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# Annual GW Mon. REPORTS

DATE:
2009



### 2009 ANNUAL MONITORING REPORT

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Environmental Bureau Oil Conservation Division

### **MONUMENT 2**

SW 1/4 SW 1/4 SECTION 06, TOWNSHIP 20 SOUTH, RANGE 37 EAST NW 1/4 NW 1/4 SECTION 07, TOWNSHIP 20 SOUTH, RANGE 37 EAST LEA COUNTY, NEW MEXICO PLAINS SRS NUMBER: TNM MONUMENT 2-KNOWN NMOCD File Number 1R-0110

### PREPARED FOR:

Prepared For:

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February 2010

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President

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### **ENCLOSED ON DATA DISK**

2009 Annual Monitoring Report

2009 Tables 1, 2 and 3 – Groundwater Elevation, BTEX, TPH and PAH Concentration Data 2009 Figures 1, 2A-2D, and 3A-3D

Electronic Copies of Laboratory Reports

Historic Table 1 and 2 - Groundwater Elevation and BTEX, TPH, PAH Concentration Table

### INTRODUCTION

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On behalf of Plains Marketing, L.P., (Plains), NOVA Safety and Environmental (NOVA) is pleased to submit this 2009 Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. Beginning on May 29, 2004, project management responsibilities for the Monument 2 Site (the site) were assumed by NOVA. The site, formerly the responsibility of Enron Oil Trading and Transportation (EOTT), is now the responsibility of Plains. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events conducted in calendar year 2009 only. However, historic data tables as well as 2009 laboratory analytical reports are provided on the enclosed disk. For reference, a Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted each quarter of 2009 to assess the levels and extent of dissolved phase constituents and Phase Separated Hydrocarbon (PSH). The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH and purging and sampling of each well exhibiting sufficient recharge. Monitor wells containing a thickness of PSH greater than 0.01 foot were sampled as per a NMOCD directive.

### SITE DESCRIPTION AND BACKGROUND INFORMATION

The legal description of the site's location is SW ¼ SW ¼ Section 6, Township 20 South, Range 37 East and NW ¼ NW ¼ Section 7, Township 20 South, Range 37 East. No information with respect to the release date, volume of crude oil released and recovered, excavation dimensions or pipeline repair is available as the release at the site occurred while the pipeline was operated by the Texas New Mexico Pipeline Company (TNM). The Release Notification and Corrective Action (Form C-141) is provided as Appendix B. The initial site investigation, consisting of the installation of seven groundwater monitor wells (MW-1 through MW-7) was conducted by previous consultants. Currently, there are eight monitor wells (MW-1 through MW-8) on-site. Figure 2 displays, the location of on-site monitor wells, initial excavation limits, pipelines and other site details.

### FIELD ACTIVITIES

### **Product Recovery Efforts**

Based on the gauging data collected during the reporting period, none of the monitor wells exhibited a measurable thickness of PSH with the exception of monitor well MW-2, exhibiting a thickness of 0.15 feet during one gauging event conducted in March 2009. PSH data for the 2009 gauging events can be found in Table 1. Approximately 52 gallons (1.2 barrels) of PSH have been recovered by manual recovery methods since project inception.

### **Groundwater Monitoring**

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Quarterly monitoring events for the reporting period were performed according to the following sampling schedule, which was approved by the NMOCD in correspondence dated April 28, 2004 and amended by NMOCD correspondence dated July 7, 2005

NMOCD Approved Sampling Schedule								
MW-I	Annually	MW-5	Quarterly					
MW-2	Quarterly	MW-6	Annually					
MW-3	Annually	MW-7	Annually					
MW-4	Semi-Annually	MW-8	Quarterly					

Quarterly groundwater sampling events conducted this reporting period were performed on February 3, May 6, August 3 and November 2, 2009. During each sampling event, the monitor wells were purged of a minimum of three well volumes of water or until the wells were dry using a disposable polyethylene bailer or electrical Grundfos pump. Groundwater was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were collected in clean glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of at a licensed disposal facility.

Figures 2A through 2D, depict the inferred groundwater gradient, derived from gauging data collected during each quarterly sampling event and surveyed top of casing (TOC) elevations. Groundwater elevation data for 2009 is provided as Table 1. Historic groundwater elevation data beginning at project inception is provided on the enclosed disk.

The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.003 feet/foot to the south-southeast as measured between the up-gradient and down-gradient monitor wells, MW-3 and MW-1, respectively. This is consistent with data presented on Figures 2A through 2C from earlier in the year. The corrected groundwater elevations ranged between 3,527.63 to 3,529.38 feet above mean sea level, in monitor well MW-5 on October 27, 2009 and in monitor well MW-3 on May 6, 2009, respectively.

### LABORATORY RESULTS

Groundwater samples obtained during the quarterly sampling events of 2009 were delivered to TraceAnalysis, Inc. in Midland, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations by EPA Method 8021B, and Polynuclear Aromatic Hydrocarbons (PAH) concentrations by EPA Method 8270C. A listing of BTEX constituent concentrations for 2009 are summarized in Table 2 and the PAH constituent concentrations for 2009 are provided on the enclosed data disk. The quarterly groundwater sample results for BTEX constituent concentrations are depicted on Figures 3A through 3D.

**Monitor well MW-1** is sampled on an annual schedule. Analytical results indicate benzene, toluene, ethyl-benzene and xylenes concentrations were below the NMOCD regulatory standards for each BTEX constituent during the 4<sup>th</sup> quarter sampling event. PAH analysis during the 4<sup>th</sup> quarter sampling event indicated elevated concentrations above MDLs for dibenzofuran (0.000393 mg/L), which is below the WQCC Drinking Water Standards.

Monitor well MW-2 is sampled on a quarterly schedule and was inadvertently not sampled during the 1<sup>st</sup> quarter of 2009. Analytical results indicate benzene concentrations ranged from 0.0095 mg/L during the 3<sup>rd</sup> quarter to 0.0170 mg/L during the 2<sup>nd</sup> quarter of 2009. Benzene concentrations were above NMOCD regulatory standards of 0.01 mg/L, for the 2<sup>nd</sup> and 4<sup>th</sup> quarters of the reporting period. Toluene concentrations ranged from <0.010 mg/L during the 4<sup>th</sup> quarter to 0.0133 mg/L during the 2<sup>nd</sup> quarter of 2009. Toluene concentrations were below the NMOCD regulatory standard of 0.75 mg/L during the three quarters of the reporting period. Ethyl-benzene concentrations ranged from 0.0818 mg/L during the 4<sup>th</sup> quarter to 0.115 mg/L during the 2<sup>nd</sup> quarter of 2009. Ethyl-benzene concentrations were below NMOCD regulatory standard of 0.75 mg/L, during the three quarters of the reporting period. Xylene concentrations ranged from 0.0388 mg/L during the 4<sup>th</sup> quarter to 0.0719 mg/L during the 2<sup>nd</sup> quarter of 2009. Xylene concentrations were below NMOCD regulatory standard of 0.62 mg/L, during the three quarters of the reporting period. Laboratory analysis for PAH during the 4<sup>th</sup> quarter sampling event indicated elevated concentrations above WQCC Drinking Water Standards of 1methylnaphthalene (0.0722 mg/L) and 2-methylnaphthalene (0.0324 mg/L). Additional PAH constituents detected above MDLs include naphthalene (0.0112 mg/L), phenanthrene (0.0171 mg/L) and dibenzofuran (0.0102 mg/L), which are below the WQCC Drinking Water Standards.

**Monitor well MW-3** was scheduled to be sampled on an annual basis, but was sampled on a quarterly basis during the current reporting period (as recommended in the 2008 Annual Report). The analytical results indicated benzene toluene and ethyl-benzene concentrations were below the NMOCD regulatory standard during the all four quarters of the reporting period. Xylene concentrations were below the NMOCD regulatory standard ranging from <0.001 mg/L during the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarters to 0.0011 mg/L during the 1<sup>st</sup> quarter of the reporting period. PAH analysis during the 4<sup>th</sup> quarter sampling event indicated elevated concentrations above MDLs for 1-methylnaphthalene (0.000698 mg/L), which is below the WQCC Drinking Water Standards.

**Monitor well MW-4** is sampled on a semi-annual schedule and the analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the 2<sup>nd</sup> and 4<sup>th</sup> quarter sampling events. The analytical results indicate BTEX concentrations have been below NMOCD regulatory standards for the last thirty—two consecutive sampling events. PAH analysis during the 4<sup>th</sup> quarter sampling event indicated no elevated concentrations were detected above the respective MDLs.

**Monitor well MW-5** is sampled on quarterly schedule and the analytical results indicate benzene concentrations ranged from <0.001 mg/L during the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarters to 0.0011 mg/L during the 1<sup>st</sup> quarter of 2009. Benzene concentrations were below the NMOCD regulatory standard during all four quarters. Toluene, ethyl-benzene and xylene concentrations were below the MDL and NMOCD regulatory standard during all four quarters of the reporting period. PAH analysis during the 4<sup>th</sup> quarter sampling event indicated elevated concentrations above MDLs for phenanthrene (0.000857 mg/L) and 1-methylnaphthalene (0.000698 mg/L), which are below the WQCC Drinking Water Standards.

**Monitor well MW-6** was scheduled to be sampled on an annual basis, but was sampled in the 1<sup>st</sup>, 2<sup>nd</sup> and 4<sup>th</sup> quarters during the current reporting period. The analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the 1<sup>st</sup>, 2<sup>nd</sup> and 4<sup>th</sup> quarterly sampling events. The analytical results indicate BTEX concentrations have been below NMOCD regulatory standards for the last

twenty-nine consecutive sampling events. PAH analysis during the 4<sup>th</sup> quarter sampling event indicated no elevated concentrations were detected above the respective MDLs.

**Monitor well MW-7** is sampled on a semi-annual basis and was inadvertently sampled during the 1<sup>st</sup> quarter instead of during the 2<sup>nd</sup> quarter. Analytical results indicate BTEX constituent concentrations were below the MDL and NMOCD regulatory standards for each BTEX constituent during the 1<sup>st</sup> and 4<sup>th</sup> quarter sampling events. The analytical results indicate BTEX concentrations have been below NMOCD regulatory standards for the last twenty-three consecutive sampling events. PAH analysis during the 4<sup>th</sup> quarter sampling event indicated no elevated concentrations were detected above the respective MDLs.

Monitor well MW-8 is sampled on quarterly schedule and the analytical results indicate benzene concentrations ranged from 0.0312 mg/L during the 2<sup>nd</sup> quarter to 0.0625 mg/L during the 1<sup>st</sup> quarter of 2009. Benzene concentrations were above NMOCD regulatory standard during all four quarters of the reporting period. Toluene concentrations ranged from <0.001 mg/L during the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarters to 0.0057 mg/L during the 1<sup>st</sup> quarter of the reporting period. Toluene concentrations were below the NMOCD regulatory standard during all four quarters of the reporting period. Ethyl-benzene concentrations ranged from 0.102 mg/L during the 2<sup>nd</sup> quarter to 0.136 mg/L during the 1<sup>st</sup> quarter of 2009. Ethyl-benzene concentrations were below NMOCD regulatory standard during all four quarters of the reporting period. Xylene concentrations ranged from 0.128 mg/L during the 2<sup>nd</sup> quarter to 0.247 mg/L during the 1<sup>st</sup> quarter of 2009. Xylene concentrations were below NMOCD regulatory standard during all four quarters of the reporting period. PAH analysis during the 4<sup>th</sup> quarter sampling event indicated elevated concentrations above MDLs for naphthalene (0.00431 mg/L), 1-methylnaphthalene (0.0113 mg/L), 2-methylnaphthalene (0.00356 mg/L), dibenzofuran (0.00184 mg/L) and phenanthrene (0.00204 mg/L), which are below the WQCC Drinking Water Standards.

Laboratory analytical results were compared to NMOCD regulatory limits based on the New Mexico groundwater standards found in section 20.6.2.3103 of the New Mexico Administrative Code.

### **SUMMARY**

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This report presents the results of monitoring activities for the 2009 annual monitoring period. Currently, there are eight groundwater monitor wells (MW-1 through MW-8) on-site. The monitor wells are gauged monthly. The most recent Groundwater Gradient Map, Figure 2D, indicates a general gradient of approximately 0.003 feet/foot to the south-southeast.

Monitor well MW-2 exhibited a PSH thickness of 0.15 feet during one gauging event conducted in March 2009. No measurable thicknesses of PSH were reported in any of the other site monitor wells during the reporting period.

Benzene is the only BTEX constituent exhibiting concentrations above NMOCD regulatory standards. Benzene concentrations exceeding regulatory guidelines were exhibited in monitor well MW-2 in two of the quarterly sampling events and in all four quarterly sampling events for monitor well MW-8. Analytical results on groundwater samples collected indicate PAH distribution mirrors those of BTEX distribution over the site.

### ANTICIPATED ACTIONS

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Quarterly monitoring, PSH recovery (as necessary) and groundwater sampling will continue in 2010. Based on the results of the PAH analysis over the past several years, NOVA recommends that further PAH analysis be conducted only on those monitor wells (MW-2 and MW-8) which have historically exhibited elevated constituents near or above the WQCC standards.

A Soil Closure Proposal will be submitted to the NMOCD in the future. The Proposal will report the results of the Soil Investigation Work Plan and propose a strategy to remediate the remaining soil issues at the site.

A 2010 annual monitoring report will be submitted to the NMOCD by April 1, 2011.

### **LIMITATIONS**

NOVA has prepared this 2009 Annual Monitoring Report to the best of its ability. No other warranty, expressed or implied, is made or intended.

NOVA has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. NOVA has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. NOVA has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. NOVA also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Plains. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of NOVA and/or Plains.

### **DISTRIBUTION**

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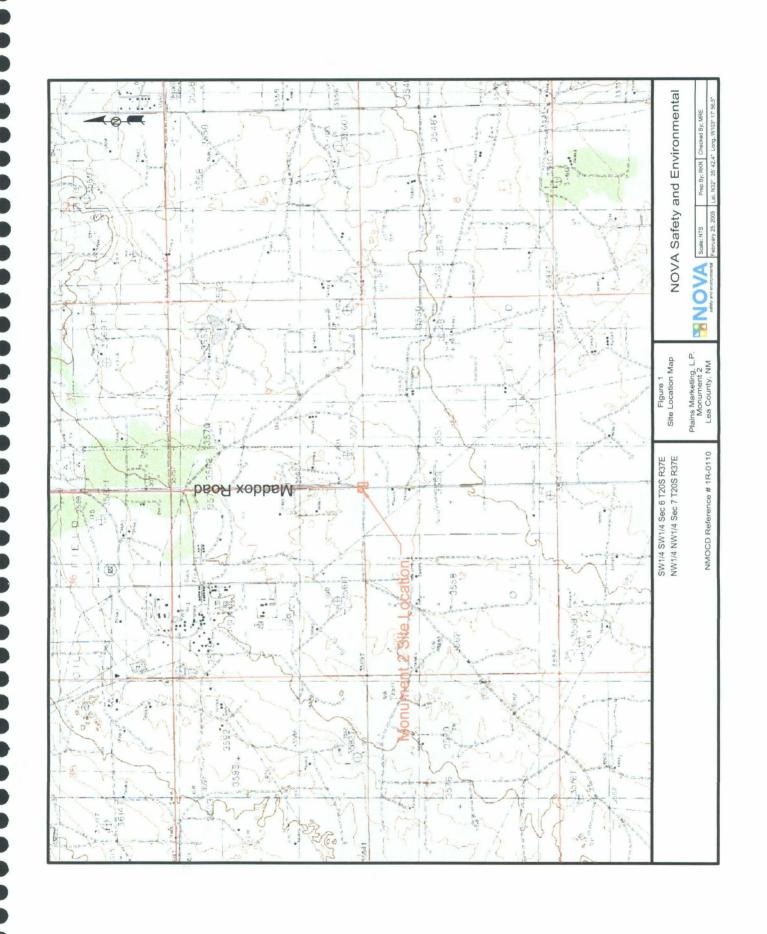
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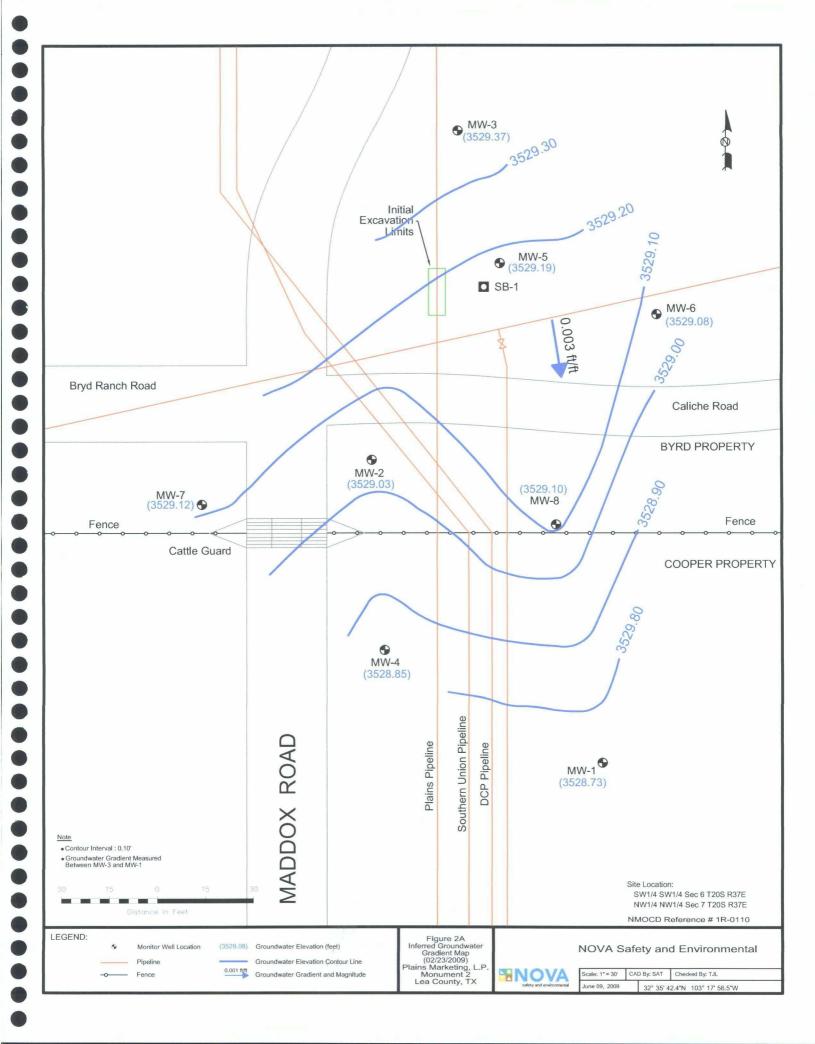
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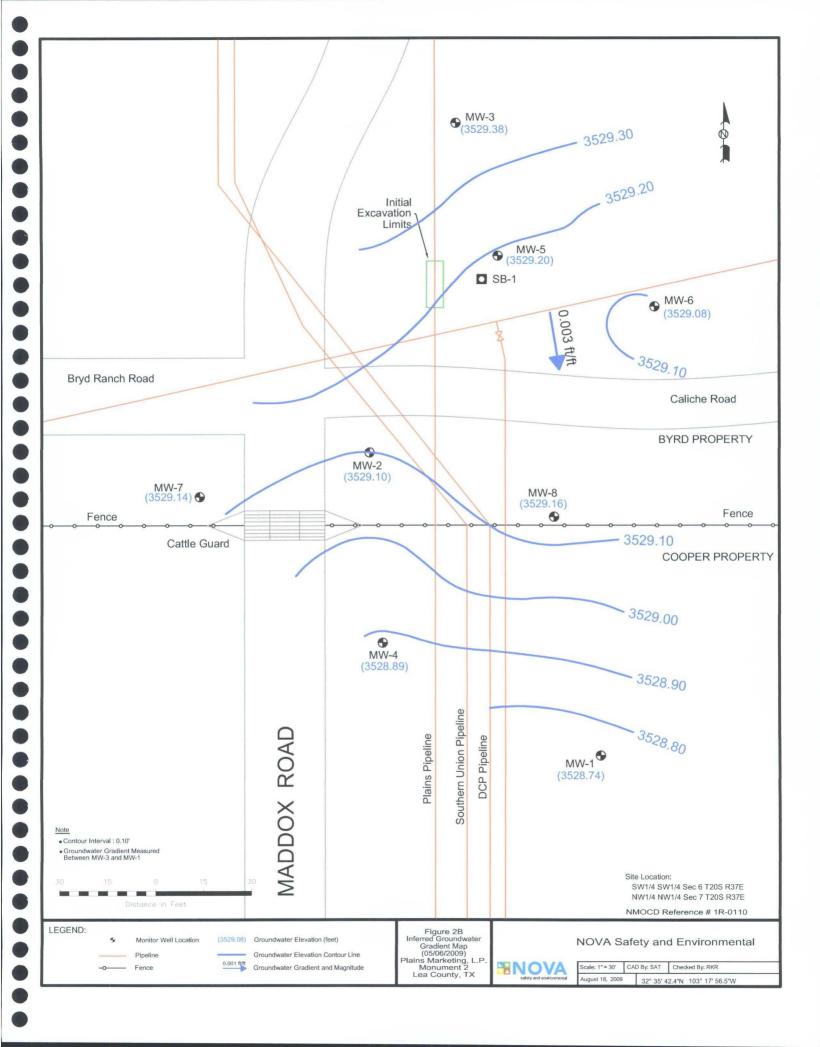
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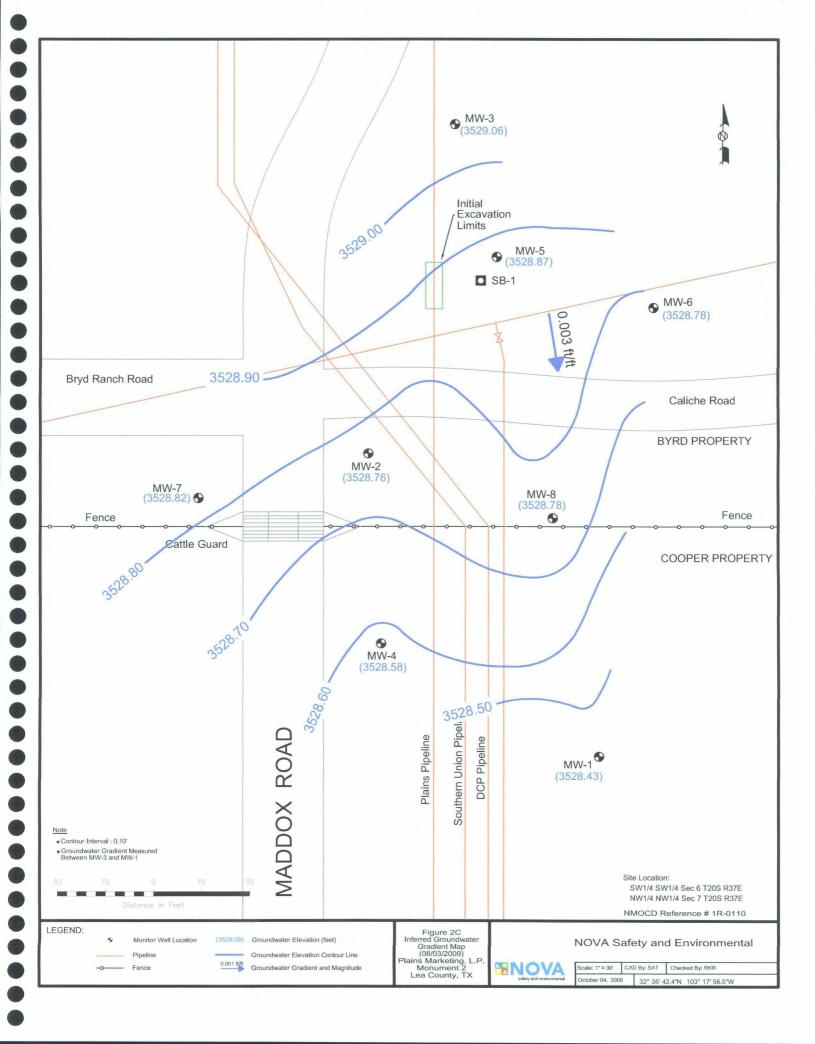
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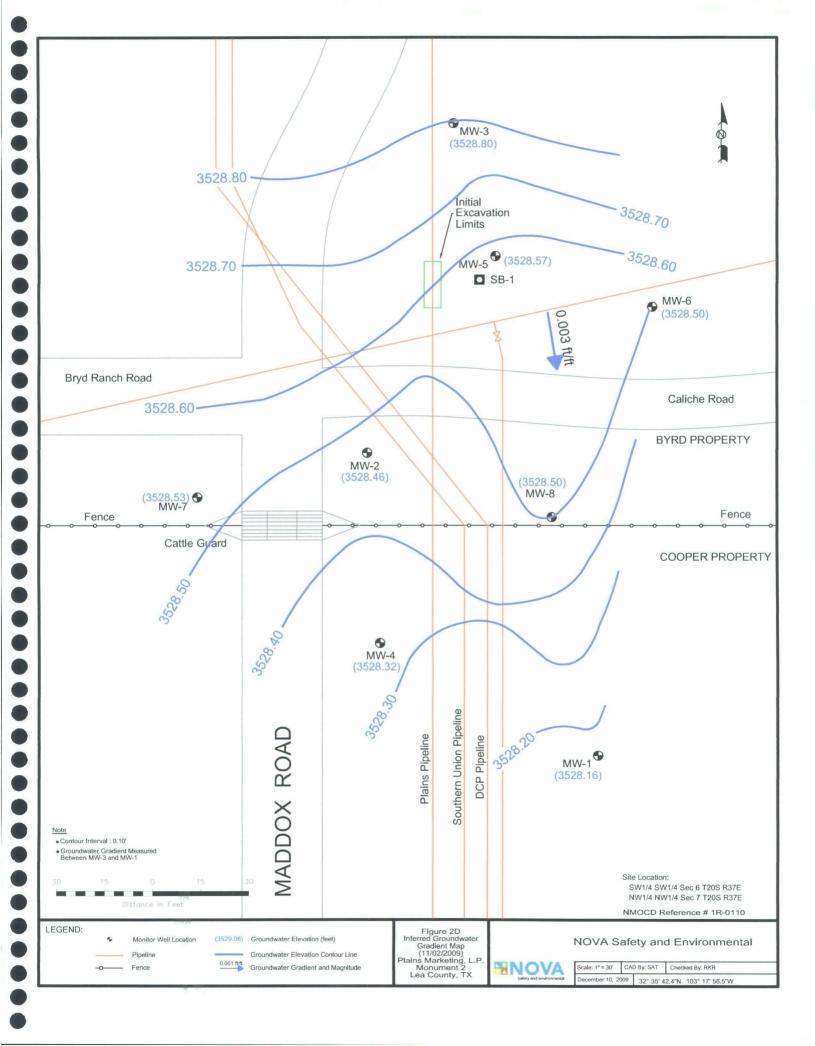
Figures

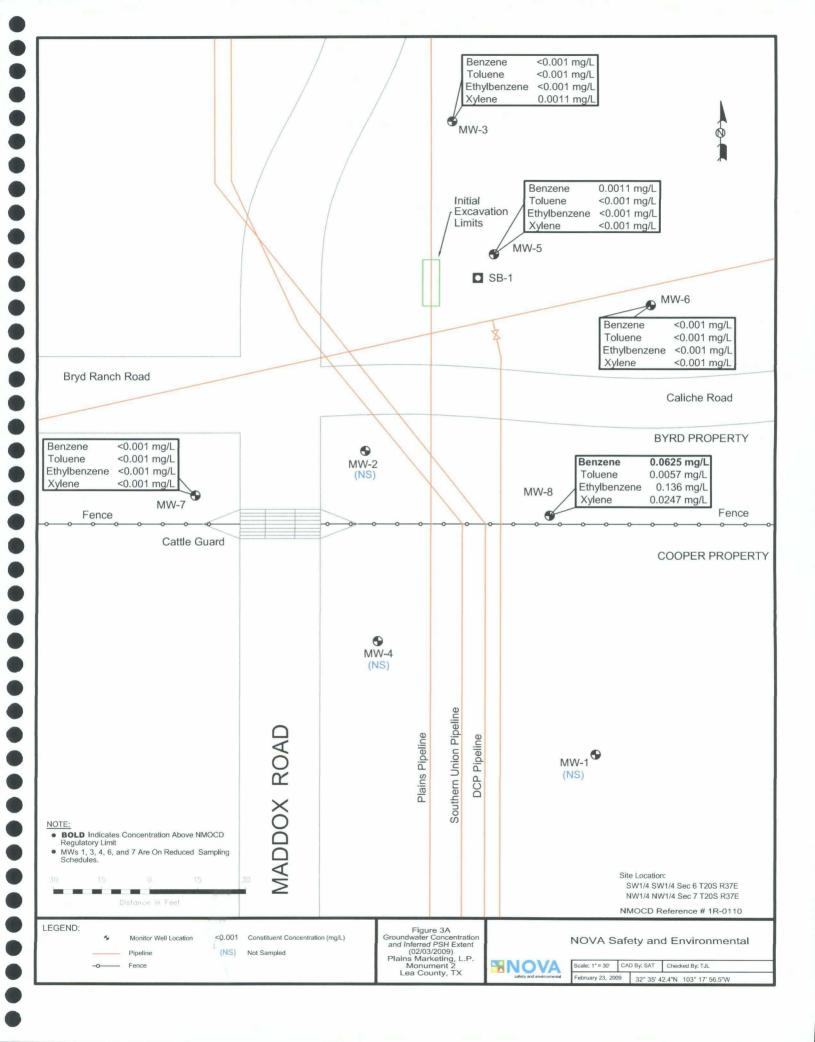


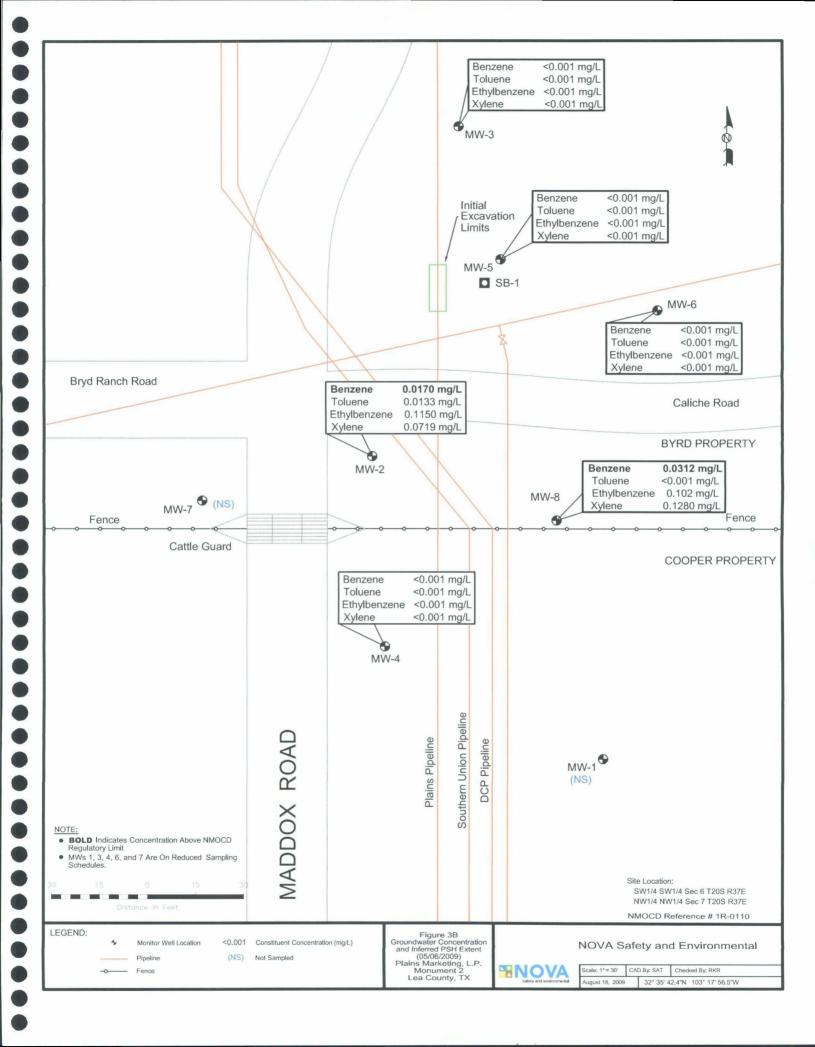


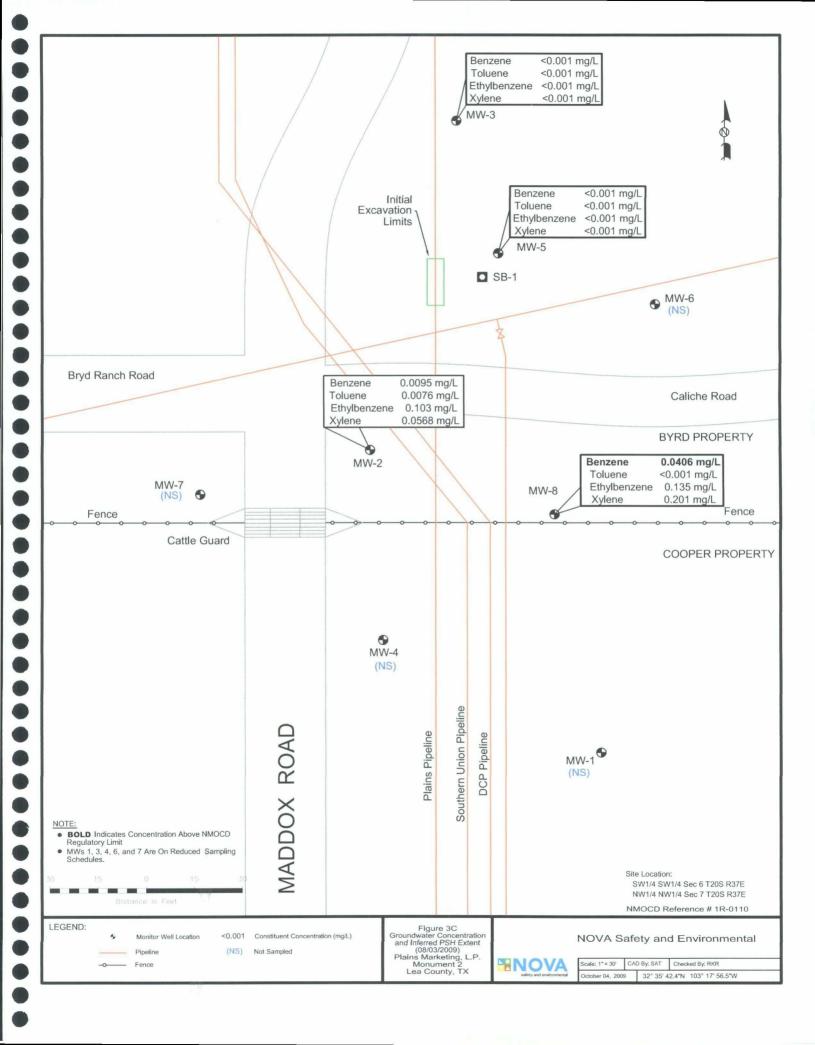


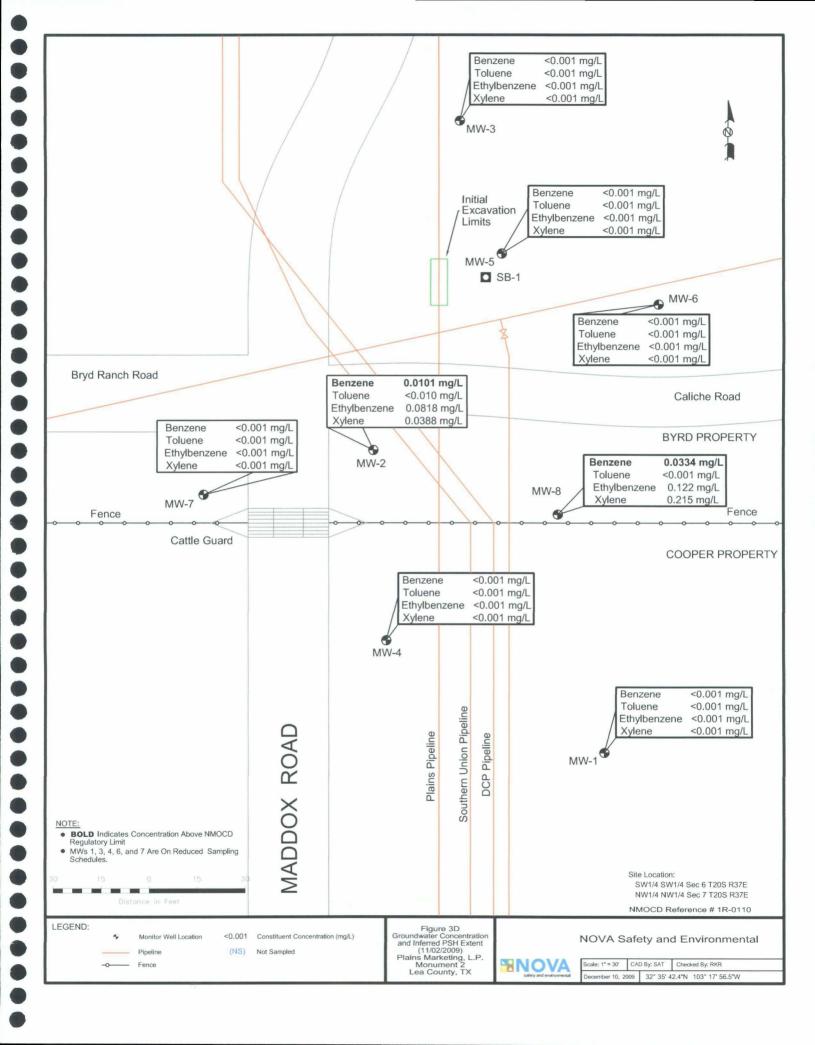












Tables

### 2009 - GROUNDWATER ELEVATION DATA

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 1	02/03/09	3,560.60		31.87	0.00	3528.73
MW - 1	05/06/09	3,560.60	-	31.86 0.00		3528.74
MW - 1	08/03/09	3,560.60	-	32.17	0.00	3528.43
MW - 1	11/02/09	3,560.60	-	32.44	0.00	3528.16
MW - 2	01/07/09	3,561.14	-	32.03	0.00	3529.11
MW - 2	01/16/09	3,561.14	_	32.09	0.00	3529.05
MW - 2	01/29/09	3,561.14	_	32.07	0.00	3529.07
MW - 2	02/03/09	3,561.14	-	32.11	0.00	3529.03
MW - 2	02/09/09	3,561.14	-	32.04	0.00	3529.10
MW - 2	02/17/09	3,561.14	-	32.03	0.00	3529.11
MW - 2	02/26/09	3,561.14	-	32.08	0.00	3529.06
MW - 2	03/02/09	3,561.14	-	32.03	0.00	3529.11
MW - 2	03/05/09	3,561.14		32.11	0.00	3529.03
MW - 2	03/09/09	3,561.14		32.14	0.00	3529.00
MW - 2	03/16/09	3,561.14	_	32.06	0.00	3529.08
MW - 2	03/18/09	3,561.14	_	32.16	0.00	3528.98
MW - 2	03/25/09	3,561.14	_ :	32.16	0.00	3528.98
MW - 2	03/27/09	3,561.14	32.01	32.16	0.15	3529.11
MW - 2	03/30/09	3,561.14	-	32.04	0.00	3529.10
MW - 2	04/06/09	3,561.14	_	32.13	0.00	3529.01
MW - 2	04/13/09	3,561.14	_	32.02	0.00	3529.12
MW - 2	04/16/09	3,561.14	_	32.06	0.00	3529.08
MW - 2	04/20/09	3,561.14	_	32.08	0.00	3529.06
MW - 2	04/23/09	3,561.14	_	32.03	0.00	3529.11
MW - 2	04/27/09	3,561.14	-	32.04	0.00	3529.10
MW - 2	04/30/09	3,561.14	-	32.08	0.00	3529.06
MW - 2	05/06/09	3,561.14	-	32.04	0.00	3529.10
MW - 2	05/21/09	3,561.14	_	32.11	0.00	3529.03
MW - 2	05/27/09	3,561.14	_	32.12	0.00	3529.02
MW - 2	06/04/09	3,561.14	_	32.16	0.00	3528.98
MW - 2	06/08/09	3,561.14	-	32.18	0.00	3528.96
MW - 2	06/11/09	3,561.14		32.14	0.00	3529.00
MW - 2	06/16/09	3,561.14		32.19	0.00	3528.95
MW - 2	06/22/09	3,561.14	-	32.24	0.00	3528.90
MW - 2	06/29/09	3,561.14	-	32.18	0.00	3528.96
MW - 2	07/02/09	3,561.14	-	32.36	0.00	3528.78
MW - 2	07/10/09	3,561.14	-	32.29	0.00	3528.85
MW - 2	07/15/09	3,561.14	<del>-</del>	32.18	0.00	3528.96
MW - 2	07/21/09	3,561.14	<u>-</u>	32.37	0.00	3528.77
MW - 2	07/29/09	3,561.14	<del></del>	32.17	0.00	3528.77

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### 2009 - GROUNDWATER ELEVATION DATA

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 2	07/30/09	3,561.14	-	32.35	0.00	3528.79
MW - 2	08/03/09	3,561.14	-	32.38	0.00	3528.76
MW - 2	08/05/09	3,561.14	-	32.39	0.00	3528.75
MW - 2	08/07/09	3,561.14	-	32.42	0.00	3528.72
MW - 2	08/10/09	3,561.14	-	32.37	0.00	3528.77
MW - 2	08/19/09	3,561.14	-	32.43	0.00	3528.71
MW - 2	08/27/09	3,561.14	-	32.46	0.00	3528.68
MW - 2	08/31/09	3,561.14	_	32.47	0.00	3528.67
MW - 2	09/11/09	3,561.14	_	32.51	0.00	3528.63
MW - 2	09/17/09	3,561.14	-	32.58	0.00	3528.56
MW - 2	09/24/09	3,561.14	-	32.55	0.00	3528.59
MW - 2	09/29/09	3,561.14		32.61	0.00	3528.53
MW - 2	09/30/09	3,561.14	-	32.53	0.00	3528.61
MW - 2	10/06/09	3,561.14	-	32.63	0.00	3528.51
MW - 2	10/20/09	3,561.14	-	32.57	0.00	3528.57
MW - 2	10/27/09	3,561.14	_	32.64	0.00	3528.50
MW - 2	11/02/09	3,561.14	-	32.68	0.00	3528.46
MW - 3	02/03/09	3,560.39	_	31.02	0.00	3529.37
MW - 3	05/06/09	3,560.39	-	31.01	0.00	3529.38
MW - 3	08/03/09	3,560.39	-	31.33	0.00	3529.06
MW - 3	11/02/09	3,560.39	-	31.59	0.00	3528.80
MW - 4	02/03/09	3,561.08	_	32.23	0.00	3528.85
MW - 4	05/06/09	3,561.08	-	32.19	0.00	3528.89
MW - 4	08/03/09	3,561.08		32.50	0.00	3528.58
MW - 4	11/02/09	3,561.08	-	32.76	0.00	3528.32
MW - 5	01/07/09	3,560.20	-	31.02	0.00	3529.18
MW - 5	01/16/09	3,560.20	-	31.01	0.00	3529.19
MW - 5	01/29/09	3,560.20	-	30.99	0.00	3529.21
MW - 5	02/03/09	3,560.20	-	31.01	0.00	3529.19
MW - 5	02/09/09	3,560.20	-	30.97	0.00	3529.23
MW - 5	02/17/09	3,560.20	-	30.95	0.00	3529.25
MW - 5	02/26/09	3,560.20		30.97	0.00	3529.23
MW - 5	03/02/09	3,560.20	-	30.96	0.00	3529.24
MW - 5	03/05/09	3,560.20	_	31.02	0.00	3529.18
MW - 5	03/09/09_	3,560.20	-	31.05	0.00	3529.15
MW - 5	03/16/09	3,560.20	-	30.99	0.00	3529.21
MW - 5	03/18/09	3,560.20	-	31.06	0.00	3529.14
MW - 5	03/25/09	3,560.20	-	31.07	0.00	3529.13
MW - 5	03/27/09	3,560.20		31.00	0.00	3529.20
MW - 5	03/30/09	3,560.20	-	30.98	0.00	3529.22
MW - 5	04/06/09	3,560.20	-	31.04	0.00	3529.16

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### 2009 - GROUNDWATER ELEVATION DATA

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 5	04/13/09	3,560.20	-	31.01	0.00	3529.19
MW - 5	04/16/09	3,560.20	-	30.99 0.00		3529.21
MW - 5	04/20/09	3,560.20	-	31.03	0.00	3529.17
MW - 5	04/23/09	3,560.20	-	31.00	0.00	3529.20
MW - 5	04/27/09	3,560.20	-	30.99	0.00	3529.21
MW - 5	04/30/09	3,560.20	-	31.04	0.00	3529.16
MW - 5	05/06/09	3,560.20	-	31.00	0.00	3529.20
MW - 5	05/21/09	3,560.20	-	31.05	0.00	3529.15
MW - 5	05/27/09	3,560.20	-	31.08	0.00	3529.12
MW - 5	06/04/09	3,560.20	-	31.12	0.00	3529.08
MW - 5	06/08/09	3,560.20	-	31.14	0.00	3529.06
MW - 5	06/11/09	3,560.20	-	31.03	0.00	3529.17
MW - 5	06/16/09	3,560.20	-	31.12	0.00	3529.08
MW - 5	06/22/09	3,560.20	-	31.18	0.00	3529.02
MW - 5	06/29/09	3,560.20	-	31.13	0.00	3529.07
MW - 5	07/02/09	3,560.20	-	31.19	0.00	3529.01
MW - 5	07/10/09	3,560.20	-	31.22	0.00	3528.98
MW - 5	07/15/09	3,560.20	-	31.14	0.00	3529.06
MW - 5	07/21/09	3,560.20	-	31.28	0.00	3528.92
MW - 5	07/29/09	3,560.20	-	31.13	0.00	3529.07
MW - 5	07/30/09	3,560.20	-	31.28	0.00	3528.92
MW - 5	08/03/09	3,560.20	-	31.33	0.00	3528.87
MW - 5	08/05/09	3,560.20	-	31.25	0.00	3528.95
MW - 5	08/07/09	3,560.20	-	31.33	0.00	3528.87
MW - 5	08/10/09	3,560.20	-	31.32	0.00	3528.88
MW - 5	08/19/09	3,560.20	-	31.35	0.00	3528.85
MW - 5	08/27/09	3,560.20	-	31.39	0.00	3528.81
MW - 5	08/31/09	3,560.20	-	31.40	0.00	3528.80
MW - 5	09/11/09	3,560.20	-	31.46	0.00	3528.74
MW - 5	09/17/09	3,560.20	-	31.47	0.00	3528.73
MW - 5	09/24/09	3,560.20	-	31.49	0.00	3528.71
MW - 5	09/29/09	3,560.20	-	31.54	0.00	3528.66
MW - 5	09/30/09	3,560.20		31.47	0.00	3528.73
MW - 5	10/06/09	3,560.20	<u></u>	31.56	0.00	3528.64
MW - 5	10/20/09	3,560.20		31.51	0.00	3528.69
MW - 5	10/27/09	3,560.20	<u> </u>	32.57	0.00	3527.63
MW - 5	11/02/09	3,560.20	-	31.63	0.00	3528.57
MW - 6	02/03/09	3,560.32	-	31.24	0.00	3529.08
MW - 6	05/06/09	3,560.32	-	31.24	0.00	3529.08
MW - 6	08/03/09	3,560.32	-	31.54	0.00	3528.78
MW - 6	11/02/09	3,560.32		31.82	0.00	3528.50

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### 2009 - GROUNDWATER ELEVATION DATA

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 7	02/03/09	3,561.07	-	31.95	0.00	3529.12
MW - 7	05/06/09	3,561.07	-	31.93 0.00		3529.14
MW - 7	08/03/09	3,561,07	-	32.25	0.00	3528.82
MW - 7	11/02/09	3,561.07	-	32.54	0.00	3528.53
MW - 8	01/07/09	3,561.07	-	31.96	0.00	3529.11
MW - 8	01/16/09	3,561.07	-	31.97	0.00	3529.10
MW - 8	01/29/09	3,561.07	-	31.95	0.00	3529.12
MW - 8	02/03/09	3,561.07	-	31.97	0.00	3529.10
MW - 8	02/09/09	3,561.07	_	31.91	0.00	3529.16
MW - 8	02/17/09	3,561.07	-	31.92	0.00	3529.15
MW - 8	02/26/09	3,561.07	-	31.93	0.00	3529.14
MW - 8	03/02/09	3,561.07	-	31.92	0.00	3529.15
MW - 8	03/05/09	3,561.07	-	31.98	0.00	3529.09
MW - 8	03/09/09	3,561.07	-	33.01	0.00	3528.06
MW - 8	03/16/09	3,561.07	-	31.96	0.00	3529.11
MW - 8	03/18/09	3,561.07	_	33.03	0.00	3528.04
MW - 8	03/25/09	3,561.07	-	33.05	0.00	3528.02
MW - 8	03/27/09	3,561.07	-	31.89	0.00	3529.18
MW - 8	03/30/09	3,561.07	-	31.93	0.00	3529.14
MW - 8	04/06/09	3,561.07	-	32.03	0.00	3529.04
MW - 8	04/13/09	3,561.07	_	31.89	0.00	3529.18
MW - 8	04/16/09	3,561.07		31.93	0.00	3529.14
MW - 8	04/20/09	3,561.07	_	31.96	0.00	3529.11
MW - 8	04/23/09	3,561.07	_	31.87	0.00	3529.20
MW - 8	04/27/09	3,561.07		31.84	0.00	3529.23
MW - 8	04/30/09	3,561.07	-	31.97	0.00	3529.10
MW - 8	05/06/09	3,561.07	-	31.91	0.00	3529.16
MW - 8	05/21/09	3,561.07	-	32.02	0.00	3529.05
MW - 8	05/27/09	3,561.07	-	32.03	0.00	3529.04
MW - 8	06/04/09	3,561.07	-	32.08	0.00	3528.99
MW - 8	06/08/09	3,561.07		32.09	0.00	3528.98
MW - 8	06/11/09	3,561.07	-	31.89	0.00	3529.18
MW - 8	06/16/09	3,561.07	-	32.08	0.00	3528.99
MW - 8	06/22/09	3,561.07	<del>-</del>	32.12	0.00	3528.95
MW - 8	06/29/09	3,561.07	-	32.06	0.00	3529.01
MW - 8	07/02/09	3,561.07	-	32.13	0.00	3528.94
MW - 8	07/10/09	3,561.07	-	32.11	0.00	3528.96
MW - 8	07/15/09	3,561.07	-	32.08	0.00	3528.99
MW - 8	07/21/09	3,561.07	-	32.28	0.00	3528.79
MW - 8	07/29/09	3,561.07	-	32.09	0.00	3528.98
MW - 8	07/30/09	3,561.07		32.24	0.00	3528.83
MW - 8	08/03/09	3,561.07		32.29	0.00	3528.78
MW - 8	08/05/09	3,561.07	-	32.26	0.00	3528.81
MW - 8	08/07/09	3,561.07	-	32.27	0.00	3528.80

### 2009 - GROUNDWATER ELEVATION DATA

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 8	08/10/09	3,561.07	-	32.28	0.00	3528.79
MW - 8	08/19/09	3,561.07	-	32.30	0.00	3528.77
MW - 8	08/27/09	3,561.07	-	32.35	0.00	3528.72
MW - 8	08/31/09	3,561.07	_	32.38	0.00	3528.69
MW - 8	09/11/09	3,561.07	-	32.40	0.00	3528.67
MW - 8	09/17/09	3,561.07	_	32.41	0.00	3528.66
MW - 8	09/24/09	3,561.07	-	32.44	0.00	3528.63
MW - 8	09/29/09	3,561.07	_	32.54	0.00	3528.53
MW - 8	09/30/09	3,561.07	_	32.42	0.00	3528.65
MW - 8	10/06/09	3,561.07	_	32.55	0.00	3528.52
MW - 8	10/20/09	3,561.07	_	32.42	0.00	3528.65
MW - 8	10/27/09	3,561.07	_	32.53	0.00	3528.54
MW - 8	11/02/09	3,561.07	-	32.57	0.00	3528.50

<sup>\*</sup>Complete Historical Tables are presented on the attached CD.

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### 2009 - CONCENTRATIONS OF BTEX IN GROUNDWATER

### PLAINS MARKETING, L.P. MONUMENT 2

### LEA COUNTY, NEW MEXICO

### NMOCD REFERENCE NUMBER 1R-0110

		All concentrat	tions are reporte							
SAMPLE	SAMPLE			SW 846-8012B, 5	030					
LOCATION	DATE	BENZENE	TOLUENE	ETHYL- BENZENE	m, p - XYLENES	o - XYLENE				
NMOCD RE	GULATORY									
	MIT	0.01	0.7500	0.750	0.6200					
MW - 1	02/03/09			Sample Schedu						
MW - 1	05/06/09			Sample Schedu						
MW - 1	08/03/09	Not Sampled	on Current	Sample Schedu	le					
MW - 1	11/02/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 2	02/03/09		Not Sample	d						
MW - 2	05/06/09	0.0170	0.0133	0.1150	0.0	719				
MW - 2	08/03/09	0.0095	0.0076	0.1030	0.05	568				
MW - 2	11/02/09	0.0101	< 0.010	0.0818	0.03	388				
MW - 3	02/03/09	< 0.001	< 0.001	< 0.001	0.00	011				
MW - 3	05/06/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 3	08/03/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 3	11/12/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 4	02/03/09	Not Sampled	on Current	Sample Schedu	le					
MW - 4	05/06/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 4	08/03/09	Not Sampled	on Current	Sample Schedu	le					
MW - 4	11/02/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 5	02/03/09	0.0011	< 0.001	< 0.001	<0.0	001				
MW - 5	05/06/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 5	08/03/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 5	11/02/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 6	02/03/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 6	05/06/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 6	08/03/09	Not Sampled	on Current	Sample Schedu	le					
MW - 6	11/02/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 7	02/03/09	< 0.001	< 0.001	< 0.001	<0.0	001				
MW - 7	05/06/09	Not Sampled	on Current	Sample Schedu	le					
MW - 7	08/03/09	Not Sampled	on Current S	Sample Schedu	le					
MW - 7	11/02/09	< 0.001	< 0.001	< 0.001	<0.0	01				
MW - 8	02/03/09	0.0625	0.0057	0.136	0.24	170				
MW - 8	05/06/09	0.0312	0.1280							
MW - 8	08/03/09	0.0406	<0.001 <0.001	0.102 0.135	0.20					
MW - 8	11/02/09	0.0334	< 0.001	0.122	0.21					

<sup>\*</sup> Complete Historical Tables are presented on the attached CD.

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# POLYCYCLIC AROMATIC HYDROCARBON CONCENTRATIONS IN GROUNDWATER

	Dibenzoluran	_	<0.000185	0.000393	0.0143	0.0102	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	<0.000184	<0.000183	<0.000185	0.00266	0.00184
	2-Methylnaphthalene	_	<0.000185	<0.000184	0.0387	0.0324	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184		<0.000183	<0.000185	0.00568	0.00356
	1-Methylnaphthalene	J\3m £0.0	<0.000185	<0.000184	0.0854	0.0722	<0.000185	0.000698	0.000698	<0.000183	<0.000917	. 869000.0	<0.000184	0.000698	<0.000183	<0.000185	0.0148	0.0113
	Pyrene	_	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	<0.000184	<0.000183	<0.000185	<0.000184	<0.000184
	Ръепалійтепе	_	<0.000185	<0.000184	0.0236	0.0171	<0.000185	<0.000184	<0.000184	<0.000183	0.000968	0.0000857	<0.000184		<0.000183	<0.000185	-+	0.00204
	ənəladidqa V	J/8m £0.0	<0.000185	<0.000184	0.019	0.0112	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184		<0.000183	<0.000185	0.00578	0.00431
	Indeno[1,2,2-c.d)pyrene	A\zm \$000.0	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	-	<0.000183	<0.000185	<0.000184	<0.000184
	Fluorene	_	<0.000185	<0.000184	0.018	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	<0.000184	<0.000183	<0.000185	0.00235	<0.000184
,3510	Fluoranthene		<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	<0.000184	<0.000183	<0.000185	<0.000184	<0.000184
EPA SW846-8270C, 3510	Dibenz[a,h]anfhracene	J\3m £000.0	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	<0.000184	<0.000183	<0.000185	<0.000184	<0.000184
EPA SW	Сргузейе	J\3m £000.0	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	< 0.000184	<0.000184	< 0.000183	<0.000917	< 0.000184	< 0.000184	<0.000184	<0.000183	<0.000185	0.000421	<0.000184
	Benzo[k]Iluoranthene	.I\zm £000.0	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	<0.000184	<0.000183	<0.000185	<0.000184	<0.000184
	Benzo[g,h,i]perylene	_	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	<0.000184	<0.000183	<0.000185	<0.000184	<0.000184
	Benzo[b]Auoranthene	A\zm 2000.0	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184		<0.000183	<0.000185		<0.000184
	Benzo[a]pyrene	J\2m 7000.0	<0.000185	<0.000184	<0.000185 <0.000185 <0.0001	<0.000926 <0.000926	<0.000185 <0.000185 <0.000185 <0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184 <0.000	<0.000184	<0.000183	<0.000185	<0.000184 <0.000	<0.000184   <0.000184   <0.000184   <0.000184   <0.000184   <0.000
	Benze[a]anthracene	Aym 1900,0	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184		<0.000183	<0.000917	<0.000184 <0.000184	<0.000184 <0.000184	<0.000184	<0.000183	<0.000185	0.00027	<0.000184
	энээктийпА	_	<0.000185	<0.000184	0.0033	<0.000926		<0.000184	<0.000184	<0.000183	<0.000917		<0.000184	<0.000184	<0.000183	<0.000185	<0.000184	<0.000184
	Acenaphihylene	_	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	<0.000184	<0.000183	<0.000185	<0.000184	<0.000184
	ənədidqanəsA	<del></del>	<0.000185	<0.000184	<0.000185	<0.000926	<0.000185	<0.000184	<0.000184	<0.000183	<0.000917	<0.000184	<0.000184	<0.000184	<0.000183	<0.000185	<0.000184	<0.000184
	SAMPLE	ntaminant. M WQCC r ions 1-	11/04/08	11/02/09	11/04/08	11/02/09	11/04/08	11/02/09	11/04/08	11/02/09	11/04/08	11/02/09	11/04/08	11/02/09	11/04/08	11/02/09	-	11/02/09
	SAMPLE 1	Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1- 101.UU and 3-103.A.	MW-1		MW-2		MW-3		MW-4		MW-5		9-MM		MW-7		MW-8	

Appendices

Appendix A
Release Notification and Corrective Action
(Form C-141)

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

### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141
Revised October 10, 2003

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

### **Release Notification and Corrective Action**

						OPERA			al Report					
Name of Co			ipeline,			Contact:		le Reynolds						
Address:				d, TX 79706		Telephone 1		41-0965						
Facility Na	me	Monume	nt # 2			Facility Typ	e: Pipelir	ne						
Surface Ow		I, Jim T C	ooper	Mineral	Owner			Lease	No.					
				LOC	ATIO	N OF RE	LEASE							
Unit Letter M	Section To	ownship 20S	Range 37E	Feet from the		/South Line	Feet from the	East/West Line	County Lea					
Latitude 32 degrees, 35' 42.4" Longitude 32 degrees, 17' 56.5"														
				NA'	<b>TURE</b>	OF REL								
Type of Rele						Volume of			Recovered					
Source of Re	lease:					Unknow	our of Occurrence	bate and	Hour of Discovery					
Was Immedi	ate Notice Giver		s 🗆 N	o Not Req	uired	If YES, To								
By Whom?						Date and F								
Was a Water	course Reached		Yes 🗵	] No		If YES, Volume Impacting the Watercourse.								
Describe Cau	ise of Problem a	ind Remed	ial Action	Taken.*										
					of the pi	peline system	at the time of tl	ne release, initial	response information is					
regulations a public health should their or the enviro	Il operators are roor the environmoperations have	required to nent. The a failed to action, NMOC	report an acceptanc lequately CD accep	d/or file certain e of a C-141 rep investigate and	release nort by the remediate	notifications and le NMOCD m le contaminati	nd perform correct arked as "Final R on that pose a thr the operator of	ctive actions for re eport" does not re eat to ground wate responsibility for o	suant to NMOCD rules and leases which may endanger lieve the operator of liability or, surface water, human health compliance with any other					
							OIL CON	SERVATION	DIVISION					
Signature:														
Printed Nam	e: Camill	e Reynolds	3			Approved by	District Supervis	or:						
Title:	Remed	iatio <u>n C</u> ooi	rdinator			Approval Dat	e:	Expiration	Date:					
E-mail Addre	ess: cjreyno	olds@paalp	o.com			Conditions of Approval:								

Phone:

(505)441-0965

Date: 3/21/2005

<sup>\*</sup> Attach Additional Sheets If Necessary