AP - 41

STAGE 1 & 2 REPORTS

DATE: 10-8-08

AP-41

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October 08, 2008

Mr. Jeff Dann
Plains Marketing, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002

Re:
Hugh Gathering – East Site – Lea County, New Mexico
Groundwater Investigation Results – September 2008
Plains SRS No. 2002-10235

Dear Jeff:

In September 2008, Premier Environmental Services, Inc. (Premier) conducted an initial groundwater evaluation at the Plains Marketing, L.P. (Plains) Hugh Gathering – East Site (Site), in Lea County, New Mexico. The investigation was based on the New Mexico Oil Conservation Division (NMOCD) approved soil remediation and groundwater investigation work plan dated July 1, 2008.

On September 5, 2008, one monitor well was installed at the Site to determine if groundwater had been affected by the crude oil release at Hugh Gathering site. Monitor well MW-13 is located 37 feet south of the gathering line, and 35 feet east of the right-of-way fence, associated with the four-lane highway, New Mexico State Road 18 (NMSR18). Attached is a Site location map (Figure 1) and a Site layout map with the location of monitor well MW-13 with respect to the excavation completed at the site to remove hydrocarbon affected soil (Figure 2). Details of the hydrocarbon removal and installation of the clay liner that were completed as part of the NMOCD approved Soil Remediation will be presented in a separate report.

The location of the well was placed as close to the excavation as practically possible and down gradient of the release point. The gradient map was based on the groundwater gauging data collected from sampling events at the Hugh Gathering Site immediately west across NMSR18. The groundwater gradient at the Site is towards the south-southeast.

Field Soil Investigation – September 2008

This letter summarizes the September 2008 groundwater investigation and the resulting data. The investigation was conducted by advancing and installing one monitor well to a depth approximately ten feet below the first groundwater bearing unit contact (59 feet bgs).

On September 5 2008, Mr. Ben Latham, with Premier, met with representatives of Straub Drilling Corporation of Stanton, Texas at the Site. A walk-through site survey was conducted to note the Site conditions and access issues, and also to conduct a site safety meeting and Health and Safety Plan review. The survey was then followed by advancing the borehole for monitor well MW-13 using air rotary drilling techniques. Discrete soil samples were collected at five-foot intervals using an open ended core tool attached to the end of the drill string and inspected for lithology. The soil samples below 35 feet below ground surface (bgs) were divided into two portions. One portion was stored in laboratory supplied glassware at recommended temperature (on ice) for a potential laboratory analyses. The second portion of each sample was placed within a self sealing, polypropylene bag, allowed to volatilize for at least fifteen minutes, then field analyzed for light end hydrocarbons using an Organic Vapor Monitor (OVM). If the hydrocarbon analysis resulted in detection, the first portion stored would be submitted for further laboratory analyses based on the highest OVM readings. Soils were continuously observed during drilling and described using a modified version of the Unified Soil Classification System, allowing for calcified soils (caliche) present in the region.

The borehole for monitor well MW-13 was located approximately 37 feet to the south of the gathering line and 35 feet east of NMSR18. The borehole for monitor well MW-13 was advanced to a total depth of 70 feet bgs (Attachment A). Groundwater was first encountered in the boring for monitor well MW-13 at approximately 60 feet bgs. No visible PSH was observed on the drill rod, sample tools or produced groundwater that were encountered during the drilling of these boreholes. No hydrocarbon odors or elevated OVM readings were detected in the soil samples collected from the boring.

Field screening of soil samples indicated no detectable concentrations of organic vapors from 35 feet bgs to the first groundwater bearing zone at 60 feet bgs in MW-13. All OVM readings are recorded on the boring logs for monitor well MW-13. No odors or staining were encountered in the boring.

Based on the lack of OVM readings and odor throughout the boring and at the first groundwater bearing unit, there were no soil samples submitted for laboratory analysis.

Field Groundwater Investigation – September 2008

The boring was advanced an additional ten feet beyond the first encounter of groundwater and allowed to sit for approximately ten minutes. This would allow

groundwater to enter the well bore and assist in analyzing aquifer flow characteristics. The groundwater was then evacuated from the borehole to help clean the hole in preparation for installing two-inch diameter PVC casing. The PVC casing was installed using 20 feet of 0.010-inch slotted screen and 53 feet of riser. 20/40 screened silica sand filter pack was placed from total depth up to two feet above the top of the PVC screen at approximately 48 feet bgs. Bentonite chips were placed from the top of the filter pack up to two feet bgs and hydrated. A metal shroud was mounted in a two foot by two foot concrete pad to the well. The driller's Well Record and Log (Attachment B) to the New Mexico Office of the State Engineer is attached.

On September 5, 2008, Mr. Robert Grubbs and Mr. Shane Diller, with Premier, arrived at the Site to develop the new well in preparation for future groundwater sampling. The well was developed by hand bailing at least five well volumes until the water clarity was acceptable.

On September 8, 2008, Mr. Grubbs and Mr. Diller purged the well by hand bailing at least three well volumes and collected groundwater from monitor well MW-13. The samples were placed on ice and transported to Trace Analysis, Inc Laboratories (Trace) in Midland, Texas and analyzed for the following constituents:

General Chemistry

Calcium	Bicarbonate Alkalinity
Magnesium	Carbonate Alkalinity
Potassium	Nitrate
Sodium	Phosphate
Chloride	Fluoride
Sulfate	

Resource Conservation and Recovery Act (RCRA) Metals

Arsenic	Lead
Barium	Mercury
Cadmium	Selenium
Chromium	Silver

Additional Water Quality Control Commission (WQCC) Metals

Copper	Boron
Iron	Cobalt
Manganese	Molybdenum
Zinc	Nickel
Aluminum	

All compounds listed in U.S. Environmental Protection Agency (EPA) SW-846 Methods: 8260 Volatile Organic Compounds (VOCs) & 8270 Semi Volatile Organic Compounds (SVOCs)

Groundwater Analytical Results

Upon receipt and review of the preliminary results of groundwater sample MW13 it was determined the initial analysis was performed with a dilution factor of 100 based on an initial OVM reading by the laboratory. The preliminary results indicated a presence of benzene at a concentration of 1.40 mg/L, which is above the NMOCD regulatory limits of 0.01 mg/L. Complete laboratory results from the groundwater sample from monitor well MW-13 are summarized in Table 1 and the comprehensive analytical reports are presented in Attachment C (provided on CD only). A summary of detections is presented in Table 2 below.

Table 2: Summary of Analytical results of detected parameters

Parameter	MW-13 Results 09/08/2008
Total Metals	**mg/L**
Total Barium	0.188
Total Chromium	0.005
Fluoride[2]	**2.17**
Nitrate-N_2	1.29
Chloride[1]	**259**
Total Copper	0.02
Total Iron	5.01
Total Manganese	0.133
Sulfate	118
Total Zinc	0.065
pH	7.37
Total Aluminum	**13**
Total Boron	0.352
Total Cobalt	0.004
Total Nickel	0.008
Alkalinity (as $CaCO_3$)	
Bicarbonate Alkalinity	335
Total Alkalinity	335
Cations	
Dissolved Calcium	204
Dissolved Potassium	4.27

Parameter	MW-13 Results 09/08/2008
Dissolved Magnesium	24.1
Dissolved Sodium	173
Specific Conductance	1580
Semi Volatiles	
Naphthalene	0.0106
2-Methylnaphthalene	0.00721
1-Methylnaphthalene	0.00938
Dibenzofuran	0.0011
Fluorene	0.000297
Phenanthrene	0.000753
bis(2-ethylhexyl)phthalate	**0.081**
Volatiles	
Benzene	**1.4**

Note: Concentrations in bold indicate exceedence with respect to New Mexico Water Quality Standards.
[1] Dilution factor = 10; [2] Dilution Factor = 5

Based on the benzene concentration observed in the initial sample (upon ensuring with the lab that the sample is within the recommended holding time limit), Premier requested a reanalysis of the sample at 10 times sample dilution. The results obtained from this run are summarized in Table 1. In addition, to confirm the presence of benzene concentration levels, monitor well was re-sampled on September 24th 2008 for benzene, toluene, ethylbenzene, and total xylenes (BTEX). These results (included in Table 1) showed concentrations of benzene at 1.02 mg/L, toluene at 0.0175 mg/L, ethylbenzene at 0.0069 mg/L and xylenes 0.0812 mg/L.

Table 1 summarizes the results of all laboratory analyses on the samples obtained from MW-13. It also includes the applicable regulatory limits, in the order of NMOCD, EPA Primary Standards, EPA Secondary Standards, and New Mexico Groundwater Risk Based Screening Levels. If a Chemical of Concern (COC) was observed to have a detected concentration and did not have any regulatory limits from the New Mexico or EPA Regulations, the Residential Groundwater Protective Concentration Limit (PCLs) from the Tier 1, Texas Risk Reduction Program has been used as the limits to evaluate the analytical results.

Analytical results obtained from the monitor well MW-13 were compared to analytical data from monitor wells at Hugh Gathering West in Table 3. Analytical data from samples MW-13 with a dilution factor (DF) = 100 and DF = 10 did not show any similarities among the constituent ratios with the analytical data from monitor wells on the west side of NMSR18. The sample from monitor well MW-13 that was re-sampled

for BTEX only, was found to have similar constituent ratios to data from monitor well MW-3 at the Hugh Gathering West site.

In summary the main COCs associated with the crude oil release that were detected in the groundwater sample from monitor well MW 13 above the regulatory limits are benzene and bis(2-ethylhexyl)Phthalate.

Proposed Remedial Approach

Based on the analytical results of COCs detected in monitor well MW-13 (presented in Table 1) Premier recommends quarterly sampling of this well. This helps to determine if contaminant concentrations are decreasing as a result of the excavation activities and placement of the liner to prevent future migration of residual hydrocarbons from reaching the groundwater.

Premier recommends installation of two additional wells, one to the southeast and one directly east of monitor well MW-13, to delineate the extent of dissolved phase hydrocarbons in groundwater. The new wells should be spaced approximately 75-100 feet from MW-13. Hydrologic gradient maps based on site data from the Hugh Gathering Site located on the west side of NMSR18 indicate the groundwater gradient is to the south, southeast across the site (Figure 3). The location of the wells will have to be placed with careful consideration of the oil well and its associated drilling pit located just southeast of the Site.

The analytical results from the collection and analysis of quarterly groundwater samples from the Hugh Gathering Site (East and West) site will be presented in quarterly letter reports to Plains. An annual report will be provided to Plains, and upon approval from Plains, presented to the NMOCD before the end of March each year.

Upon the review of this document, should you have any questions concerning the information presented or the attached materials, please call us at (281) 240-5200.

Yours very truly,

Chan Patel,
Senior Project Manager

Shashi Abburi
Staff Engineer

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Attachments:
Figure 1: Site Location Maps
Figure 2: Site Layout with MW-13
Figure 3: 3rd Quarter 2008 Hugh Gathering West Gradient Map
Table 1: Analytical Results and the Regulatory limits of COCs at MW-13
Table 2: Summary of Analytical results of detected parameters
Table 3: Comparison of Analytical Data
Attachment A – Boring Log
Attachment B – Drillers Well Record and Log
Attachment C – Laboratory Analytical Reports *(Available electronically on CD only)*
Analytical Report 1 (Dilution Factor: 100) – 172938
Analytical Report 2 (Dilution Factor: 10 for VOCs) – 172938
Analytical Report 3 (BTEX Only) – 174540

DISCLAIMER

Premier has examined and relied upon the file information provided by Plains. Premier has not conducted an independent examination of the information contained in the Plains files; furthermore, we assume the genuineness of the documents reviewed and that the information provided in these documents to be true and accurate. Premier has prepared this report using the level of care and professionalism in the industry for similar projects under similar conditions. Premier will not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time this report was prepared. Premier believes the conclusions stated herein are factual, but no guarantee is made or implied.

FIGURES

Figure 1 – Site Location Map
Figure 2 – Site Layout with MW-13
Figure 3 – 3rd Quarter 2008 Hugh Gathering Gradient Map

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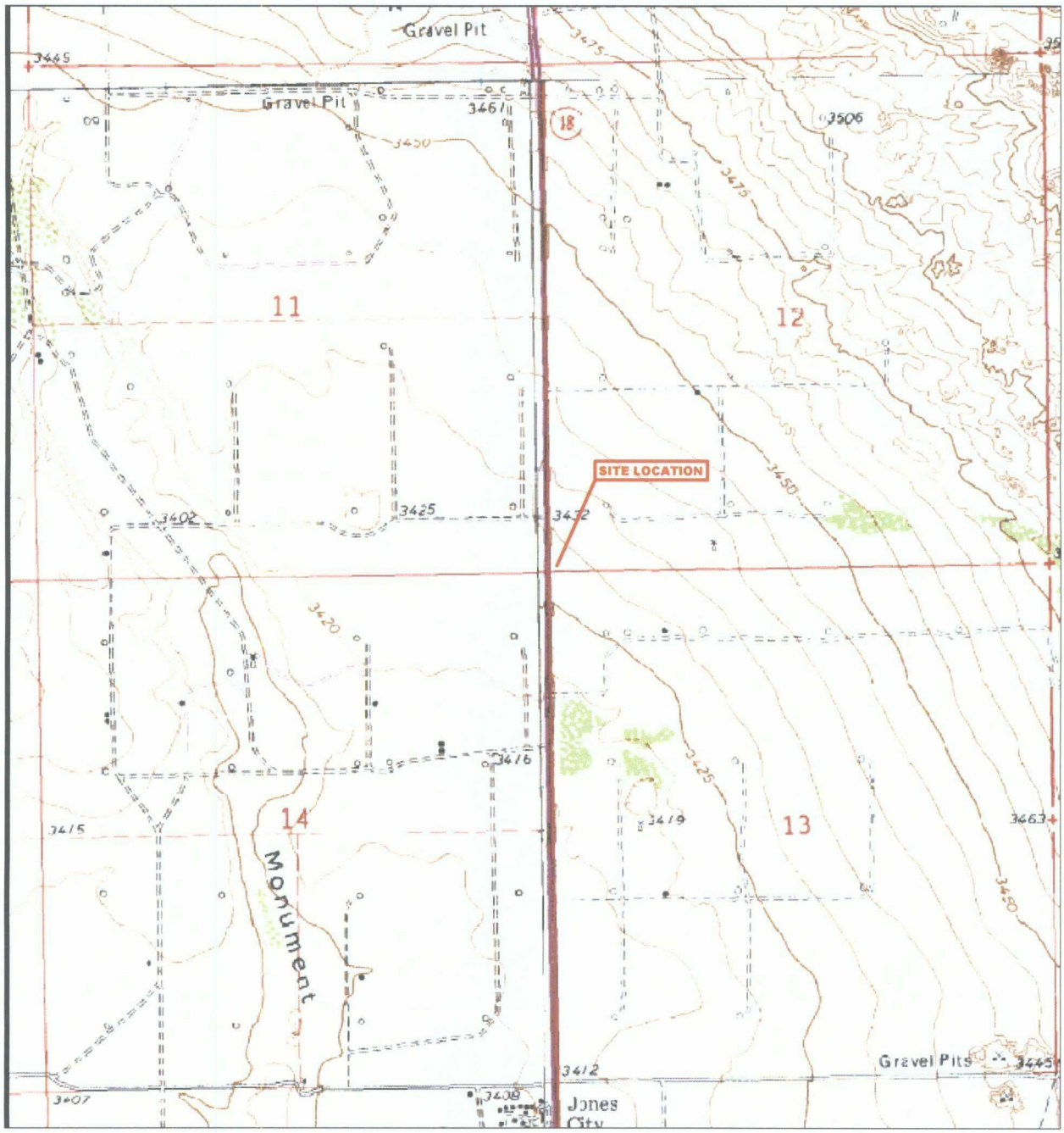

Eunice NE Quadrangle
32°29'11"N Latitude & 103°07'31"W Longitude

0 1/2 mile 1 mile
Distance in Miles

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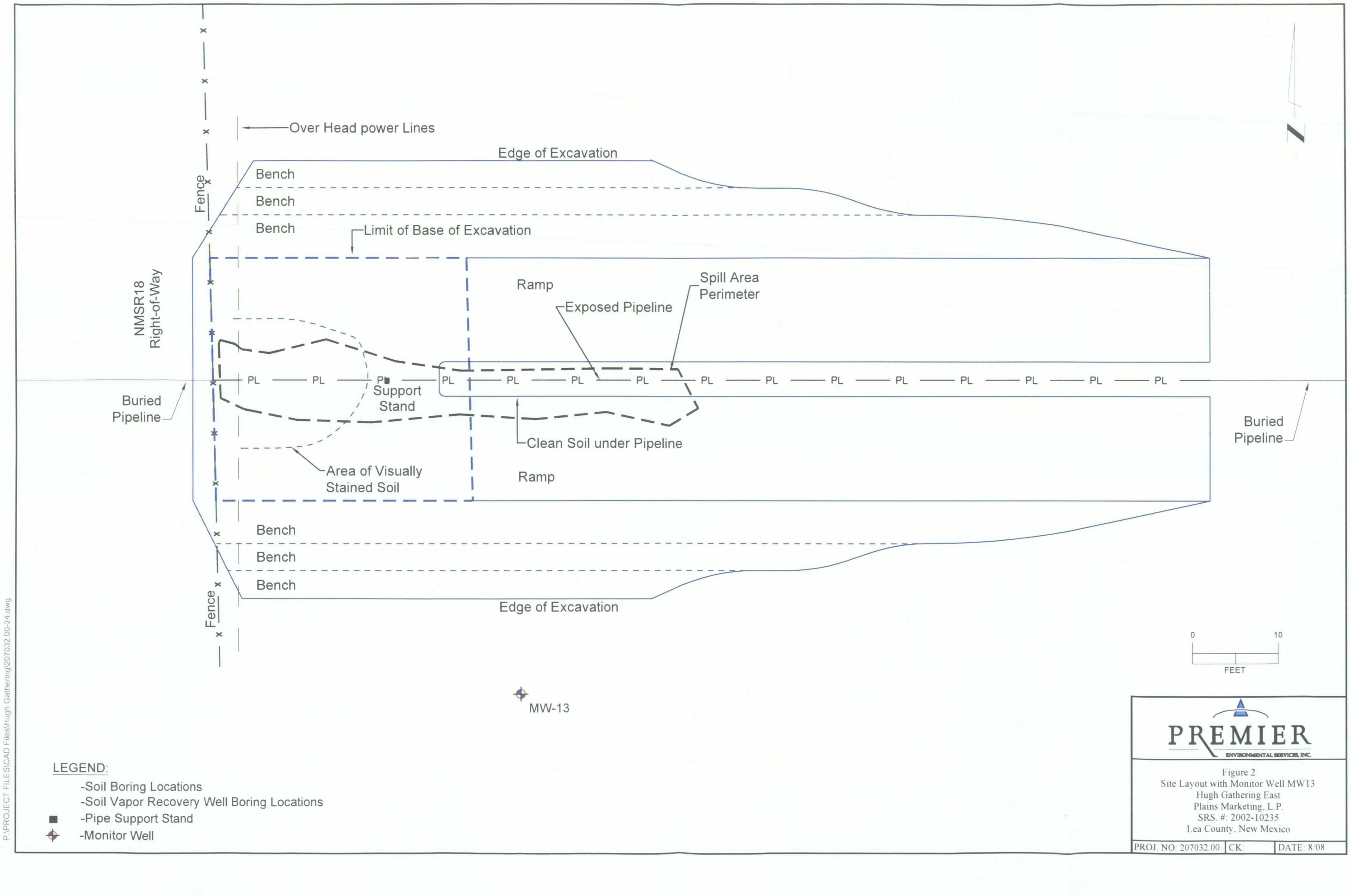
Figure 1
Site Location Map
Hugh Gathering
Plains Marketing, L.P.
SRS. #: 2002-10235
Lea County, New Mexico

PROJ. NO: 207032.00	CK:	DATE: 3/08

P:\PROJECT FILES\CAD Files\Hugh Gathering\207032.00-9.dwg



LEGEND:

-Soil Boring Locations

-Soil Vapor Recovery Well Boring Locations

■ -Pipe Support Stand

-Monitor Well

P:\PROJECT FILES\CAD Files\Hugh Gathering\207032.00-24.dwg

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Figure 2
Site Layout with Monitor Well MW13
Hugh Gathering East
Plains Marketing, L.P.
SRS. #: 2002-10235
Lea County, New Mexico

PROJ. NO: 207032.00	CK:	DATE: 8/08

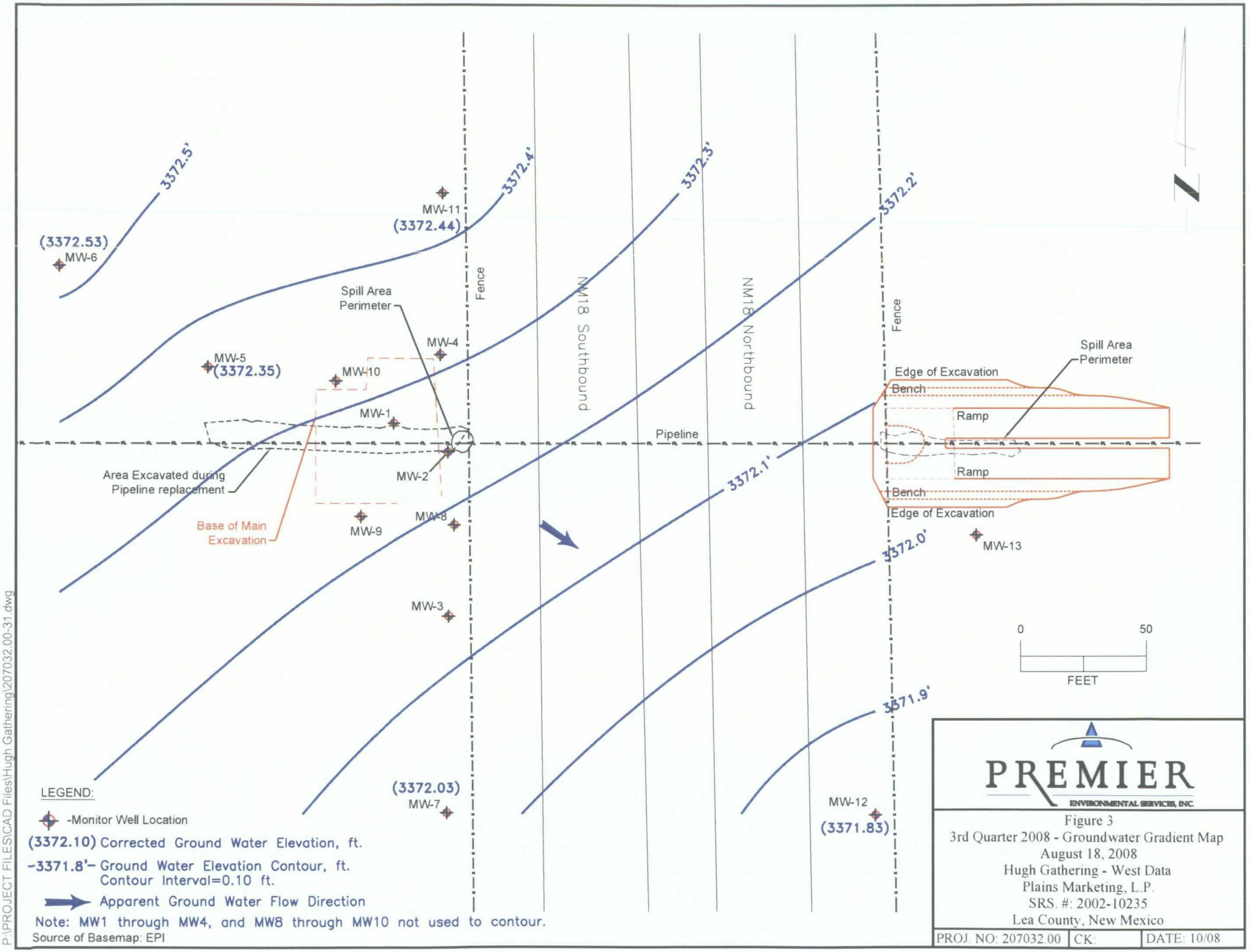
3372.5'
3372.4'
3372.3'
3372.2'
3372.1'
3372.0'
3371.9'
(3372.53)
MW-6
MW-11
(3372.44)
Spill Area
Perimeter
Fence
NM18 Southbound
NM18 Northbound
Fence
MW-4
MW-5
(3372.35)
MW-10
MW-1
Pipeline
Area Excavated during
Pipeline replacement
MW-2
Base of Main
Excavation
MW-9
MW-8
MW-3
(3372.03)
MW-7
MW-12
(3371.83)
Spill Area
Perimeter
Edge of Excavation
Bench
Ramp
Ramp
Bench
Edge of Excavation
MW-13
0
50
FEET
LEGEND:
-Monitor Well Location
(3372.10) Corrected Ground Water Elevation, ft.
-3371.8'- Ground Water Elevation Contour, ft.
Contour Interval=0.10 ft.
Apparent Ground Water Flow Direction
Note: MW1 through MW4, and MW8 through MW10 not used to contour.
Source of Basemap: EPI
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Figure 3
3rd Quarter 2008 - Groundwater Gradient Map
August 18, 2008
Hugh Gathering - West Data
Plains Marketing, L.P.
SRS. #: 2002-10235
Lea County, New Mexico
PROJ. NO: 207032.00
CK:
DATE: 10/08
P:\PROJECT FILES\CAD Files\Hugh Gathering\207032.00-31.dwg

TABLES

Table 1 – Analytical Results and the Regulatory limits of COC at MW-13
Table 2 – Summary of Analytical Results of Detected Parameters
Table 3 – Comparison of Analytical Data

TABLE 1
ANALYTICAL RESULTS of MW-13 Preliminary Analysis
Plains Pipeline, L.P.
SRS No. 2002-10235
Hugh Gathering East
Lea County, New Mexico

Parameter	MW13 Results			New Mexico Water Quality Standards (NMOCD)	EPA Primary MCLs	EPA Secondary MCLs	Selected NM GW RBSL	TRRP Tier 1 Residential GW PCLs
	9/08/2008 (DF=100)	Rerun - 9/08/08 (DF=10:VOCs)	Reanalysis for BTEX - 9/24/2008					
Total Metals	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Total Silver	<0.00500			0.05		0.1		
Total Arsenic	<0.0100			0.1	0.01			
Total Barium	0.188			1	2			
Total Cadmium	<0.00200			0.01	0.005			
Total Chromium	0.005			0.05	0.1			
Total Mercury	<0.000200			0.002	0.002			
Total Lead	<0.00500			0.05	0.015*			
Total Selenium	<0.0200			0.05	0.05			
Chloride[1]	**259**			250		250		
Fluoride[2]	**2.17**			1.6	4	2		
Nitrate-N[2]	1.29			10	10			
Total Copper	0.02			1	1.3*	1		
Total Iron	5.01			1		0.3		
Total Manganese	0.133			0.2		0.05		
Sulfate	118			600		250		
Total Zinc	0.065			10		5		
pH (s.u.)	7.37			6-9		6.5 - 8.5		
Total Aluminum	**13**			5		0.05 - 0.2		
Total Boron	0.352			0.75				
Total Cobalt	0.004			0.05				
Total Molybdenum	<0.00613			1				
Total Nickel	0.008			0.2				
Alkalinity (as $CaCO_3$)								
Hydroxide Alkalinity	<1.00							
Carbonate Alkalinity	<1.00							
Biarbonate Alkalinity	335							
Total Alkalinity	335							
Cations								
Dissolved Calcium	204							
Dissolved Potassium	4.27							
Dissolved Magnesium	24.1							
Dissolved Sodium	173							
PO_4-P	<2.5							
Specific Conductance (µMHOS/m)	1580							
Semi Volatiles								
Pyridine	<0.00500							
N-Nitrosodimethylamine	<0.00500			Tox				
2-Picoline	<0.00500							
Methylmethanesulfonate	<0.00500							
Ethylmethanesulfonate	<0.00500							
Phenol	<0.00500			0.005 (Tox)				
Aniline	<0.00500							0.16
bis(2-chloroethyl)ether	<0.00500			Tox				

TABLE 1
ANALYTICAL RESULTS of MW-13 Preliminary Analysis
Plains Pipeline, L.P.
SRS No. 2002-10235
Hugh Gathering East
Lea County, New Mexico

Parameter	MW13 Results			New Mexico Water Quality Standards (NMOCD)	EPA Primary MCLs	EPA Secondary MCLs	Selected NM GW RBSL	TRRP Tier 1 Residential GW PCLs
	9/08/2008 (DF=100)	Rerun - 9/08/08 (DF=10;VOCs)	Reanalysis for BTEX - 9/24/2008					
2-Chlorophenol	<0.00500							
1,3-Dichlorobenzene(meta)	<0.00500			Tox				
1,4-Dichlorobenzene(para)	<0.00500			Tox	0.075			
Benzylalcohol	<0.00500							
1,2-Dichlorobenzene(ortho)	<0.00500			Tox	0.6			
2-Methylphenol	<0.00500							
bis(2-chloroisopropyl)ether	<0.00500			Tox				
4-Methylphenol/3-Methylphenol	<0.00500							
N-Nitrosodi-n-propylamine	<0.00500							
Hexachloroethane	<0.00500			Tox				
Acetophenone	<0.00500							
Nitrobenzene	<0.00500			Tox				
N-Nitrosopiperidine	<0.00500							
Isophorone	<0.00500			Tox				
2-Nitrophenol	<0.00500							
2,4-Dimethylphenol	<0.00500							
bis(2-chloroethoxy)methane	<0.00500							
2,4-Dichlorophenol	<0.00500			Tox				
1,2,4-Trichlorobenzene	<0.00500				0.07			
Benzoic acid	<0.00500							
Naphthalene	0.0112			0.03				
a,a-Dimethylphenethylamine	<0.00500							
4-Chloroaniline	<0.00500							
2,6-Dichlorophenol	<0.0100							
Hexachlorobutadiene	<0.00500							
N-Nitroso-di-n-butylamine	<0.00500			Tox				
4-Chloro-3-methylphenol	<0.00500							
2-Methylnaphthalene	0.00721							0.0978
1-Methylnaphthalene	0.0098							1.71
1,2,4,5-Tetrahlorobenzene	<0.00500			Tox				
Hexachlorocyclopentadiene	<0.00500				0.05			
2,4,6-Trichlorophenol	<0.0100			Tox				
2,4,5-Trichlorophenol	<0.00500			Tox				
2-Chloronaphthalene	<0.00500							
1-Chloronaphthalene	<0.00500							
2-Nitroaniline	<0.00500							
Dimethylphthalate	<0.00500			Tox				
Acenaphthylene	<0.00500							
2,6-Dinitrotoluene	<0.00500							
3-Nitroaniline	<0.00500							
Acenaphthene	<0.00500						2.2	
2,4-Dinitrophenol	<0.00500			Tox				
Dibenzofuran	<0.00500							0.098
Pentachlorobenzene	<0.00500			Tox				
4-Nitrophenol	<0.0250							
2,4-Dinitrotoluene	<0.00500			Tox				
1-Naphthylamine	<0.00500							

TABLE 1
ANALYTICAL RESULTS of MW-13 Preliminary Analysis
Plains Pipeline, L.P.
SRS No. 2002-10235
Hugh Gathering East
Lea County, New Mexico

Parameter	MW13 Results			New Mexico Water Quality Standards (NMOCD)	EPA Primary MCLs	EPA Secondary MCLs	Selected NM GW RBSL	TRRP Tier 1 Residential GW PCLs
	9/08/2008 (DF=100)	Rerun - 9/08/08 (DF=10;VOCs)	Reanalysis for BTEX - 9/24/2008					
2,3,4,6-Tetrachlorophenol	<0.0100							
2-Naphthylamine	<0.00500							
Fluorene	<0.00500			Tox			1.46	
4-Chlorophenyl-phenylether	<0.00500							
Diethylphthalate	<0.00500			Tox				
4-Nitroaniline	<0.00500							
Diphenylhydrazine	<0.00500			Tox				
4,6-Dinitro-2-methylphenol	<0.00500							
Diphenylamine	<0.00500							
4-Bromophenyl-phenylether	<0.00500							
Phenacetin	<0.00500							
Hexachlorobenzene	<0.00500			Tox	0.001			
4-Aminobiphenyl	<0.00500							
Pentachlorophenol	<0.0100			Tox	0.001			
Anthracene	<0.00500			Tox			11**	
Pentachloronitrobenzene	<0.00500							
Pronamide	<0.00500							
Phenanthrene	<0.00500			Tox			1.1**	
Di-n-butylphthalate	<0.00500			Tox				
Fluoranthene	<0.00500			Tox			1.46**	
Benzidine	<0.0250			Tox				
Pyrene	<0.00500			Tox			1.1**	
p-Dimethylaminoazobenzene	<0.00500							
Butylbenzylphthalate	<0.00500							
Benzo(a)anthracene	<0.00500						0.0012	
3,3-Dihlorobenzidine	<0.00500							
Chrysene	<0.00500						0.117**	
bis(2-ethylhexyl)phthalate	**0.081**			Tox	0.006			
Di-n-octylphthalate	<0.00500							
Benzo(b)fluoranthene	<0.00500						0.0012	
Benzo(k)fluoranthene	<0.00500			Tox			0.0012**	
7,12-Dimethylbenz(a)anthracene	<0.00500							
Benzo(a)pyrene	<0.00500			0.0007	0.0002			
3-Methylcholanthrene	<0.00500							
Dibenzo(a,j)acridine	<0.00500							
Indeno(1,2,3-cd)pyrene	<0.00500							
Dibenzo(a,h)anthraene	<0.00500						0.00012	
Benzo(g,h,i)perylene	<0.00500							
Volatiles								
Bromochloromethane	<0.1	<0.01						
Dichlorodifluoromethane	<0.1	<0.01		Tox				
Chloromethane(methylhloride)	<0.1	<0.01		Tox				
VinylChloride	<0.1	<0.01		0.001	0.002			
Bromomethane(methylbromide)	<0.5	<0.05		Tox				
Chloroethane	<0.1	<0.01						
Trichlorofluoromethane	<0.1	<0.01						
Acetone	<1.0	<0.1						

TABLE 1
ANALYTICAL RESULTS of MW-13 Preliminary Analysis
Plains Pipeline, L.P.
SRS No. 2002-10235
Hugh Gathering East
Lea County, New Mexico

Parameter	MW13 Results			New Mexico Water Quality Standards (NMOCD)	EPA Primary MCLs	EPA Secondary MCLs	Selected NM GW RBSL	TRRP Tier 1 Residential GW PCLs
	9/08/2008 (DF=100)	Rerun - 9/08/08 (DF=10:VOCs)	Reanalysis for BTEX - 9/24/2008					
Iodomethane(methyliodide)	<0.5	<0.05						
CarbonDisulfide	<0.1	<0.01						
Acrylonitrile	<0.1	<0.01		Tox				
2-Butanone(MEK)	<0.5	<0.05						
4-Methyl-2-pentanone(MIBK)	<0.5	<0.05						
2-Hexanone	<0.5	<0.05						
trans-1,4-Dichloro-2-butene	<1.0	<0.1						
1,1-Dichloroethene	<0.1	<0.01		0.005	0.007			
Methylenechloride	0.047 J	0.0229 J		0.1	0.005			
MTBE	<0.1	<0.01		0.015				
trans-1,2-Dichloroethene	<0.1	<0.01		Tox	0.1			
1,1-Dichloroethane	<0.1	<0.01		0.025				
cis-1,2-Dichloroethene	<0.1	<0.01		Tox	0.07			
2,2-Dichloropropane	<0.1	<0.01						
1,2-Dichloroethane(EDC)	<0.1	<0.01		0.01	0.005			
Chloroform	<0.1	<0.01		0.1				
1,1,1-Trichloroethane	<0.1	<0.01		0.06	0.2			
1,1-Dichloropropene	<0.1	<0.01						
Benzene	**1.4**	**1.61**	**1.02**	0.01	0.005			
CarbonTetrachloride	<0.1	<0.01		0.01	0.005			
1,2-Dichloropropane	<0.1	<0.01			0.005			
Trichloroethene(TCE)	<0.1	<0.01		0.1	0.005			
Dibromomethane(methylenebromide)	<0.1	<0.01						
Bromodichloromethane	<0.1	<0.01		Tox				
2-Chloroethylvinylether	<0.5	<0.05						
cis-1,3-Dichloropropene	<0.1	<0.01		Tox				
trans-1,3-Dichloropropene	<0.1	<0.01		Tox				
Toluene	<0.1	<0.01	0.0175	0.75	1			
1,1,2-Trichloroethane	<0.1	<0.01		0.01	0.005			
1,3-Dichloropropane	<0.1	<0.01						
Dibromochloromethane	<0.1	<0.01						
1,2-Dibromoethane(EDB)	<0.1	<0.01		0.0001	0.00005			
Tetrachloroethene(PCE)	<0.1	<0.01		0.02				
Chlorobenzene	<0.1	<0.01		Tox	0.1			
1,1,1,2-Tetrachloroethane	<0.1	<0.01						
Ethylbenzene	<0.1	<0.01	0.0069	0.75	0.7			
m,p-Xylene	<0.1	0.0498		0.62	10			
Bromoform	<0.1	<0.01		Tox				
Styrene	<0.1	<0.01			0.1			
o-Xylene	<0.1	<0.01		0.62	10			
1,1,2,2-Tetrachloroethane	<0.1	<0.01		0.01	0.005			
2-Chlorotoluene	<0.1	<0.01						
1,2,3-Trichloropropane	<0.1	<0.01						
Isopropylbenzene	0.208	0.011						2.44
Bromobenzene	<0.1	<0.01						
n-Propylbenzene	<0.1	<0.01						
1,3,5-Trimethylbenzene	<0.1	0.00706 J						1.22

TABLE 1
ANALYTICAL RESULTS of MW-13 Preliminary Analysis
Plains Pipeline, L.P.
SRS No. 2002-10235
Hugh Gathering East
Lea County, New Mexico

Parameter	MW13 Results			New Mexico Water Quality Standards (NMOCD)	EPA Primary MCLs	EPA Secondary MCLs	Selected NM GW RBSL	TRRP Tier 1 Residential GW PCLs
	9/08/2008 (DF=100)	Rerun, 9/08/08 (DF=10:VOCs)	Reanalysis for BTEX - 9/24/2008					
tert-Butylbenzene	<0.1	<0.01						
1,2,4-Trimethylbenzene	<0.1	0.0276						1.22
1,4-Dichlorobenzene(para)	<0.1	<0.01		Tox	0.075			
sec-Butylbenzene	<0.1	<0.01						
1,3-Dichlorobenzene(meta)	<0.1	<0.01		Tox				
p-Isopropyltoluene	<0.1	<0.01						
4-Chlorotoluene	<0.1	<10.0						
1,2-Dichlorobenzene(ortho)	<0.1	<10.0		Tox	0.6			
n-Butylbenzene	<0.1	<10.0						
1,2-Dibromo-3-chloropropane	<0.5	<50.0			0.0002			
1,2,3-Trichlorobenzene	<0.5	<50.0						
1,2,4-Trichlorobenzene	<0.5	<50.0			0.07			
Naphthalene	0.441 J	0.0131 J		0.03				
Hexachlorobutadiene	<0.5	<50.0						
Total Xylene	<0.1	0.0498	0.0812	10				
PAHs								
Naphthalene		0.0106						
2-Methylnaphthalene		0.00683						
1-Methylnaphthalene		0.00938						
Acenaphthylene		<0.000200						
Acenaphthene		<0.000200						
Dibenzofuran		0.0011						0.098
Fluorene		0.000297						
Anthracene		<0.000200						
Phenanthrene		0.000753						
Fluoranthene		<0.000200						
Pyrene		<0.000200						
Benzo(a)anthracene		<0.000200						
Chrysene		<0.000200						
Benzo(b)fluoranthene		<0.000200						
Benzo(k)fluoranthene		<0.000200						
Benzo(a)pyrene		<0.000200						
Indeno(1,2,3-cd)pyrene		<0.000200						
Dibenzo(a,h)anthracene		<0.000200						
Benzo(g,h,i)perylene		<0.000200						

[1] - DF=10

[2] - DF=5

RBSL - Risk Based Screening Levels, back calculated for adults using a target risk of 1x10-5 or a hazard quotient of 1, default Toxicity

*Treatment Technique Action level

**Values listed are above the pure component solubility in water

Tox - A numerical standard has not been established, but the contaminant is listed in a narrative standard of "Toxic pollutant" defined in WQCC regulations

TRRP - Texas Risk Reduction Program

*** Methylene chloride was detected in the Method blank at a concentration of 0.00926 mg/L

[ ] = Regulatory limits not found

Table 3
Analytical Results - Comparison of Analytical data MW-13 (East) and data from Hugh Gathering West
Hugh Gathering East and West
SRS 2002-10235
Lea County, New Mexico

Well ID	Total BTEX	Benzene		Toluene		Ethyl-benzene		Total Xylenes		Naphthalene	Phenanthrene	2-Methyl naphthalene	TPH-GRO (C6-C10)	TPH (C10-C28)	
NMOCD Regulatory limits		0.01		0.75		0.75		0.62		0.03					
	mg/L	mg/L	%	mg/L	%	mg/L	%	mg/L	%	Conc. (mg/L)					Comments
MW-1	22.68	**10.9**	48.06%	**6.34**	27.95%	**1.66**	7.32%	**3.78**	16.67%	2.92	0.862	3.83	85.3	1570	Highest PSH
MW-2	3.2129	**2.18**	67.85%	0.04	1.37%	0.46	14.38%	0.53	16.40%	0.0245	0.0032J	0.0191	11.6	8.43	PSH
MW-3	6.0577	**5.48**	90.46%	0.22	3.55%	0.0347 J	0.57%	0.33	5.41%	0.0173	ND	0.0075	18.2	0.392	PSH
MW-4	1.8193	**0.95**	52.05%	0.03	1.89%	0.31	17.09%	0.53	28.97%	0.0325	0.0041J	0.0296	7.62	25.1	PSH
MW-5	0.0683	**0.0101**	14.79%	0.0039	5.71%	0.0349	51.10%	0.0194	28.40%	0.0027 J	ND	NS	NS	NS	Dissolved Phase; PAH 2007
MW-8	9.003	**6.12**	67.98%	0.33	3.71%	**0.96**	10.65%	**1.59**	17.66%	0.273	0.0682	0.512	26.1	157	PSH
MW-9	7.643	**3.48**	45.53%	**2.04**	26.69%	0.72	9.46%	**1.40**	18.32%	0.029	0.0021 J	0.0183	20.3	24.8	PSH
MW-10	0.6165	**0.40**	64.88%	0.03	5.53%	0.09	14.47%	0.09	15.12%	0.0053	0.0019 J	0.0062	2.17	7.62	PSH
MW-13 DF-100	1.4	**1.40**	100.00%	<0.1	0.00%	<0.1	0.00%	<0.1	0.00%	0.0112	<0.005	0.00721	NS	NS	HG East
MW-13 DF-10	1.66	**1.61**	97.00%	<0.01	0.00%	<0.01	0.00%	0.0498	3.00%	0.0112	0.000753	0.00721	NS	NS	HG East
MW-13 Reanalysis	1.10	**1.02**	92.63%	0.0175	1.59%	0.0069	0.63%	0.0812	7.37%	NS	NS	NS	NS	NS	Results observed are similar to MW-3 at Hugh Gathering East

MW 6,7,11 and 12 and below detection limit for BTEX and PAH at HG West
NS - Not sampled for the COCs
☐ = Hugh Gathering West
☐ = Hugh Gathering East

ATTACHMENT A

Boring Logs

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-13

PROJECT Hugh Gathering East LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 70 BOREHOLE DIA (in) 5 STICKUP (ft) 3

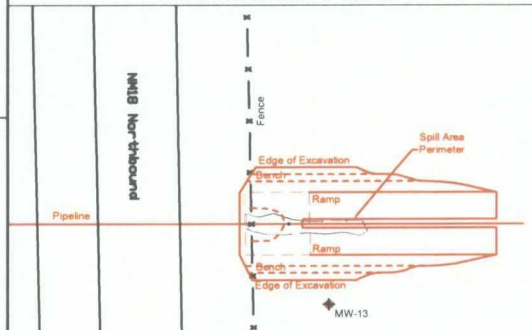
CASING DIA (in) 2 TYPE PVC SCREEN LENGTH 20' SLOT SIZE (in) 0.010

DRILLING CO. Straub Drilling DRILLING METHOD Air Rotary

GEOLOGIST Ben Latham DATE DRILLED 9/5/08

TOP OF CASING ELEV. (ft) _____ GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	GRAPHIC LOG	PID (ppm)	LITHOLOGIC DESCRIPTION/COMMENTS	WELL CONSTRUCTION	REMARKS
0			Tan Well Graded Sand, Fine.		Well Stickup
2					Grout
4					
6					
8			Tan Fine Sand –Sandstone – Caliche		
10					
12			Tan Well Graded Sand.		
14					
16					Bentonite Chips
18			Tan Fine Sand –Sandstone – Caliche		
20					
22			Redish Sand, 2% Clay, fine.		
24					
26					
28					2" PVC Blank Casing
30					
32					
34					
36					
38					
40			Tan Well Graded Sand.		

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-13

PROJECT Hugh Gathering East LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 70 BOREHOLE DIA (in) 5 STICKUP (ft) 3'

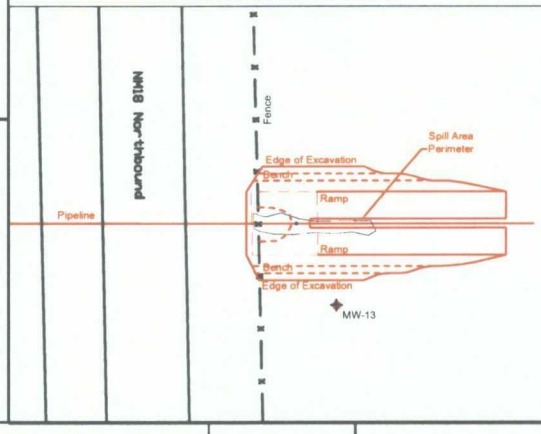
CASING DIA (in) 2 TYPE PVC SCREEN LENGTH 20' SLOT SIZE (in) 0.010

DRILLING CO. Straub Drilling DRILLING METHOD Air Rotary

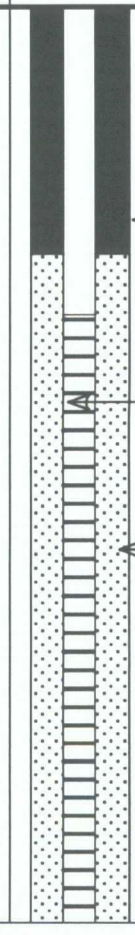
GEOLOGIST Ben Latham DATE DRILLED 9/5/08

TOP OF CASING ELEV. (ft) _____ GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	GRAPHIC LOG	PID (ppm)	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS
40		0.0	Redish Clayey Sand.	
42				
44				
46		0.0	Redish Clayey Sand with rock inclusions.	
48				
50				
52				
54				
56				
58				
60				
62				
64				
66		0.0	Redish Clayey Sand, more Clay content.	
68				
70				
72				
74				
76				
78				
80				



ATTACHMENT B

Drillers Well Record and Log

PREMIER

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
HUGH GATHERING EAST SIDE MW-13	
WELL OWNER NAME(S)	**PHONE (OPTIONAL)**
PLAINS MARKETING LP	
WELL OWNER MAILING ADDRESS	**CITY / STATE / ZIP**
333 CLAY STREET, SUITE 1600	HOUSTON / TX / 77078

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	29	11.00	N
	LONGITUDE	103	7	29.00	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS

FROM INTERSECTION HWY 176 AND 18 GO N TURN R AT CATTLE GUARD FOLLOW RD TO LOCATION.

2. OPTIONAL

(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION	TOWNSHIP	RANGE
¼	¼	¼	¼		☐ NORTH ☐ SOUTH	☐ EAST ☐ WEST

SUBDIVISION NAME	LOT NUMBER	BLOCK NUMBER	UNIT/TRACT

HYDROGRAPHIC SURVEY	MAP NUMBER	TRACT NUMBER

3. DRILLING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD1478	EDWARD BRYAN	STRAUB CORPORATION

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
9-5-08	9-5-08	70	70	60

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT):

DRILLING FLUID: ☑ AIR ☐ MUD ☐ ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
70'	50'	5	SCH 40 .010 SCREEN	FJ	2	0.154	.010
50'	+43"	5	SCH 40 PVC RISER	FJ	2	0.154	RISER

4. WATER BEARING STRATA

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	YIELD (GPM)

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA	TOTAL ESTIMATED WELL YIELD (GPM)

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

5. SEAL AND PUMP

TYPE OF PUMP: ☐ SUBMERSIBLE ☐ JET ☐ NO PUMP – WELL NOT EQUIPPED
☐ TURBINE ☐ CYLINDER ☐ OTHER – SPECIFY:

ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
	70'	47.9'	5	6 BAGS OF 20/40 SAND		TOPLOAD
	47.9'	2'	5	8 BAGS OF 3/8 HOLEPLUG		TOPLOAD
	2'	0	5	1 BAG OF CEMENT		TOPLOAD

6. GEOLOGIC LOG OF WELL

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
0	7	7	TAN FINE SAND - CALICHE	☐ YES ☑ NO
7	11	4	TAN FINE SAND - SANDSTONE - CALICHE	☐ YES ☑ NO
11	17	6	TAN FINE SAND - SANDSTONE	☐ YES ☑ NO
17	21	4	TAN FINE SAND - SANDSTONE - CALICHE	☐ YES ☑ NO
21	23	2	TAN FINE SAND	☐ YES ☑ NO
23	54	31	RED FINE SAND - WITH CLAY LESS 5%	☐ YES ☑ NO
54	64	10	RED FINE SAND - CALICHE NODULES - WITH CLAY	☐ YES ☑ NO
64	70	6	RED VERY FINE SAND - CLAY	☐ YES ☑ NO
TD	70			☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO

WELL TEST — METHOD: ☐ BAILER ☐ PUMP ☐ AIR LIFT ☐ OTHER – SPECIFY:

TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

ADDITIONAL STATEMENTS OR EXPLANATIONS:

2X2 PAD - 4X4 HIGH RISER - 2X5 BOLARDS

8. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

SIGNATURE OF DRILLER _____ DATE _____

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

ATTACHMENT C

Laboratory Analytical
(On CD Only)
Analytical Report 1 (Dilution Factor: 100) – 172938
Analytical Report 2 (Dilution Factor: 10 for VOCs) – 172938
Analytical Report 3 (BTEX Only) – 174540