AP - 40

STAGE 1 & 2 REPORTS

DATE: 2/15/2006

ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

February 15, 2006 Project # 98094-009

Mr. Roger Anderson
Environmental Bureau Chief
NMOCD
1220 South St. Francis Dr.
Santa Fe, NM 87505 Phone (505) 476-3490

AP040

RE: STAGE 1 ABATEMENT PLAN REPORT FOR THE BOB AND BLANCHE NO. 1 SPILL 3R0401 KIRTLAND, NEW MEXICO

Dear Mr. Anderson:

Enclosed, please find the report entitled, *Stage 1 Abatement Plan Report, for* the Bob and Blanche No. 1 Spill 3R0401 located in Kirtland, New Mexico. This plan complies with the NMOCD requirements for a Joint Abatement Plan per Rule 19 NMAC.

If you have any questions or need additional information, please do not hesitate to contact me at (505) 632-0615.

Respectfully Submitted,
ENVIROTECH INC.

C. Jack Collins
Chief Environmental Scientist / Hydrogeologist
NMCES # 038
jcollins@envirotech-inc.com

Enclosure Stage 1 Abatement Plan Report

cc: Tom Bergin – Richardson Operating
Tim Foster – Landowner
Patty Davis – Richardson Operating
John Heinle – Richardson Operating
Jesus Villalobos – PETRO MEX LLC
Denny Foust - NMOCD
Client File No. 98094

STAGE 1 ABATEMENT PLAN REPORT

5/09/06
- NO IMPACT
- CONF SAMPLE FOR BTEX @ 6 MOS.

SITE NAME:

BOB AND BLANCHE NO. 1
576 COUNTY ROAD 6100
KIRTLAND, NEW MEXICO

SUBMITTED TO:

MR. ROGER ANDERSON
ENVIRONMENTAL BUREAU CHIEF
NMOCD
1220 SOUTH ST. FRANCIS DR.
SANTA FE, NM 87505

SUBMITTED FOR:

RICHARDSON OPERATING
5600 SOUTH QUEBEC ST., SUITE 130B
GREENWOOD VILLAGE, COLORADO 80111
(303) 830-8000
AND
PETRO MEX LLC
P.O. BOX 6724
FARMINGTON, NM 87499

PREPARED BY:

ENVIROTECH INC.
5796 U.S. HIGHWAY 64
FARMINGTON, NEW MEXICO 87401
(505) 632-0615

PROJECT NO. 98094-009

FEBRUARY 2006

STAGE 1 ABATEMENT PLAN REPORT
BOB AND BLANCHE NO. 1
576 COUNTY ROAD 6100
KIRTLAND, NEW MEXICO

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Figure 4, Water Level Map

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Table 3, Laboratory Results of Trace Metals and Cation/Anion Analyses
Table 4, Water Level Measurements

Appendices: Appendix A, Well Completion Logs
Appendix B, Field Notes
Appendix C, Laboratory Analysis

INTRODUCTION

Envirotech Inc. has been retained by Richardson Operating Company and Petro Mex LLC, the owners and responsible parties of a well site known as Bob and Blanche No. 1, to prepare a Stage 1 Abatement Plan to investigate any groundwater and soil contamination at the above referenced site. In July 2005, a confirmed release of hydrocarbon contaminated fluids occurred at the above referenced site. Envirotech, Inc. was contracted by Richardson Operating to provide spill response and remediation services. During the course of remediation activities, water samples collected from the open excavation indicated that groundwater in the area may have been impacted with levels of benzene and xylenes that are above New Mexico Groundwater Quality Standards. The site is located at 576 County Road 6100 in Kirtland, New Mexico; see ***Figure 1, Vicinity Map.***

Due to the site location and depth to groundwater, the New Mexico Oil Conservation Division (NMOCD) has requested a Stage 1 Abatement Plan. A proposal for the Abatement Plan was submitted on October 4, 2005 and was approved on December 12, 2005.

Scope of Work

The purpose of this abatement plan is to conduct a site investigation that will define the site conditions, extent of contamination, and the data necessary to select and design an effective abatement option. This abatement plan was designed to provide the methodology for an initial investigation consisting of: soil borings, monitor well installation, on-site investigation activities, site geology and hydrogeology, laboratory analysis, reporting of the on-site activities at the subject site, public notice and participation. The following scope of services, as stated in the proposal, was designed to meet this objective.

1) Initially, five (5) soil borings will be completed to determine site geology and hydrogeology. The borings will also help determine the horizontal and vertical extent of contamination on-site. All five (5) of these soil borings will be completed as monitor wells. Proposed monitor wells will be located down gradient, south and southwest of the former release, and one (1) will be installed up gradient, near the source area, to establish background conditions. In addition, four (4) existing shallow water wells near the site will be sampled with the monitor wells to provide additional information. Monitor well locations (MW-1 through MW-5) and water wells (WW-1 and WW-2) are shown on ***Figure 2, Site Map.*** Additional step out monitor wells will be constructed as required to complete the investigation.

2) An inventory of water wells inside and within one (1) mile from the perimeter of the contamination that exceeds state standards, as well as the location and number of wells actually or potentially impacted.

3) Monitoring stations and a sampling schedule will be established. A quality assurance plan consistent with the sampling and analytical techniques will be utilized in order to meet the state water quality standards.

4) A schedule for all Stage 1 Abatement Plan activities, including quarterly progress reports and a detailed final site investigation report documenting the results of on-site activities, will be prepared and submitted to Richardson Operating, Petro Mex LLC, and the NMOCD.

ACTIVITIES PERFORMED

Soil Borings and Monitor Well Installation

Five (5) soil borings were completed as monitor wells to determine the horizontal and vertical extent of groundwater contamination underlying the site. Four (4) proposed monitor wells are located down gradient, south and southwest of the reported release, and one (1) up gradient near the source area.

Hollow stem auger drilling was used for the installation of the new groundwater-monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5). All monitor wells were drilled to a depth of 12.5 feet. During drilling, field personnel conducted field screening continuously to evaluate, describe, and record lithology, hydrocarbon vapors, odor, and all other observations pertinent to the geology of the site; see ***Appendix A, Well Completion Logs.*** Any contamination detected during drilling activities was to be noted. Since no contamination was encountered, one (1) soil sample was collected at the total depth from each of the newly installed monitor well soil borings. Samples were analyzed for volatile organic constituents using EPA method 8021 (formally EPA Method 8020) for BTEX and EPA method 8015 modified for TPH. All soil samples were collected and placed in 4-ounce jars, preserved on ice in a chilled, insulated cooler until delivered to the analyzing laboratory. All sample collection, screening, and preservation protocols adhered to the 1993 NMOCD Soil and Water Sampling and Disposal Guidelines.

In order to determine where groundwater has been impacted, all five (5) soil borings were completed across the air/water interface. Monitor wells were constructed of 2-inch Schedule 40 PVC threaded flush joint casing with 0.010 slot screen. The screens were gravel packed with #10–20 Colorado silica sand to one (1) foot above the screened interval, followed by two (2) feet of bentonite chips. Above ground steel well protector completions were cemented in place at the surface. Each well completion was further protected by a steel pipe guard rail cage cemented in place. The screened interval was placed to allow a minimum of five (5) feet of screen below and above the static water level. Monitor well cuttings resulting from the soil borings were drummed and removed for off-site disposal at Envirotech's NMOCD Permitted Lanfarm #2, near Hilltop, New Mexico, in accordance with all local, state, and federal statutes and regulations.

Monitor Well Development and Survey

Each monitor well was surveyed to provide control for latitude, longitude, and U.S.G.S. elevation. Upon completion of the monitor wells, the top of casing elevations were surveyed into the site benchmark in order to provide 0.01 foot vertical control and 0.1 foot horizontal control. The site benchmark was identified, documented, and referenced to latitude, longitude, and the appropriate U.S.G.S. 7.5 minute topographic map. Each well casing was permanently marked to indicate the point from which the depth to groundwater is determined. The survey included all monitor wells.

The newly completed monitor wells were developed by purging with a new disposable bailer until the produced water was clear and the pH, conductivity, and temperature had stabilized pursuant to the most recent NMOCD Sampling and Disposal Guidelines. The monitor wells were sampled within 48 hours of development. Water generated from the development and sampling of these monitor wells was disposed of at a NMOCD permitted disposal facility in accordance with the NMOCD Sampling and Disposal Guidelines.

Groundwater Monitoring and Analysis

Water samples were submitted to Envirotech's laboratory for determination of VOCs analysis including benzene, toluene, ethylbenzene, and total xylenes (BTEX). The sample procedures followed USEPA SW-846 protocol. Water levels were measured prior to bailing each well. A minimum of three (3) well volumes was removed from each well prior to sampling using a new disposable bailer. Conductivity, pH, and temperature was measured and recorded; see ***Appendix B, Field Notes.*** Samples were collected into 40 ml VOA vials with Teflon closures, preserved with $HgCl_2$, capped headspace free, labeled, and stored on ice in an ice chest. Samples were delivered to Envirotech Laboratory for analysis by USEPA Method 8021B, Major Cations and Anions, Heavy Metals by USEPA Method 6010, and Polynuclear Aromatic Hydrocarbons (PAH's) by EPA Method 8100.

In addition, water from two (2) water wells near the area of interest were sampled and analyzed by the above methods following the protocol previously outlined in this section. Contact was not made with the landowners of the two (2) other nearby wells in order to obtain permission to sample, and these wells were incidentally not sampled.

Purge water and development water was disposed of at Envirotech's NMOCD Permitted Landfarm #2.

Public Notice

Public notice of all surface owners, and city, state, federal, and tribal officials within one (1) mile of the contaminated area was completed by Richardson Operating.

SUMMARY AND CONCLUSIONS

Site Investigation

Site geology consists mainly of alluvial sediments; fine to coarse sands, clays, and gravel to cobble size boulders. Based on grain size of the alluvial sediments, the hydraulic conductivity is estimated at 1 ft/day to10 ft/day. Assuming an effective porosity of 15%, the groundwater velocity is calculated to be 0.14 ft/day to1.14 ft/day. Assuming an aquifer thickness of ten (10) feet, the transmissivity is estimated to be 1.4 to 11.4 ft/day and the storativity is estimated to be 0.15. Based on these estimations, water levels, and surface geology, the contamination would move in a west by southwest direction at a rate of approximately 0.1 to 1.1 ft/day. All wells inside and within one (1) mile from the spill area were identified and inventoried. Two (2) of the closest, down gradient wells were selected and sampled during the sampling event to determine whether they were affected by the contamination.

Monitoring Highlights

- Installation of the monitor wells occurred on January 13, 2006.
- All five (5) of the newly installed monitor wells had soil samples that were below the NMOCD standards for BTEX and TPH; see ***Table 1, Laboratory Results of Soil Borings.***
- Monitoring of the newly installed monitor wells occurred on January 18, 2006.
- All five (5) of the newly installed monitor wells contain water that were below the NMWQCC standards for BTEX and PAH's. The two (2) water wells sampled had non-detectable amounts of BTEX and PAH's; see ***Table 2, Laboratory Results of Groundwater Sample Analyses*** and ***Figure 3, Total BTEX Iso-Concentration Map.***
- All five (5) of the newly installed monitor wells had detectable amounts of trace metals As, Ba, Cd, Se, and Pb. The two (2) water wells had detectable amounts of trace metals As, Ba, Cd, Se, and Cr. All metal analyses were less than the TCLP regulatory levels; see ***Table 3, Laboratory Results of Trace Metal and Cation/ Anion Analyses.***
- Cation / Anion analysis for all five (5) newly installed monitor wells had TDS values that varied from 740 ppm to 1600 ppm, while the two (2) water wells had much lower TDS values that varied from 280 ppm to 290 ppm. The major dissolved constituents are Na, Ca, SO4, and HCO3 in both types of wells.
- All laboratory results are shown in ***Appendix C, Laboratory Analysis.***
- Groundwater gradient was measured based on the five (5) newly installed monitor wells and is to the south west at 0.0171 ft/ft; see ***Table 4, Water Level Measurements*** and ***Figure 4, Water Level Map.***
- None of the nearby water wells appear to be actually or potentially affected by the spill.

Summary

Soil from the five (5) newly installed monitor wells had levels below the NMOCD standards for BTEX and non-detectable amounts of TPH. Groundwater levels in the wells did not exceed NMWQCC standards for any of the constituents measured.

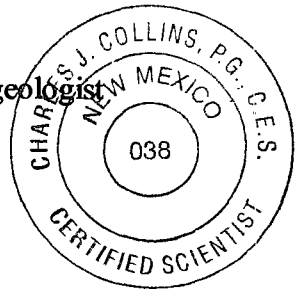
We appreciate the opportunity to be of service. Should you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted
ENVIROTECH, INC.

Reviewed By:

Shawna Chartrand
Environmental Scientist
schartrand@envirotech-inc.com

C. Jack Collins
Chief Environmental Scientist/Hydrogeologist
NMCES# 038
cjcollins@envirotech-inc.com



Morris D. Young
President
NMCES # 098
myoung@envirotech-inc.com

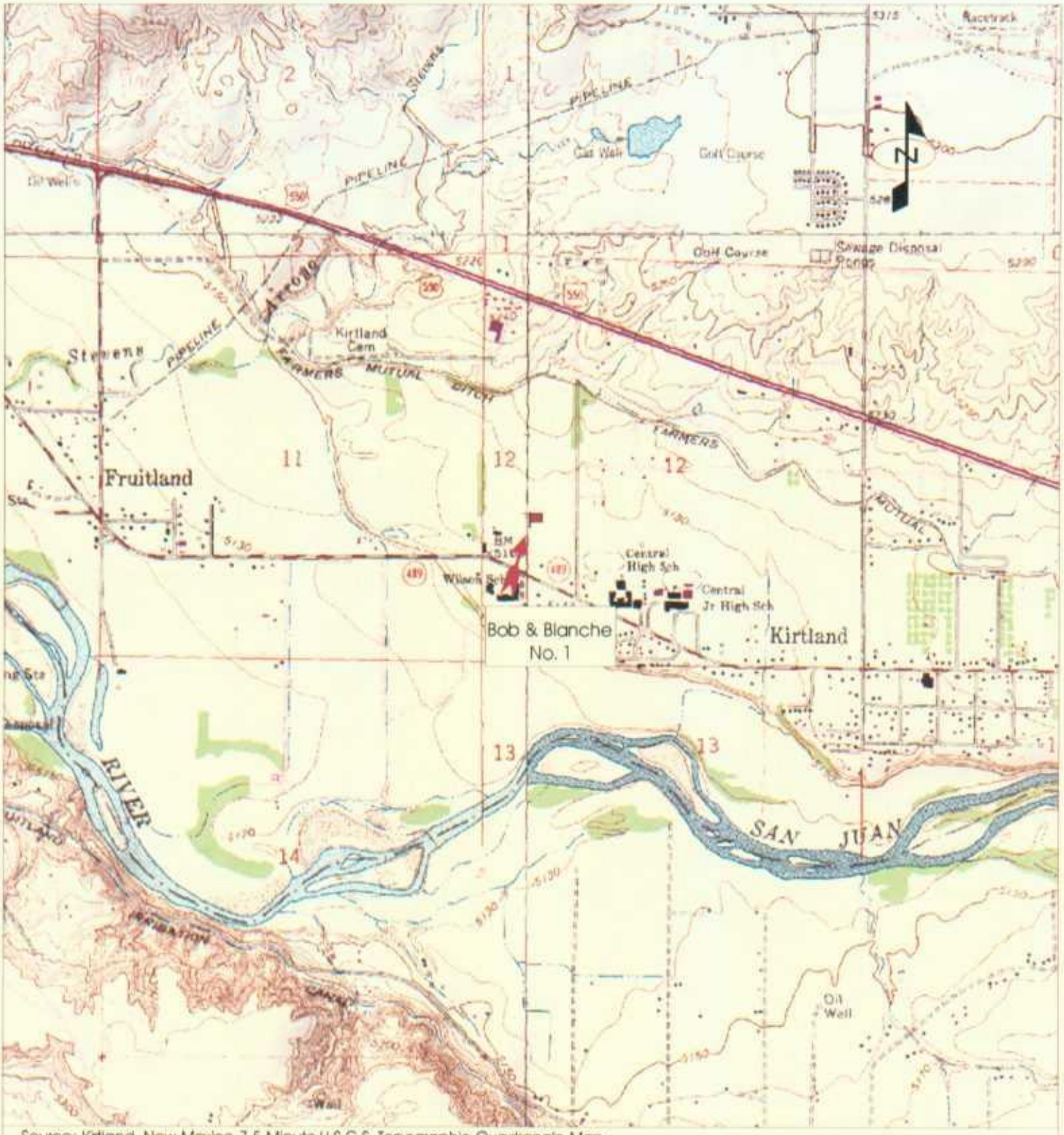
FIGURES

Figure 1, Vicinity Map

Figure 2, Site Map

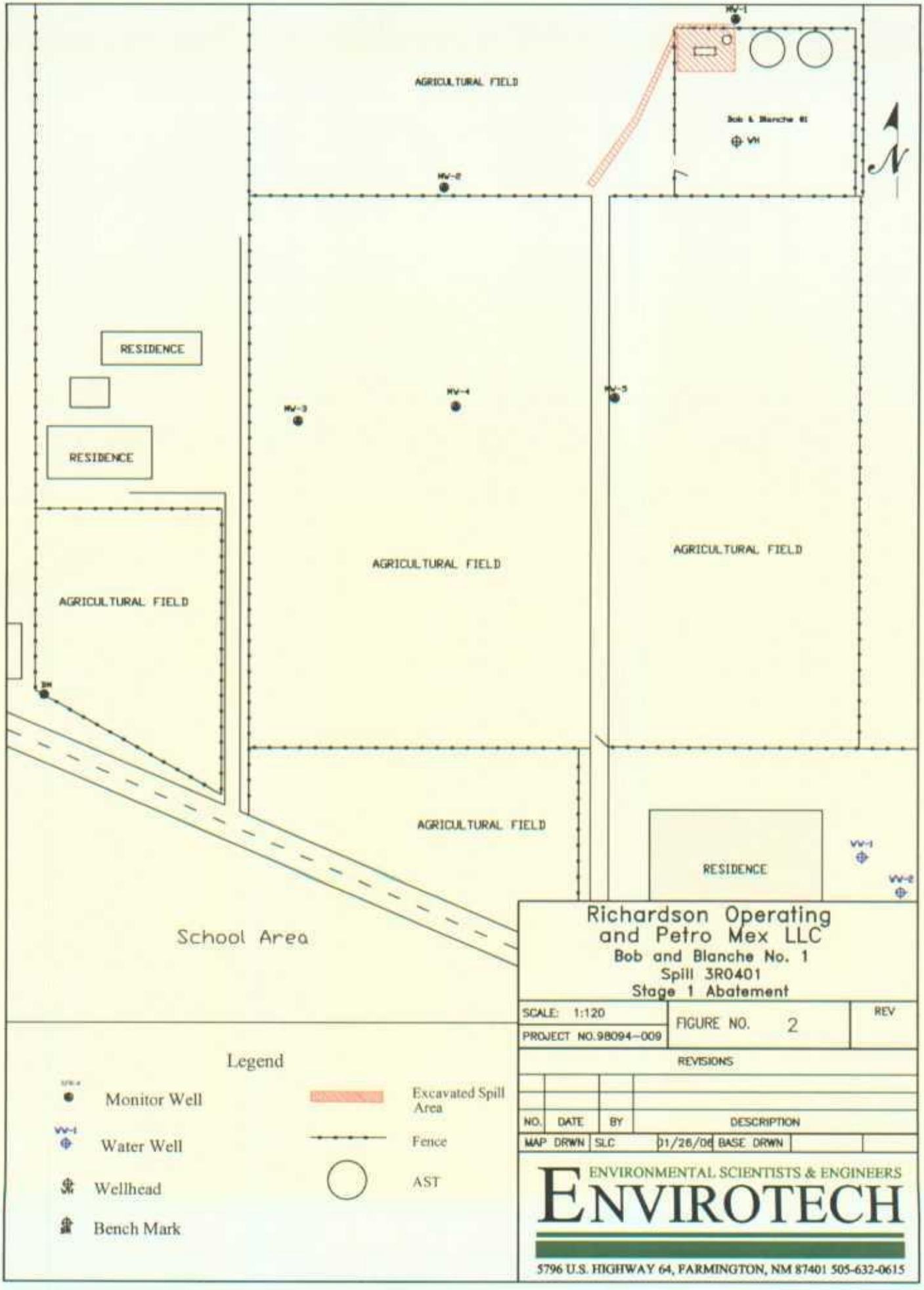
Figure 3, Total BTEX Iso-Concentration Map

Figure 4, Water Level Map



Source: Kirtland, New Mexico 7.5 Minute U.S.G.S. Topographic Quadrangle Map
Scale: 1:24,000 1" = 2000'

Bob and Blanche Well No. 1 Richardson Operating Kirtland, New Mexico S12, T29, R15		ENVIROTECH INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64 FARMINGTON, NEW MEXICO 87401 PHONE (505) 632-0615	Vicinity Map Figure 1
PROJECT No. 98094-009	Date Drawn: 02/10/06	DRAWN BY: Shawna Chartrand	PROJECT MANAGER: C. Jack Collins



Richardson Operating and Petro Mex LLC

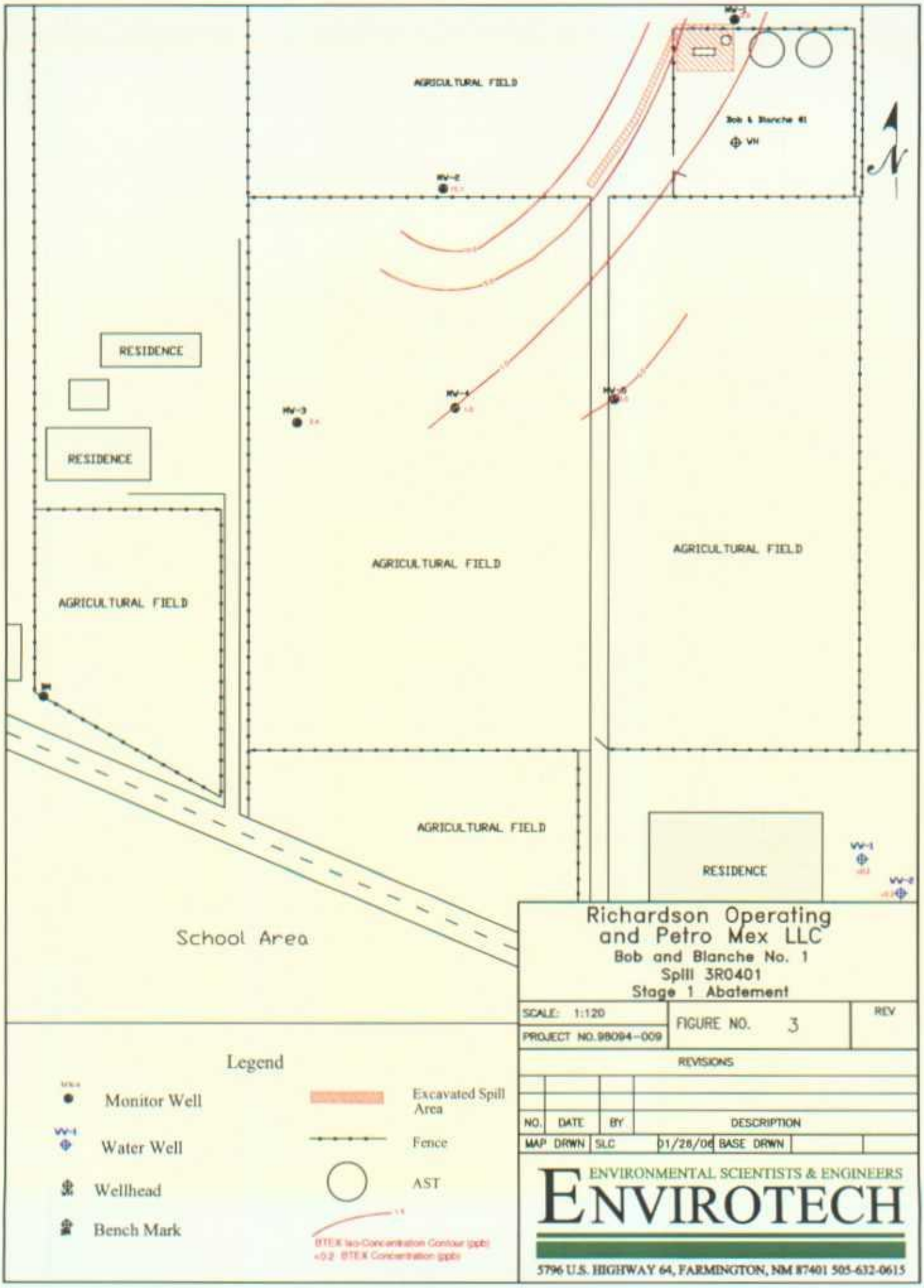
Bob and Blanche No. 1
Spill 3R0401
Stage 1 Abatement

SCALE: 1:120	FIGURE NO. 2	REV
PROJECT NO.98094-009		

REVISIONS

NO.	DATE	BY	DESCRIPTION
MAP DRWN	SLC	01/26/06	BASE DRWN

ENVIRONMENTAL SCIENTISTS & ENGINEERS
ENVIROTECH
5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615



Richardson Operating and Petro Mex LLC

Bob and Blanche No. 1
Spill 3R0401
Stage 1 Abatement

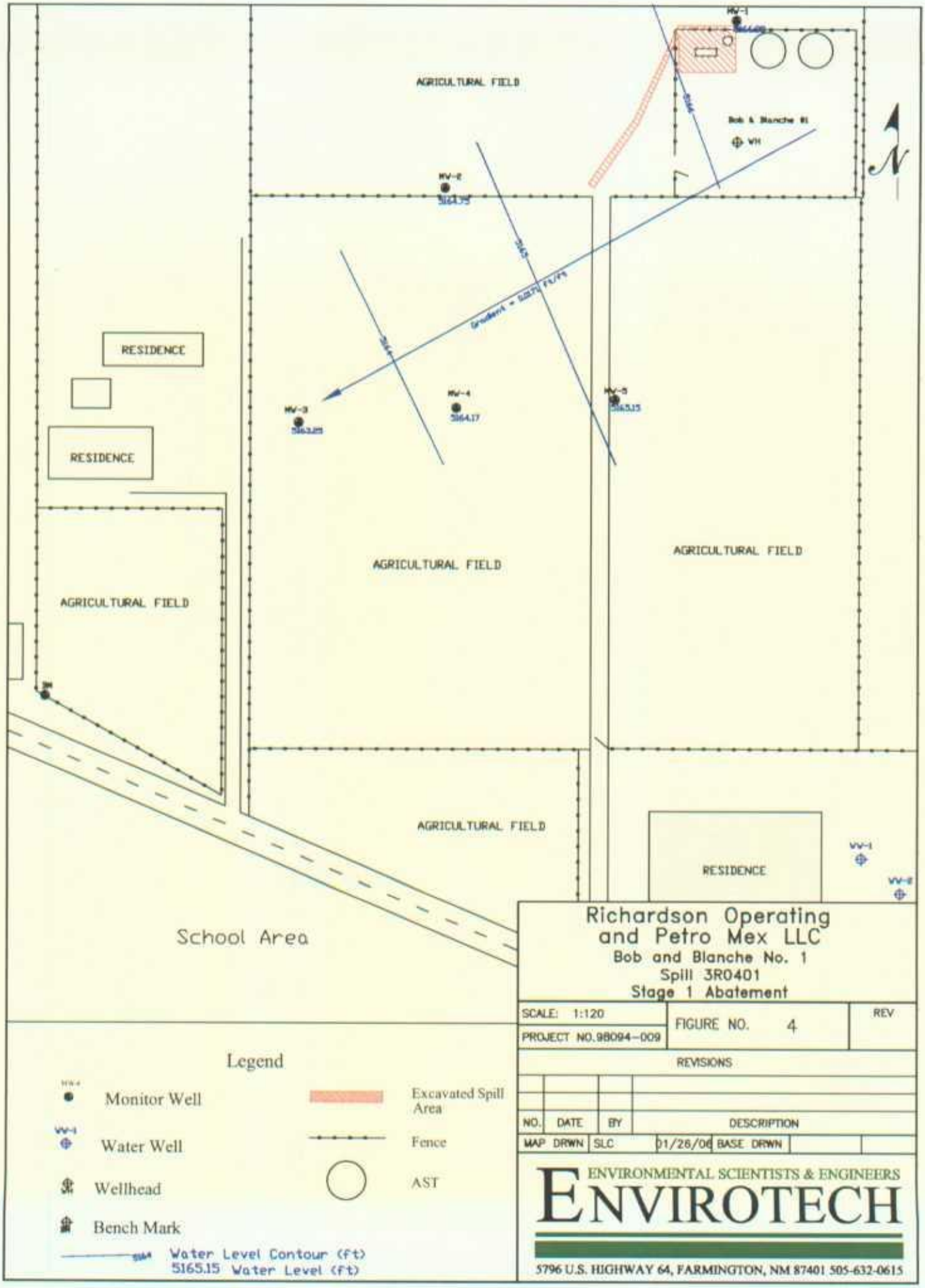
SCALE: 1:120	FIGURE NO. 3	REV
PROJECT NO. 98094-009		

REVISIONS

NO.	DATE	BY	DESCRIPTION

MAP DRWN: SLC 01/28/06 BASE DRWN:

ENVIRONMENTAL SCIENTISTS & ENGINEERS
ENVIROTECH
5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615



Richardson Operating and Petro Mex LLC
Bob and Blanche No. 1
Spill 3R0401
Stage 1 Abatement

SCALE: 1:120	FIGURE NO. 4	REV
PROJECT NO.98094-009		

REVISIONS

NO.	DATE	BY	DESCRIPTION

MAP DRWN SLC 01/26/06 BASE DRWN

ENVIRONMENTAL SCIENTISTS & ENGINEERS
ENVIROTECH
5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615

TABLES

Table 1, Laboratory Results of Soil Borings

Table 2, Laboratory Results of Groundwater Sample Analyses

Table 3, Laboratory Results of Trace Metals and Cation/Anion Analyses

Table 4, Water Level Measurements

Table 1
Laboratory Results of Soil Borings

NMED Action Levels		10	N/A	N/A	N/A	50,000	100
Well No.	Sample Date	ug/L (ppb)					
		Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	TPH
MW-1 @ 5'	1/13/06	<1.8	<1.7	5.0	27.5	32.5	<0.2
MW-2 @ 5'	1/13/06	<1.8	3.2	2.2	16.1	21.5	<0.2
MW-3 @ 5'	1/13/06	<1.8	<1.7	<1.5	5.1	5.1	<0.2
MW-4 @ 5'	1/13/06	<1.8	10.3	<1.5	22.7	33.0	<0.2
MW-5 @ 5'	1/13/06	<1.8	<1.7	<1.5	<2.2	0	<0.2

Table 2

Laboratory Results of Groundwater Sample Analyses

NMED Action Levels		10	750	750	620		30
Well No.	Sample Date	ug/L (ppb)					
		Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Total Naphthalene
MW-1	1/18/06	0.3	0.2	0.3	2.1	2.9	<0.2
MW-2	1/18/06	0.3	0.7	1.8	12.3	15.1	<0.2
MW-3	1/18/06	<0.2	<0.2	<0.2	2.4	2.4	<0.2
MW-4	1/18/06	<0.2	<0.2	<0.2	1.0	1.0	<0.2
MW-5	1/18/06	<0.2	<0.2	<0.2	0.5	0.5	<0.2
WW-1	1/18/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
WW-2	1/18/06	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Table 3

Laboratory Results of Trace Metal and Cation/Anion Analyses

New Mexico Water Quality Standards		5.0	100	1.0	5.0	5.0	0.2	1.0	5.0		
		ppm (mg/L)								ppm (mg/L)	ppm (mg/L)
Well No.	Sample Date	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	TDS @ 180C	Chloride
MW-1	1/18/06	0.003	0.045	0.001	<0.001	<0.001	<0.001	0.014	<0.001	736	30.8
MW-2	1/18/06	0.003	0.043	0.001	<0.001	<0.001	<0.001	0.017	<0.001	862	72.4
MW-3	1/18/06	0.004	0.054	0.003	<0.001	<0.001	<0.001	0.012	<0.001	776	56.0
MW-4	1/18/06	0.006	0.046	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1110	78.8
MW-5	1/18/06	0.010	0.111	0.001	<0.001	0.004	<0.001	0.037	<0.001	1620	91.2
WW-1	1/18/06	<0.001	0.062	<0.001	<0.001	<0.001	<0.001	0.031	<0.001	290	40.4
WW-2	1/18/06	0.019	0.179	0.006	0.002	<0.001	<0.001	<0.001	<0.001	282	64.0

Site Name	Richardson Operating
Date	January 18, 2006
Project #	98094-009

Table 4

Water Level Measurements

Well #	Date of Measurement	Top of Casing Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)	Change from Previous Measurement (feet)
MW-1	01/18/06	5176.05	9.67	5166.38	
MW-2	01/18/06	5174.55	9.80	5164.75	
MW-3	01/18/06	5171.22	7.97	5163.25	
MW-4	01/18/06	5171.26	7.09	5164.17	
MW-5	01/18/06	5172.04	6.89	5165.15	

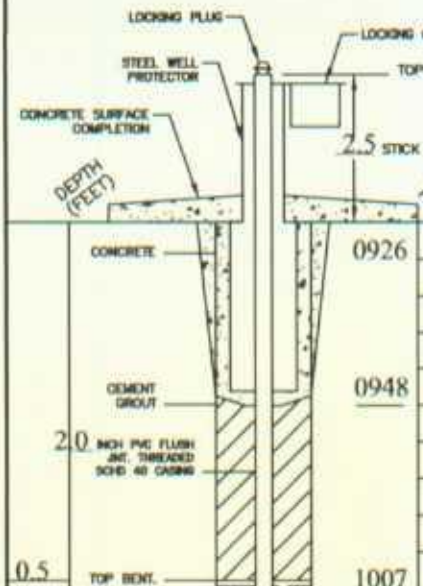
Appendix A

Well Completion Logs

ABOVE GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW 1

SB



Time	Sample Type	Headspace (PPM)	Lithology	Sample Description	Depth (Feet)
					0
0926	A			Sandy clay, tan, dry, no odor	
				@2ft- cobbles, hard, dry, no odor, with sand matrix	
				Water level @4.5 feet	
0948	SS	0.0		Sand, dark grey, no odor, moist	5
1007	A	0.0		Cobbles/Sand, wet, no odor	10
1015	A	0.0		Total Depth: 12.5 feet	
					15

Well Materials Used:

- 6 Sks 10–12 Silica Sand
- 1 Sks Bentonite Chips
- 3 Sks Class "A" Cement
- ___ Sks Quickcrete
- 5 Ft Blank Casing
- 10 Ft Screen

Well Development:

- X Bailed
- ___ Pumped
- 3 Gallons of Water

Remarks:

DRILLER: Kelly Padilla
HELPER: Brandon Bennally
DRILLING COMPANY: Envirotech
DRILLING METHOD: HSA

BIT SIZE: 7 7/8"
TOTAL BORING DEPTH: 12.5'
DATE STARTED: 01/13/06
SAMPLER TYPE: Split Spoon

LOCATION: Tim Foster Farm
ELEVATION:
DATE COMPLETED 01/13/06
GEOLOGIST: Jack Collins

Richardson Operating &
Petro Mex LLC
Bob & Blanche No 1

ENVIROTECH INC.

ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64
FARMINGTON, NEW MEXICO 87401
(505) 632-0615

MW-1

REVISIONS
BY ___ DATE ___
BY ___ DATE ___

JOB # 98094-009

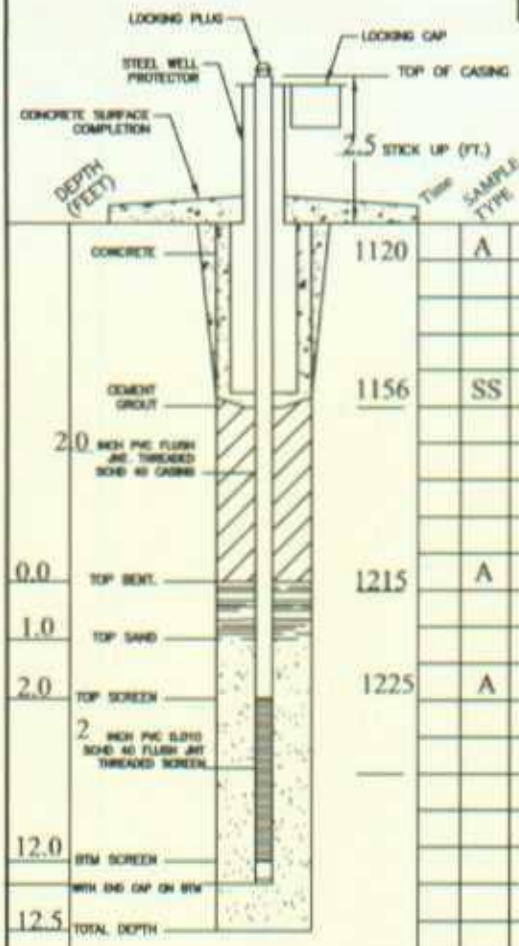
DATE 01/13/06 DRAWN CJC
SCALE ___ APPROVED ___

PAGE 1 OF 1

ABOVE GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW 2

SB



DEPTH (FEET)	Time	SAMPLE TYPE	HEADSPACE (PPM)	LITHOLOGY	SAMPLE DESCRIPTION	DEPTH (FEET)
	1120	A			Clayey sand, tan,	0
					Cobbles, 2-3" with clay matrix, dry	
	1156	SS	0.0		Cobbles to 4", hard, dry, no odor, sand/clay matrix	5
	1215	A	0.0		Cobbles with sand matrix, wet, no odor	10
	1225	A	0.0		Total Depth: 12.5 feet	
						15

Well Materials Used:

- 6 Sks 10–12 Silica Sand
- 1 Sks Bentonite Chips
- 3 Sks Class "A" Cement
- ___ Sks Quickcrete
- 5 Ft Blank Casing
- 10 Ft Screen

Well Development:

- X Bailed
- ___ Pumped
- 5 Gallons of Water

Remarks:

DRILLER: Kelly Padilla
HELPER: Brandon Bennally
DRILLING COMPANY: Envirotech
DRILLING METHOD: HSA

BIT SIZE: 7 7/8"
TOTAL BORING DEPTH: 12.5'
DATE STARTED: 01/13/06
SAMPLER TYPE: Split Spoon

LOCATION: Tim Foster Farm
ELEVATION:
DATE COMPLETED 01/13/06
GEOLOGIST: Jack Collins

Richardson Operating &
Petro Mex LLC
Bob & Blanche No 1

ENVIROTECH INC.

ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64
FARMINGTON, NEW MEXICO 87401
(505) 632-0615

MW-2

REVISIONS
BY ___ DATE ___
BY ___ DATE ___

JOB # 98094-009

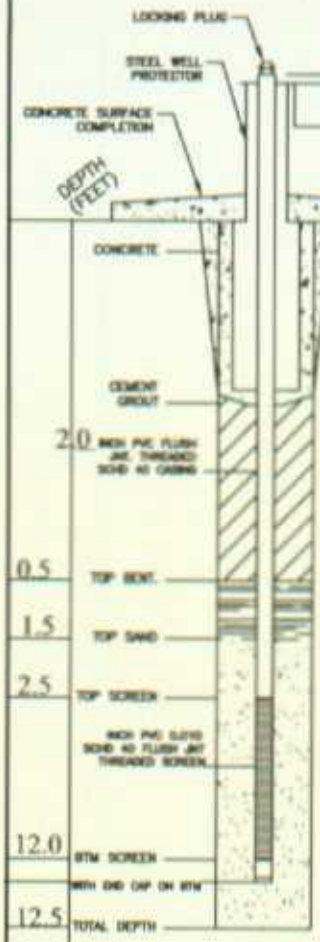
DATE 01/13/06 DRAWN CJC
SCALE ___ APPROVED ___

PAGE 1 OF 1

ABOVE GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW 3

SB



DEPTH (FEET)	Time	SAMPLE TYPE	HEADSPACE (PPM)	LITHOLOGY	SAMPLE DESCRIPTION	DEPTH (FEET)
	1316	A			Clayey sand, tan,	0
					Cobbles, 2-3" with clay matrix, dry	
	1335	SS	0.0		Cobbles to 4", hard, dry, no odor, sand/clay matrix	5
	1345	A	0.0		Cobbles with sand matrix, wet, no odor	10
		A	0.0		Total Depth: 12.5 feet	
						15

Well Materials Used:

- 6 Sks 10-12 Silica Sand
- 1 Sks Bentonite Chips
- 2 Sks Class "A" Cement
- ___ Sks Quickcrete
- 5 Ft Blank Casing
- 10 Ft Screen

Well Development:

- X Bailed
- ___ Pumped
- 3.5 Gallons of Water

Remarks:

DRILLER: Kelly Padilla
HELPER: Brandon Bennally
DRILLING COMPANY: Envirotech
DRILLING METHOD: HSA

BIT SIZE: 7 7/8"
TOTAL BORING DEPTH: 12.5'
DATE STARTED: 01/13/06
SAMPLER TYPE: Split Spoon

LOCATION: Tim Foster Farm
ELEVATION:
DATE COMPLETED 01/13/06
GEOLOGIST: Jack Collins

Richardson Operating & Petro Mex LLC
Bob & Blanche No 1

ENVIROTECH INC.
ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64
FARMINGTON, NEW MEXICO 87401
(505) 632-0615

MW-3

REVISIONS
BY ___ DATE ___
BY ___ DATE ___

JOB # 98094-009

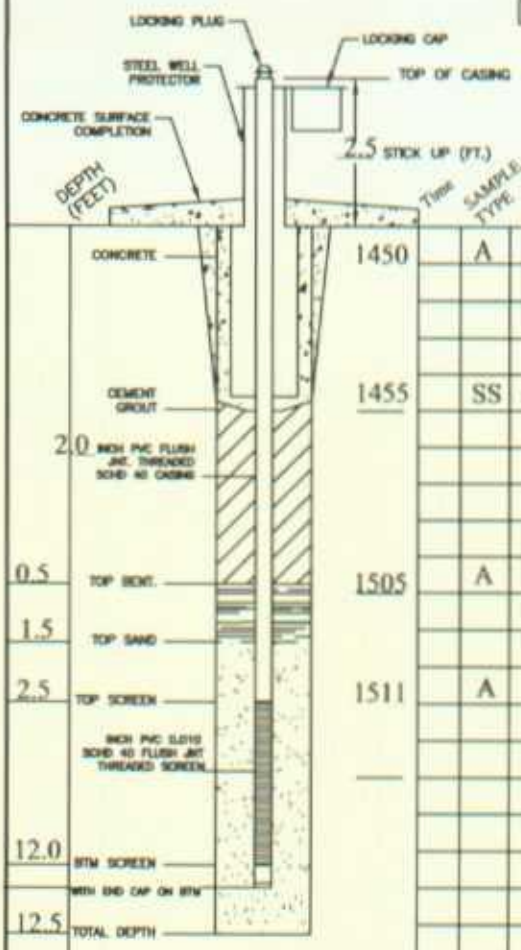
DATE 01/13/06 DRAWN CJC
SCALE ___ APPROVED ___

PAGE 1 OF 1

ABOVE GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW 4

SB



Time	Sample Type	Headspace (PPM)	Lithology	Sample Description	Depth (Feet)
					0
1450	A			Cobbles/Clay/Sand	
1455	SS	0.0		Wet clay/sand, blue grey, no odor	5
				Clayey sand/ some cobbles, wet, no odor	
1505	A	0.0		Cobbles/sand, wet, no odor	10
1511	A	0.0		Total Depth: 12.5 feet	
					15

Well Materials Used:

- 6 Sks 10-12 Silica Sand
- 1 Sks Bentonite Chips
- 3 Sks Class "A" Cement
- ___ Sks Quickcrete
- 5 Ft Blank Casing
- 10 Ft Screen

Well Development:

- X Bailed
- ___ Pumped
- 6 Gallons of Water

Remarks:

DRILLER: Kelly Padilla
HELPER: Brandon Bennally
DRILLING COMPANY: Envirotech
DRILLING METHOD: HSA

BIT SIZE: 7 7/8"
TOTAL BORING DEPTH: 12.5'
DATE STARTED: 01/13/06
SAMPLER TYPE: Split Spoon

LOCATION: Tim Foster Farm
ELEVATION:
DATE COMPLETED 01/13/06
GEOLOGIST: Jack Collins

Richardson Operating &
Petro Mex LLC
Bob & Blanche No 1

ENVIROTECH INC.

MW-4

REVISIONS
BY ___ DATE ___
BY ___ DATE ___

JOB # 98094-009

ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64
FARMINGTON, NEW MEXICO 87401
(505) 632-0615

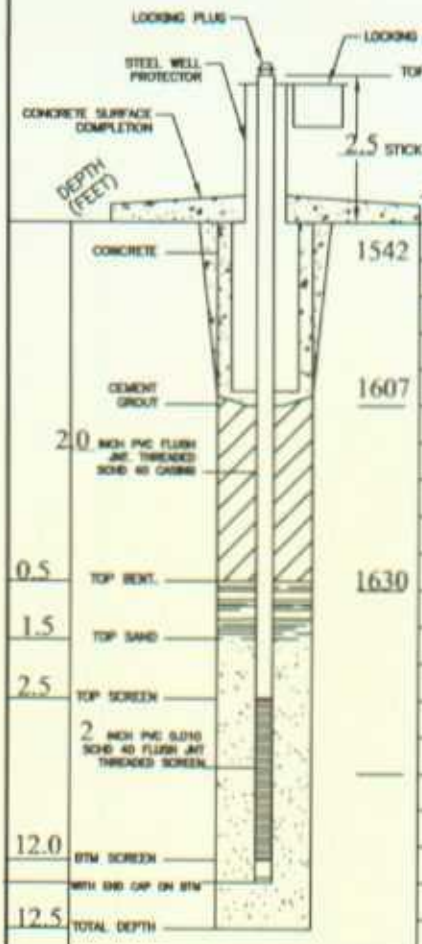
DATE 01/13/06 DRAWN CJC
SCALE ___ APPROVED ___

PAGE 1 OF 1

ABOVE GRADE WELL COMPLETION DIAGRAM / LITHOLOGY LOG

MW 5

SB



DEPTH (FEET)	Time	SAMPLE TYPE	HEADSPACE (PPM)	LITHOLOGY	SAMPLE DESCRIPTION	DEPTH (FEET)
	1542	A			Cobbles to 6", dry	0
	1607	SS	0.0		Cobbles/clay, wet, no odor	5
	1630	A	0.0		Cobbles/clay/sand, wet, no odor	10
		A	0.0		Total Depth: 12.5 feet	15

Well Materials Used:

- 6 Sks 10–12 Silica Sand
- 1 Sks Bentonite Chips
- 3 Sks Class "A" Cement
- ___ Sks Quickcrete
- 5 Ft Blank Casing
- 10 Ft Screen

Well Development:

- X Bailed
- ___ Pumped
- 3 Gallons of Water

Remarks:

DRILLER: Kelly Padilla
HELPER: Brandon Bennally
DRILLING COMPANY: Envirotech
DRILLING METHOD: HSA

BIT SIZE: 7 7/8"
TOTAL BORING DEPTH: 12.5'
DATE STARTED: 01/13/06
SAMPLER TYPE: Split Spoon

LOCATION: Tim Foster Farm
ELEVATION:
DATE COMPLETED 01/13/06
GEOLOGIST: Jack Collins

Richardson Operating &
Petro Mex LLC
Bob & Blanche No 1

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FARMINGTON, NEW MEXICO 87401
(505) 632-0615

MW-5

REVISIONS
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JOB # 98094-009

DATE 01/13/06 DRAWN CJC
SCALE ___ APPROVED ___

PAGE 1 OF 1

Appendix B

Field Notes

ENVIROTECH INC.
FARMINGTON, NM 5796 HIGHWAY 64
MONITOR WELL DATA

Date: 1-18-06 Project No: 98094-009

Project Name: Richardson Operating Chain of Custody No: _____

Location: Kirtland NM

Project Manager: CJC Sampler: CJC/SLC

MONITOR WELL DATA

WELL #	TIME	OVM ppm	pH	COND. µS	TEMP. °F	DEPTH TO WATER FT.	TOTAL DEPTH FT.	WATER COLUMN FT.	BAILED Water Gal.	PRODUCT Ft.	WATER LEVEL FT.
MW-1	1340		7.91	1.09	51.3	9.67	13	3.3	1.7		
MW-2	1350		7.88	1.85	52.9	9.8	13.8	4	2		
MW-5	1410		7.79	2.24	52.7	6.89	13.3				
MW4	1446		7.82	1.60	55.4	7.09	13.8	7	3.5		
MW3	1430		7.81	1.32	53.5	7.97	13.6	5	25		
WW1	1605		8.15	0.63	49.7	—	—	—			
WW2	1420		9.30	0.53	55.6						

Notes: TOC = Top of Casing
Bailed = 3 well volummes:
1.25" well = 0.19 gal/ft.
2.00" well = 0.49 gal/ft.
4.00" well = 1.96 gal/ft.
Note well diameter if not one of the above.

Appendix C

Laboratory Analysis

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-1 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35744	Date Sampled:	01-13-06
Chain of Custody:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Analyzed:	01-18-06
Preservative:	Cool	Date Extracted:	01-16-06
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**1.8**
Toluene	**ND**	**1.7**
Ethylbenzene	**5.0**	**1.5**
p,m-Xylene	**20.5**	**2.2**
o-Xylene	**7.0**	**1.0**
Total BTEX	**32.5**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**99.0 %**
	1,4-difluorobenzene	**99.0 %**
	Bromochlorobenzene	**99.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-2 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35745	Date Sampled:	01-13-06
Chain of Custody:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Analyzed:	01-18-06
Preservative:	Cool	Date Extracted:	01-16-06
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**1.8**
Toluene	**3.2**	**1.7**
Ethylbenzene	**2.2**	**1.5**
p,m-Xylene	**11.5**	**2.2**
o-Xylene	**4.6**	**1.0**
Total BTEX	**21.5**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**98.0 %**
	1,4-difluorobenzene	**98.0 %**
	Bromochlorobenzene	**98.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-3 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35746	Date Sampled:	01-13-06
Chain of Custody:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Analyzed:	01-18-06
Preservative:	Cool	Date Extracted:	01-16-06
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**1.8**
Toluene	**ND**	**1.7**
Ethylbenzene	**ND**	**1.5**
p,m-Xylene	**3.7**	**2.2**
o-Xylene	**1.4**	**1.0**
Total BTEX	**5.1**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**97.0 %**
	1,4-difluorobenzene	**97.0 %**
	Bromochlorobenzene	**97.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-4 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35747	Date Sampled:	01-13-06
Chain of Custody:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Analyzed:	01-18-06
Preservative:	Cool	Date Extracted:	01-16-06
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**1.8**
Toluene	**10.3**	**1.7**
Ethylbenzene	**ND**	**1.5**
p,m-Xylene	**17.3**	**2.2**
***o*-Xylene**	**5.4**	**1.0**
Total BTEX	**33.0**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**98.0 %**
	1,4-difluorobenzene	**98.0 %**
	Bromochlorobenzene	**98.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-5 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35748	Date Sampled:	01-13-06
Chain of Custody:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Analyzed:	01-18-06
Preservative:	Cool	Date Extracted:	01-16-06
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**1.8**
Toluene	**ND**	**1.7**
Ethylbenzene	**ND**	**1.5**
p,m-Xylene	**ND**	**2.2**
o-Xylene	**ND**	**1.0**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**97.0 %**
	1,4-difluorobenzene	**97.0 %**
	Bromochlorobenzene	**97.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	01-18-BTEX QA/QC	Date Reported:	01-18-06
Laboratory Number:	35744	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-18-06
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	3.5539E+007	3.5610E+007	0.2%	ND	0.2
Toluene	4.7440E+007	4.7535E+007	0.2%	ND	0.2
Ethylbenzene	3.4978E+007	3.5048E+007	0.2%	ND	0.2
p,m-Xylene	7.2600E+007	7.2745E+007	0.2%	ND	0.2
o-Xylene	3.4164E+007	3.4232E+007	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	ND	ND	0.0%	0 - 30%	1.8
Toluene	ND	ND	0.0%	0 - 30%	1.7
Ethylbenzene	5.0	4.9	2.0%	0 - 30%	1.5
p,m-Xylene	20.5	20.4	0.5%	0 - 30%	2.2
o-Xylene	7.0	6.9	1.4%	0 - 30%	1.0

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	50.0	49.9	99.8%	39 - 150
Toluene	ND	50.0	50.0	100.0%	46 - 148
Ethylbenzene	5.0	50.0	55.0	100.0%	32 - 160
p,m-Xylene	20.5	100	120	99.9%	46 - 148
o-Xylene	7.0	50.0	56.9	99.8%	46 - 148

ND - Parameter not detected at the stated detection limit.

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for Samples 35744 - 35748.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-1 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35744	Date Sampled:	01-13-06
Chain of Custody No:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Extracted:	01-16-06
Preservative:	Cool	Date Analyzed:	01-18-06
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-2 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35745	Date Sampled:	01-13-06
Chain of Custody No:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Extracted:	01-16-06
Preservative:	Cool	Date Analyzed:	01-18-06
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-3 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35746	Date Sampled:	01-13-06
Chain of Custody No:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Extracted:	01-16-06
Preservative:	Cool	Date Analyzed:	01-18-06
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-4 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35747	Date Sampled:	01-13-06
Chain of Custody No:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Extracted:	01-16-06
Preservative:	Cool	Date Analyzed:	01-18-06
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Richardson Operating	Project #:	98094-009
Sample ID:	MW-5 @ 5'	Date Reported:	01-18-06
Laboratory Number:	35748	Date Sampled:	01-13-06
Chain of Custody No:	15377	Date Received:	01-13-06
Sample Matrix:	Soil	Date Extracted:	01-16-06
Preservative:	Cool	Date Analyzed:	01-18-06
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Bob & Blanch #1.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified

Nonhalogenated Volatile Organics

Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	01-18-06 QA/QC	Date Reported:	01-18-06
Laboratory Number:	35744	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-18-06
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	02-04-05	1.0067E+003	1.0077E+003	**0.10%**	**0 - 15%**
Diesel Range C10 - C28	02-04-05	1.0004E+003	1.0024E+003	**0.20%**	**0 - 15%**

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	**ND**	**0.2**
Diesel Range C10 - C28	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	**ND**	**ND**	**0.0%**	**0 - 30%**
Diesel Range C10 - C28	**ND**	**ND**	**0.0%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**ND**	**250**	**250**	**100.0%**	**75 - 125%**
Diesel Range C10 - C28	**ND**	**250**	**250**	**100.0%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **QA/QC for Samples 35744 - 35748, 35757 - 35760.**

Analyst

Review

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15377

CHAIN OF CUSTODY RECORD

Client / Project Name	Project Location
Richardson Operating	Bob & Blanch #1
Sampler: Jack Collins	Client No. 98094-009

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX 8021	TPH 8015					Remarks
MW-1@5'	1-13-6	0948	35744	Soil	1	✓	✓					
MW-2@5'		1155	35745		1	✓	✓					
MW-3@5'		1342	35746		1	✓	✓					
MW-4@5'		1500	35747		1	✓	✓					
MW-5@5'		1617	35748		1	✓	✓					

ANALYSIS / PARAMETERS

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
C. Jack Collins	1-13-6	1752	MBMee	1/13/6	1752
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice			

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 1	Date Reported:	01-20-06
Chain of Custody:	15404	Date Sampled:	01-18-06
Laboratory Number:	35808	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**0.3**	**1**	**0.2**
Toluene	**0.2**	**1**	**0.2**
Ethylbenzene	**0.3**	**1**	**0.2**
p,m-Xylene	**1.7**	**1**	**0.2**
o-Xylene	**0.4**	**1**	**0.1**
Total BTEX	**2.9**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	**100 %**
	1,4-difluorobenzene	**100 %**
	4-bromochlorobenzene	**100 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **Kirtland, NM.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 2	Date Reported:	01-20-06
Chain of Custody:	15404	Date Sampled:	01-18-06
Laboratory Number:	35809	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**0.3**	**1**	**0.2**
Toluene	**0.7**	**1**	**0.2**
Ethylbenzene	**1.8**	**1**	**0.2**
p,m-Xylene	**11.3**	**1**	**0.2**
o-Xylene	**1.0**	**1**	**0.1**
Total BTEX	**15.1**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	**100 %**
	1,4-difluorobenzene	**100 %**
	4-bromochlorobenzene	**100 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **Kirtland, NM.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 3	Date Reported:	01-20-06
Chain of Custody:	15404	Date Sampled:	01-18-06
Laboratory Number:	35810	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**ND**	**1**	**0.2**
p,m-Xylene	**1.4**	**1**	**0.2**
o-Xylene	**1.0**	**1**	**0.1**
Total BTEX	**2.4**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	**100 %**
	1,4-difluorobenzene	**100 %**
	4-bromochlorobenzene	**100 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **Kirtland, NM.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 4	Date Reported:	01-20-06
Chain of Custody:	15404	Date Sampled:	01-18-06
Laboratory Number:	35811	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**ND**	**1**	**0.2**
p,m-Xylene	**0.8**	**1**	**0.2**
o-Xylene	**0.2**	**1**	**0.1**
Total BTEX	**1.0**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	**100 %**
	1,4-difluorobenzene	**100 %**
	4-bromochlorobenzene	**100 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **Kirtland, NM.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 5	Date Reported:	01-20-06
Chain of Custody:	15404	Date Sampled:	01-18-06
Laboratory Number:	35812	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**ND**	**1**	**0.2**
p,m-Xylene	**0.5**	**1**	**0.2**
o-Xylene	**ND**	**1**	**0.1**
Total BTEX	**0.5**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	**100 %**
	1,4-difluorobenzene	**100 %**
	4-bromochlorobenzene	**100 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **Kirtland, NM.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson	Project #:	98094-009
Sample ID:	WW 1	Date Reported:	01-20-06
Chain of Custody:	15404	Date Sampled:	01-18-06
Laboratory Number:	35813	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**ND**	**1**	**0.2**
p,m-Xylene	**ND**	**1**	**0.2**
o-Xylene	**ND**	**1**	**0.1**
Total BTEX	**ND**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	**100 %**
	1,4-difluorobenzene	**100 %**
	4-bromochlorobenzene	**100 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **Kirtland, NM.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Richardson	Project #:	98094-009
Sample ID:	WW 2	Date Reported:	01-20-06
Chain of Custody:	15404	Date Sampled:	01-18-06
Laboratory Number:	35814	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**ND**	**1**	**0.2**
p,m-Xylene	**ND**	**1**	**0.2**
o-Xylene	**ND**	**1**	**0.1**
Total BTEX	**ND**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	**100 %**
	1,4-difluorobenzene	**100 %**
	4-bromochlorobenzene	**100 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **Kirtland, NM.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	01-20-BTEX QA/QC	Date Reported:	01-20-06
Laboratory Number:	35808	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-20-06
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	5.4058E+007	5.4221E+007	0.30%	ND	0.2
Toluene	5.3091E+007	5.3251E+007	0.30%	ND	0.2
Ethylbenzene	3.8031E+007	3.8145E+007	0.30%	ND	0.2
p,m-Xylene	7.7292E+007	7.7525E+007	0.30%	ND	0.2
o-Xylene	3.6639E+007	3.6750E+007	0.30%	ND	0.1

Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff.	Accept Limit
Benzene	0.3	0.3	0.0%	0 - 30%
Toluene	0.2	0.2	0.0%	0 - 30%
Ethylbenzene	0.3	0.3	0.0%	0 - 30%
p,m-Xylene	1.7	1.7	0.0%	0 - 30%
o-Xylene	0.4	0.4	0.0%	0 - 30%

Spike Conc. (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Limits
Benzene	0.3	50.0	50.2	99.8%	39 - 150
Toluene	0.2	50.0	50.1	99.8%	46 - 148
Ethylbenzene	0.3	50.0	50.2	99.8%	32 - 160
p,m-Xylene	1.7	100	101	99.7%	46 - 148
o-Xylene	0.4	50.0	50.3	99.8%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for samples 35808 - 35814.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 1	Date Reported:	01-24-06
Laboratory Number:	35808	Date Sampled:	01-18-06
Chain of custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-24-06
Preservative:	Cool	Date Concentrated:	01-23-06
Condition:	Cool & Intact	Analysis Requested:	8100

Parameter	oncentration (ug/L)	Det. Limit (ug/L)
Naphthalene	**ND**	**0.2**
Acenaphthylene	**ND**	**0.2**
Acenaphthene	**ND**	**0.2**
Fluorene	**ND**	**0.2**
Phenanthrene	**ND**	**0.2**
Anthracene	**ND**	**0.2**
Fluoranthene	**ND**	**0.2**
Pyrene	**ND**	**0.2**
Benzo[a]anthracene	**ND**	**0.2**
Chrysene	**ND**	**0.2**
Benzo(b)fluoranthene	**ND**	**0.2**
Benzo[k]fluoranthene	**ND**	**0.2**
Benzo(a)pyrene	**ND**	**0.2**
Indeno[1,2,3]pyrene	**ND**	**0.2**
Dibenzo[a,h]anthracene	**ND**	**0.2**
Benzo(g,h,i)perylene	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronapthalene	**99.7%**

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **Kirtland, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 2	Date Reported:	01-24-06
Laboratory Number:	35809	Date Sampled:	01-18-06
Chain of custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-24-06
Preservative:	Cool	Date Concentrated:	01-23-06
Condition:	Cool & Intact	Analysis Requested:	8100

Parameter	oncentration (ug/L)	Det. Limit (ug/L)
Naphthalene	**ND**	**0.2**
Acenaphthylene	**ND**	**0.2**
Acenaphthene	**ND**	**0.2**
Fluorene	**ND**	**0.2**
Phenanthrene	**ND**	**0.2**
Anthracene	**ND**	**0.2**
Fluoranthene	**ND**	**0.2**
Pyrene	**ND**	**0.2**
Benzo[a]anthracene	**ND**	**0.2**
Chrysene	**ND**	**0.2**
Benzo(b)fluoranthene	**ND**	**0.2**
Benzo[k]fluoranthene	**ND**	**0.2**
Benzo(a)pyrene	**ND**	**0.2**
Indeno[1,2,3]pyrene	**ND**	**0.2**
Dibenzo[a,h]anthracene	**ND**	**0.2**
Benzo(g,h,i)perylene	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronapthalene	**99.1%**

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **Kirtland, NM.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 3	Date Reported:	01-24-06
Laboratory Number:	35810	Date Sampled:	01-18-06
Chain of custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-24-06
Preservative:	Cool	Date Concentrated:	01-23-06
Condition:	Cool & Intact	Analysis Requested:	8100

Parameter	oncentration (ug/L)	Det. Limit (ug/L)
Naphthalene	**ND**	**0.2**
Acenaphthylene	**ND**	**0.2**
Acenaphthene	**ND**	**0.2**
Fluorene	**ND**	**0.2**
Phenanthrene	**ND**	**0.2**
Anthracene	**ND**	**0.2**
Fluoranthene	**ND**	**0.2**
Pyrene	**ND**	**0.2**
Benzo[a]anthracene	**ND**	**0.2**
Chrysene	**ND**	**0.2**
Benzo(b)fluoranthene	**ND**	**0.2**
Benzo[k]fluoranthene	**ND**	**0.2**
Benzo(a)pyrene	**ND**	**0.2**
Indeno[1,2,3]pyrene	**ND**	**0.2**
Dibenzo[a,h]anthracene	**ND**	**0.2**
Benzo(g,h,i)perylene	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronapthalene	**98.4%**

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **Kirtland, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 4	Date Reported:	01-24-06
Laboratory Number:	35811	Date Sampled:	01-18-06
Chain of custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-24-06
Preservative:	Cool	Date Concentrated:	01-23-06
Condition:	Cool & Intact	Analysis Requested:	8100

Parameter	oncentration (ug/L)	Det. Limit (ug/L)
Naphthalene	**ND**	**0.2**
Acenaphthylene	**ND**	**0.2**
Acenaphthene	**ND**	**0.2**
Fluorene	**ND**	**0.2**
Phenanthrene	**ND**	**0.2**
Anthracene	**ND**	**0.2**
Fluoranthene	**ND**	**0.2**
Pyrene	**ND**	**0.2**
Benzo[a]anthracene	**ND**	**0.2**
Chrysene	**ND**	**0.2**
Benzo(b)fluoranthene	**ND**	**0.2**
Benzo[k]fluoranthene	**ND**	**0.2**
Benzo(a)pyrene	**ND**	**0.2**
Indeno[1,2,3]pyrene	**ND**	**0.2**
Dibenzo[a,h]anthracene	**ND**	**0.2**
Benzo(g,h,i)perylene	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronapthalene	**97.6%**

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **Kirtland, NM.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 5	Date Reported:	01-24-06
Laboratory Number:	35812	Date Sampled:	01-18-06
Chain of custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-24-06
Preservative:	Cool	Date Concentrated:	01-23-06
Condition:	Cool & Intact	Analysis Requested:	8100

Parameter	oncentration (ug/L)	Det. Limit (ug/L)
Naphthalene	**ND**	**0.2**
Acenaphthylene	**ND**	**0.2**
Acenaphthene	**ND**	**0.2**
Fluorene	**ND**	**0.2**
Phenanthrene	**ND**	**0.2**
Anthracene	**ND**	**0.2**
Fluoranthene	**ND**	**0.2**
Pyrene	**ND**	**0.2**
Benzo[a]anthracene	**ND**	**0.2**
Chrysene	**ND**	**0.2**
Benzo(b)fluoranthene	**ND**	**0.2**
Benzo[k]fluoranthene	**ND**	**0.2**
Benzo(a)pyrene	**ND**	**0.2**
Indeno[1,2,3]pyrene	**ND**	**0.2**
Dibenzo[a,h]anthracene	**ND**	**0.2**
Benzo(g,h,i)perylene	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronapthalene	**99.2%**

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **Kirtland, NM.**

Analyst

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5796 U.S. Highway 64 ◦ Farmington, NM 87401 ◦ Tel 505 ◦ 632 ◦ 0615 ◦ Fax 505 ◦ 632 ◦ 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons

Client:	Richardson	Project #:	98094-009
Sample ID:	WW 1	Date Reported:	01-24-06
Laboratory Number:	35813	Date Sampled:	01-18-06
Chain of custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-24-06
Preservative:	Cool	Date Concentrated:	01-23-06
Condition:	Cool & Intact	Analysis Requested:	8100

Parameter	oncentration (ug/L)	Det. Limit (ug/L)
Naphthalene	**ND**	**0.2**
Acenaphthylene	**ND**	**0.2**
Acenaphthene	**ND**	**0.2**
Fluorene	**ND**	**0.2**
Phenanthrene	**ND**	**0.2**
Anthracene	**ND**	**0.2**
Fluoranthene	**ND**	**0.2**
Pyrene	**ND**	**0.2**
Benzo[a]anthracene	**ND**	**0.2**
Chrysene	**ND**	**0.2**
Benzo(b)fluoranthene	**ND**	**0.2**
Benzo[k]fluoranthene	**ND**	**0.2**
Benzo(a)pyrene	**ND**	**0.2**
Indeno[1,2,3]pyrene	**ND**	**0.2**
Dibenzo[a,h]anthracene	**ND**	**0.2**
Benzo(g,h,i)perylene	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronapthalene	**98.8%**

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **Kirtland, NM.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons

Client:	Richardson	Project #:	98094-009
Sample ID:	WW 2	Date Reported:	01-24-06
Laboratory Number:	35814	Date Sampled:	01-18-06
Chain of custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-24-06
Preservative:	Cool	Date Concentrated:	01-23-06
Condition:	Cool & Intact	Analysis Requested:	8100

Parameter	oncentration (ug/L)	Det. Limit (ug/L)
Naphthalene	**ND**	**0.2**
Acenaphthylene	**ND**	**0.2**
Acenaphthene	**ND**	**0.2**
Fluorene	**ND**	**0.2**
Phenanthrene	**ND**	**0.2**
Anthracene	**ND**	**0.2**
Fluoranthene	**ND**	**0.2**
Pyrene	**ND**	**0.2**
Benzo[a]anthracene	**ND**	**0.2**
Chrysene	**ND**	**0.2**
Benzo(b)fluoranthene	**ND**	**0.2**
Benzo[k]fluoranthene	**ND**	**0.2**
Benzo(a)pyrene	**ND**	**0.2**
Indeno[1,2,3]pyrene	**ND**	**0.2**
Dibenzo[a,h]anthracene	**ND**	**0.2**
Benzo(g,h,i)perylene	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronapthalene	**99.6%**

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **Kirtland, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons
Quality Assurance Report

Client:	QA/QC	Project #:	QA/QC
Sample ID:	Laboratory Blank	Date Reported:	01-24-06
Laboratory Number:	QA/QC	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	01-24-06
Condition:	N/A	Analysis Requested:	8100

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Naphthalene	**ND**	**0.2**
Acenaphthylene	**ND**	**0.2**
Acenaphthene	**ND**	**0.2**
Fluorene	**ND**	**0.2**
Phenanthrene	**ND**	**0.2**
Anthracene	**ND**	**0.2**
Fluoranthene	**ND**	**0.2**
Pyrene	**ND**	**0.2**
Benzo[a]anthracene	**ND**	**0.2**
Chrysene	**ND**	**0.2**
Benzo(b)fluoranthene	**ND**	**0.2**
Benzo[k]fluoranthene	**ND**	**0.2**
Benzo(a)pyrene	**ND**	**0.2**
Indeno[1,2,3]pyrene	**ND**	**0.2**
Dibenzo[a,h]anthracene	**ND**	**0.2**
Benzo(g,h,i)perylene	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY:	Parameter	Percent Recovery
	1-fluoronapthalene	**99.6%**

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **QA/QC for samples 35808 - 35814.**

Analyst

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons
Quality Assurance Report

Client:	QA/QC	Project #:	QA/QC
Sample ID:	Matrix Duplicate	Date Reported:	01-24-06
Laboratory Number:	35808	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	8100	Date Analyzed:	01-24-06
Condition:	N/A		

Parameter	Sample Result (ug/L)	Duplicate Sample Result (ug/L)	Det. Limit (ug/L)	Percent Difference
Naphthalene	**ND**	**ND**	**0.2**	**0.0%**
Acenaphthylene	**ND**	**ND**	**0.2**	**0.0%**
Acenaphthene	**ND**	**ND**	**0.2**	**0.0%**
Fluorene	**ND**	**ND**	**0.2**	**0.0%**
Phenanthrene	**ND**	**ND**	**0.2**	**0.0%**
Anthracene	**ND**	**ND**	**0.2**	**0.0%**
Fluoranthene	**ND**	**ND**	**0.2**	**0.0%**
Pyrene	**ND**	**ND**	**0.2**	**0.0%**
Benzo[a]anthracene	**ND**	**ND**	**0.2**	**0.0%**
Chrysene	**ND**	**ND**	**0.2**	**0.0%**
Benzo(b)fluoranthene	**ND**	**ND**	**0.2**	**0.0%**
Benzo[k]fluoranthene	**ND**	**ND**	**0.2**	**0.0%**
Benzo(a)pyrene	**ND**	**ND**	**0.2**	**0.0%**
Indeno[1,2,3]pyrene	**ND**	**ND**	**0.2**	**0.0%**
Dibenzo[a,h]anthracene	**ND**	**ND**	**0.2**	**0.0%**
Benzo(g,h,i)perylene	**ND**	**ND**	**0.2**	**0.0%**

ND - Parameter not detected at the stated detection limit.

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **QA/QC for samples 35808 - 35814.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8100
Polynuclear Aromatic Hydrocarbons
Quality Assurance Report

Client:	QA/QC	Project #:	QA/QC
Sample ID:	Matrix Spike	Date Reported:	01-24-06
Laboratory Number:	35808	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	8100	Date Analyzed:	01-24-06
Condition:	N/A		

Parameter	Sample Result (ug/L)	Spike Added (ug/L)	Spiked Sample Result (ug/L)	Det. Limit (ug/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Naphthalene	**ND**	**100.0**	**99.9**	**0.2**	**99.9%**	**10-122**
Acenaphthylene	**ND**	**100.0**	**99.9**	**0.2**	**99.9%**	**10-139**
Acenaphthene	**ND**	**100.0**	**99.9**	**0.2**	**99.9%**	**10-124**
Fluorene	**ND**	**100.0**	**99.9**	**0.2**	**99.9%**	**10-142**
Phenanthrene	**ND**	**100.0**	**99.9**	**0.2**	**99.9%**	**10-155**
Anthracene	**ND**	**100.0**	**99.9**	**0.2**	**99.9%**	**10-126**
Fluoranthene	**ND**	**10.0**	**9.99**	**0.2**	**99.9%**	**14-123**
Pyrene	**ND**	**10.0**	**9.99**	**0.2**	**99.9%**	**10-140**
Benzo[a]anthracene	**ND**	**10.0**	**9.98**	**0.2**	**99.8%**	**10-116**
Chrysene	**ND**	**10.0**	**9.98**	**0.2**	**99.8%**	**12-135**
Benzo(b)fluoranthene	**ND**	**10.0**	**9.98**	**0.2**	**99.8%**	**10-199**
Benzo[k]fluoranthene	**ND**	**5.0**	**4.98**	**0.2**	**99.6%**	**10-150**
Benzo(a)pyrene	**ND**	**10.0**	**9.98**	**0.2**	**99.8%**	**10-159**
Indeno[1,2,3]pyrene	**ND**	**10.0**	**9.99**	**0.2**	**99.9%**	**10-128**
Dibenzo[a,h]anthracene	**ND**	**10.0**	**9.98**	**0.2**	**99.8%**	**10-110**
Benzo(g,h,i)perylene	**ND**	**10.0**	**9.99**	**0.2**	**99.9%**	**10-116**

ND - Parameter not detected at the stated detection limit.

References: Method 8100, Polynuclear Aromatic Hydrocarbons, Test Methods for Evaluating Soild Waste, SW-846, USEPA, September 1986.

Comments: **QA/QC for samples 35808 - 35814.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 1	Date Reported:	01-20-06
Laboratory Number:	35808	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Date Digested:	01-19-06
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	**0.003**	**0.001**	**5.0**
Barium	**0.045**	**0.001**	**100**
Cadmium	**0.001**	**0.001**	**1.0**
Chromium	**ND**	**0.001**	**5.0**
Lead	**ND**	**0.001**	**5.0**
Mercury	**ND**	**0.001**	**0.2**
Selenium	**0.014**	**0.001**	**1.0**
Silver	**ND**	**0.001**	**5.0**

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectorscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Kirtland, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 2	Date Reported:	01-20-06
Laboratory Number:	35809	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Date Digested:	01-19-06
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	**0.003**	**0.001**	**5.0**
Barium	**0.043**	**0.001**	**100**
Cadmium	**0.001**	**0.001**	**1.0**
Chromium	**ND**	**0.001**	**5.0**
Lead	**ND**	**0.001**	**5.0**
Mercury	**ND**	**0.001**	**0.2**
Selenium	**0.017**	**0.001**	**1.0**
Silver	**ND**	**0.001**	**5.0**

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectorscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Kirtland, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 3	Date Reported:	01-20-06
Laboratory Number:	35810	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Date Digested:	01-19-06
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	**0.004**	**0.001**	**5.0**
Barium	**0.054**	**0.001**	**100**
Cadmium	**0.003**	**0.001**	**1.0**
Chromium	**ND**	**0.001**	**5.0**
Lead	**ND**	**0.001**	**5.0**
Mercury	**ND**	**0.001**	**0.2**
Selenium	**0.012**	**0.001**	**1.0**
Silver	**ND**	**0.001**	**5.0**

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectorscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Kirtland, NM.**

Analyst

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ENVIROTECH LABS
PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 4	Date Reported:	01-20-06
Laboratory Number:	35811	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Date Digested:	01-19-06
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	**0.006**	**0.001**	**5.0**
Barium	**0.046**	**0.001**	**100**
Cadmium	**0.001**	**0.001**	**1.0**
Chromium	**ND**	**0.001**	**5.0**
Lead	**ND**	**0.001**	**5.0**
Mercury	**ND**	**0.001**	**0.2**
Selenium	**ND**	**0.001**	**1.0**
Silver	**ND**	**0.001**	**5.0**

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectorscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Kirtland, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 5	Date Reported:	01-20-06
Laboratory Number:	35812	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Date Digested:	01-19-06
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	**0.010**	**0.001**	**5.0**
Barium	**0.111**	**0.001**	**100**
Cadmium	**0.001**	**0.001**	**1.0**
Chromium	**ND**	**0.001**	**5.0**
Lead	**0.004**	**0.001**	**5.0**
Mercury	**ND**	**0.001**	**0.2**
Selenium	**0.037**	**0.001**	**1.0**
Silver	**ND**	**0.001**	**5.0**

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectorscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Kirtland, NM.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	WW 1	Date Reported:	01-20-06
Laboratory Number:	35813	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Date Digested:	01-19-06
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	**ND**	**0.001**	**5.0**
Barium	**0.062**	**0.001**	**100**
Cadmium	**ND**	**0.001**	**1.0**
Chromium	**ND**	**0.001**	**5.0**
Lead	**ND**	**0.001**	**5.0**
Mercury	**ND**	**0.001**	**0.2**
Selenium	**0.031**	**0.001**	**1.0**
Silver	**ND**	**0.001**	**5.0**

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectorscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Kirtland, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	WW 2	Date Reported:	01-20-06
Laboratory Number:	35814	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Analyzed:	01-20-06
Preservative:	Cool	Date Digested:	01-19-06
Condition:	Cool & Intact	Analysis Needed:	RCRA Metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	TCLP Regulatory Level (mg/L)
Arsenic	**0.019**	**0.001**	**5.0**
Barium	**0.179**	**0.001**	**100**
Cadmium	**0.006**	**0.001**	**1.0**
Chromium	**0.002**	**0.001**	**5.0**
Lead	**ND**	**0.001**	**5.0**
Mercury	**ND**	**0.001**	**0.2**
Selenium	**ND**	**0.001**	**1.0**
Silver	**ND**	**0.001**	**5.0**

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectorscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Kirtland, NM.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS
Quality Control / Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	01-20-TM QA/QC	Date Reported:	01-20-06
Laboratory Number:	35808	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	Total RCRA Metals	Date Analyzed:	01-20-06
Condition:	N/A	Date Digested:	01-19-06

Blank & Duplicate Conc. (mg/L)	Instrument Blank (mg/L)	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	0.003	0.003	0.0%	0% - 30%
Barium	ND	ND	0.001	0.045	0.045	0.0%	0% - 30%
Cadmium	ND	ND	0.001	0.001	0.001	0.0%	0% - 30%
Chromium	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Lead	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Mercury	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	0.014	0.014	0.0%	0% - 30%
Silver	ND	ND	0.001	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.500	0.003	0.503	100.0%	80% - 120%
Barium	0.500	0.045	0.544	99.8%	80% - 120%
Cadmium	0.500	0.001	0.501	100.0%	80% - 120%
Chromium	0.500	ND	0.499	99.8%	80% - 120%
Lead	0.500	ND	0.499	99.8%	80% - 120%
Mercury	0.500	ND	0.499	99.8%	80% - 120%
Selenium	0.500	0.014	0.513	99.8%	80% - 120%
Silver	0.500	ND	0.500	100.0%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectorscopy, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples 35808 - 35814.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 1	Date Reported:	01-20-06
Laboratory Number:	35808	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	01-19-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.47**	s.u.		
Conductivity @ 25° C	**1,170**	umhos/cm		
Total Dissolved Solids @ 180C	**736**	mg/L		
Total Dissolved Solids (Calc)	**744**	mg/L		
SAR	**17.1**	ratio		
Total Alkalinity as CaCO3	**224**	mg/L		
Total Hardness as CaCO3	**30.0**	mg/L		
Bicarbonate as HCO3	**224**	mg/L	3.67	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**<0.1**	mg/L	0.00	meq/L
Nitrite Nitrogen	**0.008**	mg/L	0.00	meq/L
Chloride	**30.8**	mg/L	0.87	meq/L
Fluoride	**0.92**	mg/L	0.05	meq/L
Phosphate	**0.4**	mg/L	0.01	meq/L
Sulfate	**320**	mg/L	6.66	meq/L
Iron	**0.005**	mg/L	0.00	meq/L
Calcium	**11.0**	mg/L	0.55	meq/L
Magnesium	**2.40**	mg/L	0.20	meq/L
Potassium	**2.58**	mg/L	0.07	meq/L
Sodium	**240**	mg/L	10.44	meq/L
Cations			11.26	meq/L
Anions			11.26	meq/L
Cation/Anion Difference			**0.06%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Kirtland, NM.**

Analyst

Review

5796 U.S. Highway 64 ◦ Farmington, NM 87401 ◦ Tel 505 ◦ 632 ◦ 0615 ◦ Fax 505 ◦ 632 ◦ 1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 2	Date Reported:	01-20-06
Laboratory Number:	35809	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	01-19-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.61**	s.u.		
Conductivity @ 25° C	**1,350**	umhos/cm		
Total Dissolved Solids @ 180C	**862**	mg/L		
Total Dissolved Solids (Calc)	**861**	mg/L		
SAR	**15.6**	ratio		
Total Alkalinity as CaCO3	**234**	mg/L		
Total Hardness as CaCO3	**49.4**	mg/L		
Bicarbonate as HCO3	**234**	mg/L	3.84	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**<0.1**	mg/L	0.00	meq/L
Nitrite Nitrogen	**0.007**	mg/L	0.00	meq/L
Chloride	**72.4**	mg/L	2.04	meq/L
Fluoride	**1.19**	mg/L	0.06	meq/L
Phosphate	**0.4**	mg/L	0.01	meq/L
Sulfate	**345**	mg/L	7.18	meq/L
Iron	**0.008**	mg/L	0.00	meq/L
Calcium	**18.7**	mg/L	0.93	meq/L
Magnesium	**2.60**	mg/L	0.21	meq/L
Potassium	**6.44**	mg/L	0.16	meq/L
Sodium	**272**	mg/L	11.83	meq/L
Cations			13.14	meq/L
Anions			13.14	meq/L
Cation/Anion Difference			**0.06%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Kirtland, NM.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 3	Date Reported:	01-20-06
Laboratory Number:	35810	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	01-19-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.49**	s.u.		
Conductivity @ 25° C	**1,200**	umhos/cm		
Total Dissolved Solids @ 180C	**776**	mg/L		
Total Dissolved Solids (Calc)	**766**	mg/L		
SAR	**14.4**	ratio		
Total Alkalinity as CaCO3	**274**	mg/L		
Total Hardness as CaCO3	**47.8**	mg/L		
Bicarbonate as HCO3	**274**	mg/L	4.49	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.7**	mg/L	0.01	meq/L
Nitrite Nitrogen	**0.102**	mg/L	0.00	meq/L
Chloride	**56.0**	mg/L	1.58	meq/L
Fluoride	**1.31**	mg/L	0.07	meq/L
Phosphate	**0.4**	mg/L	0.01	meq/L
Sulfate	**272**	mg/L	5.66	meq/L
Iron	**0.007**	mg/L	0.00	meq/L
Calcium	**18.2**	mg/L	0.91	meq/L
Magnesium	**2.20**	mg/L	0.18	meq/L
Potassium	**3.95**	mg/L	0.10	meq/L
Sodium	**245**	mg/L	10.64	meq/L
Cations			11.83	meq/L
Anions			11.83	meq/L
Cation/Anion Difference			**0.05%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Kirtland, NM.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 4	Date Reported:	01-20-06
Laboratory Number:	35811	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	01-19-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.45**	s.u.		
Conductivity @ 25° C	**1,790**	umhos/cm		
Total Dissolved Solids @ 180C	**1,110**	mg/L		
Total Dissolved Solids (Calc)	**1,140**	mg/L		
SAR	**19.4**	ratio		
Total Alkalinity as CaCO3	**312**	mg/L		
Total Hardness as CaCO3	**52.1**	mg/L		
Bicarbonate as HCO3	**312**	mg/L	5.11	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.1**	mg/L	0.00	meq/L
Nitrite Nitrogen	**0.018**	mg/L	0.00	meq/L
Chloride	**78.8**	mg/L	2.22	meq/L
Fluoride	**0.78**	mg/L	0.04	meq/L
Phosphate	**0.3**	mg/L	0.01	meq/L
Sulfate	**478**	mg/L	9.95	meq/L
Iron	**<0.001**	mg/L	0.00	meq/L
Calcium	**18.9**	mg/L	0.94	meq/L
Magnesium	**4.88**	mg/L	0.40	meq/L
Potassium	**3.05**	mg/L	0.08	meq/L
Sodium	**366**	mg/L	15.92	meq/L
Cations			17.34	meq/L
Anions			17.34	meq/L
Cation/Anion Difference			**0.01%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Kirtland, NM.**

Christine M Walters
Analyst

Review

5796 U.S. Highway 64 ◦ Farmington, NM 87401 ◦ Tel 505 ◦ 632 ◦ 0615 ◦ Fax 505 ◦ 632 ◦ 1865

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	MW 5	Date Reported:	01-20-06
Laboratory Number:	35812	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	01-19-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.43**	s.u.		
Conductivity @ 25° C	**2,490**	umhos/cm		
Total Dissolved Solids @ 180C	**1,620**	mg/L		
Total Dissolved Solids (Calc)	**1,583**	mg/L		
SAR	**23.7**	ratio		
Total Alkalinity as CaCO3	**286**	mg/L		
Total Hardness as CaCO3	**72.8**	mg/L		
Bicarbonate as HCO3	**286**	mg/L	4.69	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.1**	mg/L	0.00	meq/L
Nitrite Nitrogen	**0.017**	mg/L	0.00	meq/L
Chloride	**91.2**	mg/L	2.57	meq/L
Fluoride	**0.86**	mg/L	0.05	meq/L
Phosphate	**0.7**	mg/L	0.02	meq/L
Sulfate	**780**	mg/L	16.24	meq/L
Iron	**<0.001**	mg/L	0.00	meq/L
Calcium	**27.8**	mg/L	1.39	meq/L
Magnesium	**3.61**	mg/L	0.30	meq/L
Potassium	**6.43**	mg/L	0.16	meq/L
Sodium	**499**	mg/L	21.71	meq/L
Cations			23.56	meq/L
Anions			23.57	meq/L
Cation/Anion Difference			**0.04%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Kirtland, NM.**

Christine M Walters
Analyst

Review

5796 U.S. Highway 64 ◦ Farmington, NM 87401 ◦ Tel 505 ◦ 632 ◦ 0615 ◦ Fax 505 ◦ 632 ◦ 1865

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	WW 1	Date Reported:	01-20-06
Laboratory Number:	35813	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	01-19-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**7.94**	s.u.		
Conductivity @ 25° C	**493**	umhos/cm		
Total Dissolved Solids @ 180C	**290**	mg/L		
Total Dissolved Solids (Calc)	**278**	mg/L		
SAR	**8.7**	ratio		
Total Alkalinity as CaCO3	**116**	mg/L		
Total Hardness as CaCO3	**16.4**	mg/L		
Bicarbonate as HCO3	**116**	mg/L	1.90	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.5**	mg/L	0.01	meq/L
Nitrite Nitrogen	**0.004**	mg/L	0.00	meq/L
Chloride	**40.4**	mg/L	1.14	meq/L
Fluoride	**0.32**	mg/L	0.02	meq/L
Phosphate	**0.8**	mg/L	0.03	meq/L
Sulfate	**65.0**	mg/L	1.35	meq/L
Iron	**<0.001**	mg/L	0.00	meq/L
Calcium	**5.92**	mg/L	0.30	meq/L
Magnesium	**1.56**	mg/L	0.13	meq/L
Potassium	**1.08**	mg/L	0.03	meq/L
Sodium	**91.8**	mg/L	3.99	meq/L
Cations			4.45	meq/L
Anions			4.44	meq/L
Cation/Anion Difference			**0.01%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Kirtland, NM.**

Christine M Walters
Analyst

Review

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	Richardson	Project #:	98094-009
Sample ID:	WW 2	Date Reported:	01-20-06
Laboratory Number:	35814	Date Sampled:	01-18-06
Chain of Custody:	15404	Date Received:	01-18-06
Sample Matrix:	Water	Date Extracted:	N/A
Preservative:	Cool	Date Analyzed:	01-19-06
Condition:	Cool & Intact		

Parameter	Analytical Result	Units		
pH	**8.33**	s.u.		
Conductivity @ 25° C	**417**	umhos/cm		
Total Dissolved Solids @ 180C	**282**	mg/L		
Total Dissolved Solids (Calc)	**271**	mg/L		
SAR	**12.8**	ratio		
Total Alkalinity as CaCO3	**84.4**	mg/L		
Total Hardness as CaCO3	**7.67**	mg/L		
Bicarbonate as HCO3	**84.4**	mg/L	1.38	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**<0.1**	mg/L	0.00	meq/L
Nitrite Nitrogen	**0.003**	mg/L	0.00	meq/L
Chloride	**64.0**	mg/L	1.81	meq/L
Fluoride	**0.01**	mg/L	0.00	meq/L
Phosphate	**0.2**	mg/L	0.01	meq/L
Sulfate	**56.0**	mg/L	1.17	meq/L
Iron	**0.001**	mg/L	0.00	meq/L
Calcium	**2.72**	mg/L	0.14	meq/L
Magnesium	**0.87**	mg/L	0.07	meq/L
Potassium	**0.71**	mg/L	0.02	meq/L
Sodium	**95.1**	mg/L	4.14	meq/L
Cations			4.36	meq/L
Anions			4.36	meq/L
Cation/Anion Difference			**0.02%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
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Comments: **Kirtland, NM.**

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Review

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15404

CHAIN OF CUSTODY RECORD

Client / Project Name	Project Location
Richardson	Kirtland, NM
Sampler:	**Client No.**
CJC/SLC	98094-009

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX	Cat/Anions	Lead (8 metals)	8100 PAHs			Remarks
MW1	1/16/06	1340	35808	H_2O	5	✓	✓	✓	✓			
MW2		1350	35809		5	✓	✓	✓	✓			
MW3		1430	35810		5	✓	✓	✓	✓			
MW4		1446	35811		5	✓	✓	✓	✓			
MW5		1418	35812		5	✓	✓	✓	✓			
WW1		1605	35813		5	✓	✓	✓	✓			
WW2		1620	35814		5	✓	✓	✓	✓			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Shawna Cook	1/16/06	1705	MBruce	1/18/06	1705
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		