3R - 340

GW WORKPLAN

JUNE 2009

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Environmental Work Plan for Monitoring Well Installation and Baseline Groundwater Monitoring

Randleman #1
San Juan Basin, Aztec, New Mexico

Prepared for:

ConocoPhillips Company

Risk Management and Remediation
420 South Keeler Avenue
Bartlesville, OK 74004
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Prepared by:

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June 2009

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1.0 PURPOSE AND NEED

This document presents the scope of work to be performed at the Randleman #1 petroleum hydrocarbon release site (Site) associated with ConocoPhillips Company exploration and production operations in the San Juan Basin area of New Mexico. The surface owner of the Site is Tim and Marcia Montoya; land to the east of the Site where groundwater monitoring wells may need to be installed is owned by the Andrew Buyok Trustees. The Site is located approximately 5.5 miles north, northeast of Aztec, New Mexico, in Section 13 of Township 31 North, Range 11 West.

The work at the Site is being conducted in response to the discovery of a release of approximately 60 barrels of condensate on February 23, 2009. Tetra Tech Inc. (Tetra Tech) will conduct this work according to site characterization methods and soil and groundwater laboratory analyses outlined in the New Mexico Oil Conservation Division (OCD) *Guidelines for Remediation of Leaks, Spills and Releases* (OCD, 1993).

This document does not describe the preparation of risk analyses or the implementation of remedial activities that could potentially occur simultaneously with monitoring efforts at the sites in the future. Specific plans covering those potential activities will be prepared separately.

2.0 SITE HISTORY

Chronologies of activities previously performed at the Site are presented below. The proposed scope of work for the Site is presented following the chronology section.

2.1 Site Activities

The following table summarizes activities that have occurred at the Site regarding the response to the 2009 release discovery. Soil and groundwater analyses discussed below are summarized in Appendix A.

DATE	ACTIVITY
February 23, 2009	Approximately 60 barrels of condensate were found to have spilled from a hole located on the back side of an on-Site condensate tank. The condensate was released into the bermed area surrounding the tank. Upon discovery, the site operator shut in the well and notified a supervisor. Form C-141 (Appendix B) was filled out by ConocoPhillips staff and notice was given to Brandon Powell of OCD via telephone. The spilled fluids remained in the berm and none of the condensate was recovered. Form C-141 stated that the spill impacted the soil on the ground surface around the tank, that the production tank was to be removed, and that the affected soils were to be excavated.
February 26, 2009	Envirotech Inc. of Farmington, NM (Envirotech) arrived on Site, performed the soil excavation, and collected soil samples for analysis. The area of release was excavated to approximately 42 feet by 51 feet by 7 feet deep. A total of 7 composite soil samples were collected from the excavation – 1 from each of the walls of the excavation and 3 samples from the bottom of the excavation. Soil samples were collected in the field and were analyzed for total petroleum hydrocarbons (TPH) using Environmental Protection Agency (EPA) Method 418.1. Additionally, organic vapors were analyzed in the field using a Photoionization Detector (PID) and heated headspace techniques. TPH results ranged from 8 parts per million (ppm) in the soil sample collected from the north wall of the excavation to 1,080 ppm in the sample collected from the south wall of the excavation. Depth of soil samples was not noted in the samples obtained from the walls of the excavation, but the samples obtained from the bottom of the excavation were obtained at 2.5 feet below ground surface (bgs) and at 3 feet bgs along the east and west sides of the excavation, respectively. The OCD recommended action level for TPH at the Site was determined to be 100 ppm. Organic vapor concentrations ranged from 6.8 ppm in the sample obtained from the north wall of the excavation to 898 ppm in the sample obtained from the south wall of the excavation. The OCD recommended action level for organic vapor (in lieu of benzene and benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations) is 100 ppm. Due to levels of TPH and organic vapors above OCD action levels, the excavation was continued (Envirotech, 2009).

DATE	ACTIVITY
February 27, 2009	Envirotech returned to the Site to continue the excavation and sampling activities. Due to the fact that soil samples collected from the north, west, and east ends of the excavation on February 26, 2009 were found to be below OCD action levels for TPH and organic vapor, the focus of the excavation on February 27, 2009 was the south wall, the southeast wall, and the bottom of the southeast corner. At the end of the day, the excavation measured 81 feet by 43 feet by 20 feet deep (total depth is given for the deepest part of the excavation; other areas determined to be below OCD action levels went to approximately 8 feet bgs). A total of 8 soil samples were collected and analyzed in the field for TPH and organic vapors. The excavation continued until all samples were found to be below the OCD action levels of 100 ppm for both TPH and organic vapors along all four walls and the bottom of the excavation. Using this excavation approach, the southeast corner became the focus of the excavation, where after obtaining soil samples at 8, 13, and 15 feet bgs with both TPH and organic vapor results greater than 100 ppm, soil sample results for both of these constituents were not detected at a depth of 20 feet bgs, and the excavation was discontinued (Envirotech, 2009).
March 2, 2009	Groundwater was found seeping into the southeast corner of the excavation at a depth of 20 feet bgs. A Rock Springs vacuum truck was contracted by Envirotech to collect groundwater from the excavation; approximately 10 gallons of water were removed. After removal of collected groundwater, Envirotech obtained a soil sample from the southeast corner of the excavation at a depth of 20 feet bgs. TPH and organic vapor results were found to be above OCD action levels. During field analysis of the soil sample, more groundwater had seeped into the excavation. More water was then removed from the excavation, and additional excavation was performed in order to attempt to obtain a soil sample below OCD action levels. A groundwater sample was collected from the area where water continued to seep into the excavation, and was sent for laboratory analysis of volatile organic compounds by EPA Method 8260. The groundwater sample was found to contain benzene, total xylenes and total naphthalenes above New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards. Once this sample had been obtained, the excavation caved in, making further water removal via the vacuum truck impossible (Envirotech, 2009). A total of 611 cubic yards of soil were removed from the Site and were transported to an OCD-permitted facility; clean fill was obtained from the landowner to backfill the excavation. Envirotech recommended the installation of groundwater monitoring wells at the Site under OCD guidelines (Envirotech, 2009). It should be noted that according to Site history information obtained through personal communication with ConocoPhillips, groundwater monitoring wells did exist at the Site prior to this release. Envirotech used a metal detector to attempt to locate these wells without success. Tetra Tech obtained a historical map showing the location of these wells, but was also unable to locate them.

3.0 SCOPE OF WORK

The Scope of Work for Site activities is described below. Work conducted at the Site will consist of field preparation prior to the start of work (Section 3.1); a Site investigation (Section 3.2) consisting of soil boring advancement and soil sample collection (Section 3.2.1); soil boring completion to groundwater monitoring wells (Section 3.2.2); proper handling and disposal of investigation-derived waste (Section 3.2.3); and groundwater monitoring (Section 3.2.4). Reporting is discussed in Section 3.3, and quality assurance/quality control (QA/QC) is discussed in Section 4.0. References are in Section 5.0. Figure 1 is a Site location map, Figure 2 displays the Site layout and proposed locations of groundwater monitoring wells to be installed, and Figure 3 is a typical groundwater monitoring well completion diagram. Appendices follow the Figures and include:

- Appendix A – Historical Analytical Table
- Appendix B – C-141 form (Release Notification and Corrective Action) for the Site
- Appendix C – Soil Boring and Monitoring Well Completion Log Forms
- Appendix D – Groundwater Sampling Forms
- Appendix E – Site Contacts

3.1 Pre Field Work Preparation

The proposed groundwater monitoring well location map (Figure 2) will be reviewed and approved by the San Juan Business Unit and ConocoPhillips Risk Management and Remediation personnel. Once these well locations have been approved, New Mexico One-Call will be contacted to perform a utility locate within a 250 foot radius from the Randleman #1 wellhead. Additionally, monitoring well installation permits will be acquired by Tetra Tech, and a Health and Safety Plan (HASP) will be prepared by Tetra Tech prior to the start of field work.

3.2 Site Investigation

3.2.1 Soil Boring Advancement and Soil Sample Collection

The subject Site is scheduled to have four (4) soil borings completed into two-inch diameter groundwater monitoring wells in order to define the groundwater flow direction and to determine the extent, if any, of petroleum hydrocarbon-impacts to groundwater. Borings will be advanced until auger refusal is met or until a sufficient depth into groundwater is achieved. Depth to groundwater at the Site is expected to be found at a depth of 20 feet bgs.

Prior to the start of drilling operations, each boring location will be "day lighted" by Riley Industrial Services of Farmington, New Mexico, in order to insure that no underground utilities within the Site will be damaged by drilling equipment. "Day lighting" of each boring will be performed using a vacuum truck and water pressure to advance a hole approximately ten (10) inches in diameter and five (5) feet deep. Soil samples will be collected from just below the "day lighted" hole to just above the water table with a split-spoon sampling device during the advancement of each boring, while the lithology of the borehole will be recorded to the total

depth of the boring (as practical beneath the water table). Soil samples will be collected in two-foot intervals for field screening with a photo-ionization organic vapor detector (PID) using the heated headspace method. The interval containing the highest PID readings within each of the four (4) soil borings will be collected for laboratory analysis. If no hydrocarbon impacts are noted during field PID screening, the soil sample collected from just above the water table will be collected for laboratory analysis and will be submitted to Southern Petroleum Laboratories (SPL) of Houston, Texas, or another ConocoPhillips-approved laboratory. Soil analysis will consist of the following analytical parameters:

- Volatile Organic Compounds (VOCs), EPA Method 8260B
- Semivolatile Organic Compounds (SVOCs), EPA Method 8270C
- Total petroleum hydrocarbons (TPH), EPA Method 418.1
- Total metals, EPA Methods 6010/6020/7470A/7471A
- General chemistry (as described in 40 CFR 136.3), including alkalinity, bromide, chloride, fluoride, orthophosphate, sulfate, and nitrate/nitrites (various methods)

3.2.2 Groundwater Monitoring Well Construction

WDC Exploration and Wells of Peralta, NM (WDC) will be utilized as the drilling contractor at the Site, and drilling operations will be supervised by Tetra Tech personnel. Groundwater monitoring wells will be constructed using 2-inch diameter polyvinyl chloride (PVC) casing and at least 15 feet of PVC screen (approximately 10 feet of the screen to be installed below the water table, as requested by Glen VonGonten of OCD during a meeting with Tetra Tech in April 2008). The installed groundwater monitoring wells will include a sand filter pack to 2-feet above the top of the screen. A bentonite seal will placed on top of the filter pack, followed by cement grouting to the ground surface. Each well will be completed with a locking, steel, stick-up mounted well head set in a concrete pad (Figure 3). If deemed necessary, traffic bollards will be installed around each groundwater monitoring well by ConocoPhillips Company; Tetra Tech will not be responsible for this aspect of monitoring well installation. Following construction, the groundwater monitoring wells will be developed using a surge block and bailer or purge pump.

3.2.3 Investigation Derived Waste

In the event that a hydrocarbon sheen or odor is observed in well development water, the development water will be containerized in on-Site wastewater disposal tanks. Otherwise, development water will be spread on-Site. Soil cuttings will be placed on polyethylene sheeting and will be covered in the event of precipitation during field activities. Once each soil boring is complete, a representative sample of soil cuttings from that boring will be field screened using a PID and will be spread on-Site if the results are less than 100 ppm. In the event that a soil cutting PID result is greater than 100 ppm, those soil cuttings will be containerized and transported by Envirotech to the Envirotech Soil Remediation Facility (or another ConocoPhillips-approved waste disposal facility) located along Angel Peak Road, approximately 16 miles south of Bloomfield, NM.

3.2.4 Groundwater Monitoring

A baseline groundwater monitoring event will be conducted at the Site in June 2009. A dedicated, disposable bailer will be used to purge and sample each well. A groundwater sample will be collected once specific conductance, pH, dissolved oxygen, oxidation/reduction potential (ORP) and temperature are determined to have stabilized (within a 10% margin), or until at least three (3) well volumes have been removed. Records of each sampling event will be kept on Tetra Tech groundwater sampling forms and in a bound field notebook dedicated to the Site. Groundwater samples will be containerized in bottles supplied by SPL of Houston, Texas, or another ConocoPhillilps-approved laboratory. The groundwater samples will be placed on ice in a cooler under chain of custody documentation and submitted to SPL (or other ConocoPhillips-approved laboratory) for analysis via an overnight courier.

The baseline parameter list for groundwater includes analyses of the following parameters:

- VOCs, EPA Method 8260B
- SVOCs, EPA Method 8270C
- TPH, gasoline range organics (GRO), EPA Method 8015B
- TPH, diesel range organics (DRO), EPA Method 8015B
- Total metals, EPA Methods 6010/6020/7470A/7471A
- General chemistry (as described in 40 CFR 136.3), including alkalinity, bromide, chloride, fluoride, orthophosphate, sulfate, nitrate/nitrite, pH, specific conductance, TDS, and hardness (various methods)

Compounds of concern (COCs) detected in the baseline groundwater parameter list in concentrations above the New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards will be carried forward for analyses in subsequent groundwater monitoring events. The timing and duration of the subsequent groundwater monitoring events will be dependent upon the results of the baseline analysis, and will be covered under a separate, OCD-approved work plan. In the event that all COCs are detected at concentrations below NMWQCC groundwater quality standards after the first groundwater monitoring event, ConocoPhillips will discuss Site-specific closure requirements with OCD.

3.3 Reporting

A groundwater monitoring report will be prepared for the Site after completion of the baseline groundwater quality analysis. The report will include a summary of the groundwater monitoring well installation, a brief description of the soil and groundwater sampling events and a discussion of analytical sampling results. In general, Tetra Tech groundwater monitoring reports will include the date(s) the events occurred, copies of field notes from each sampling event, copies of laboratory chain-of-custody documentation and laboratory analytical results, laboratory quality assurance/quality control (QA/QC) documentation, tabulated groundwater elevations, groundwater concentration/elevation maps, a generalized geologic cross section, and a summary of key findings. In the event that a quarterly, semi-annual or annual groundwater monitoring program is initiated at the Site, groundwater elevations and groundwater analytical results from the previous

sampling event will be tabulated with the results from the current sampling event. One (1) hard copy and one (1) electronic copy of each monitoring report will be submitted to OCD.

A C-141 form (Release Notification and Corrective Action) was completed on February 23, 2009, by Gwen Frost of ConocoPhillips Company and was submitted to Brandon Powell of OCD via electronic mail (Appendix B).

4.0 QUALITY ASSURANCE AND QUALITY CONTROL

A quality assurance evaluation will be conducted by the analytical laboratory on collected samples to check for accuracy, precision and reliability of each reported analyte concentration. Sample spiked-matrix batch samples will be analyzed to determine the accuracy of laboratory results. Quality assurance documentation will be provided on the laboratory report. In addition, at least one duplicate groundwater sample will be obtained during sampling activities and will be labeled with a false name and false time in order to remove any laboratory bias toward the sample. Results of the duplicate sample analysis will be reported with the groundwater results table.

At least one field audit of health and safety procedures and of investigation and sampling protocol will be conducted by the project manager during the period covered by this work plan. Variations from standard operating procedures will be documented and corrected, if necessary.

5.0 REFERENCES

Envirotech Incorporated (2009). *Spill Cleanup Report, Located at: Burlington Resources* [sic] *Randleman #1 Well Site, Section 13, Township 31N, Range 11W, San Juan County, New Mexico.* Prepared for ConocoPhillips. Report Dated February 2009. 3 pp (not including Figures, Tables, and Appendices).

New Mexico Oil Conservation Division (1993). *Guidelines for Remediation of Leaks, Spills and Releases.* August 13, 1993. 16 pp. (not including Appendices).

FIGURES

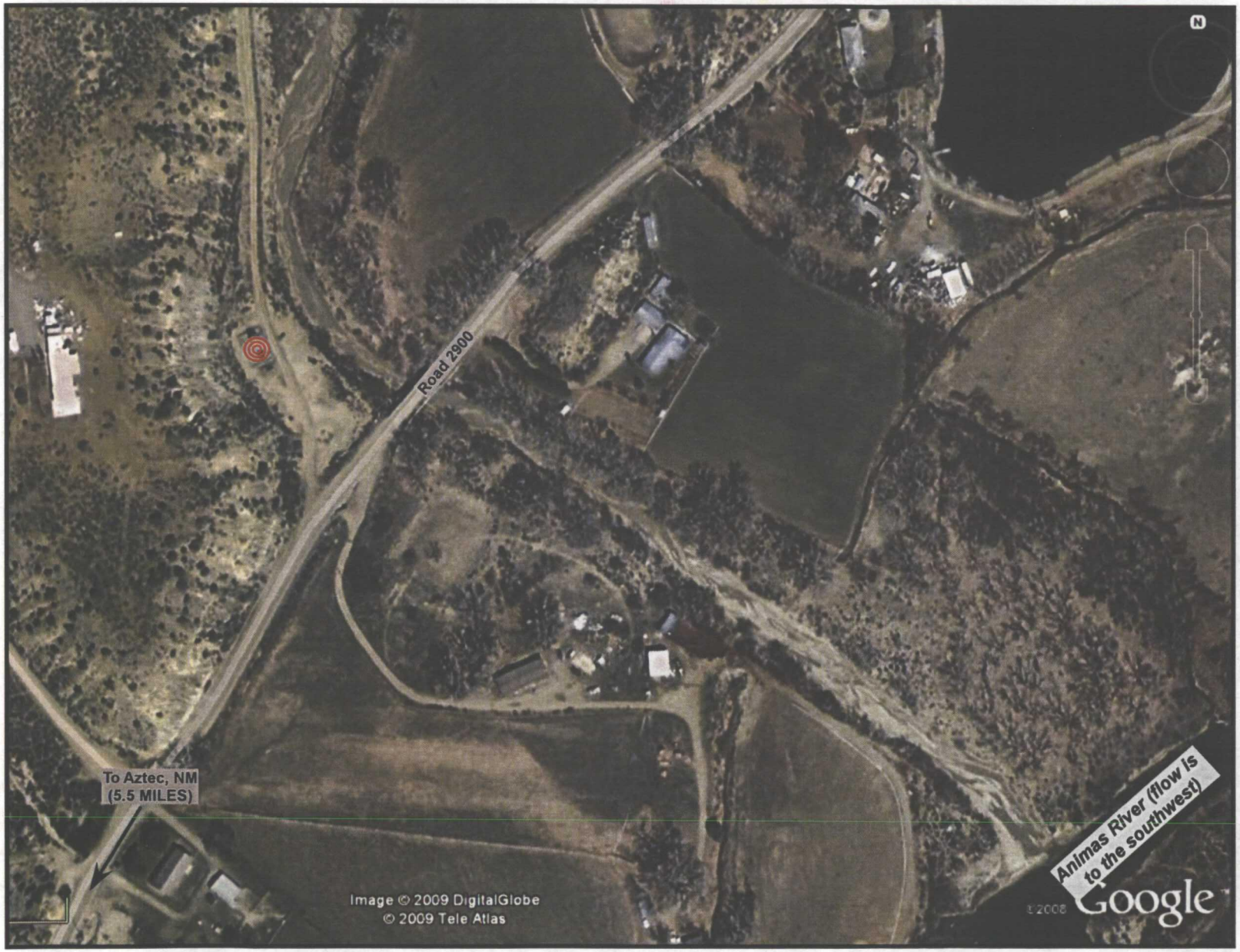
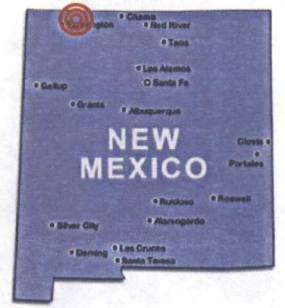


FIGURE 1.

Site Location Map
ConocoPhillips
Randleman #1
Aztec, NM



ConocoPhillips
Randleman #1 Site Location

0 175 350
Feet

Source: Google™ Earth

N

TETRA TECH, INC.

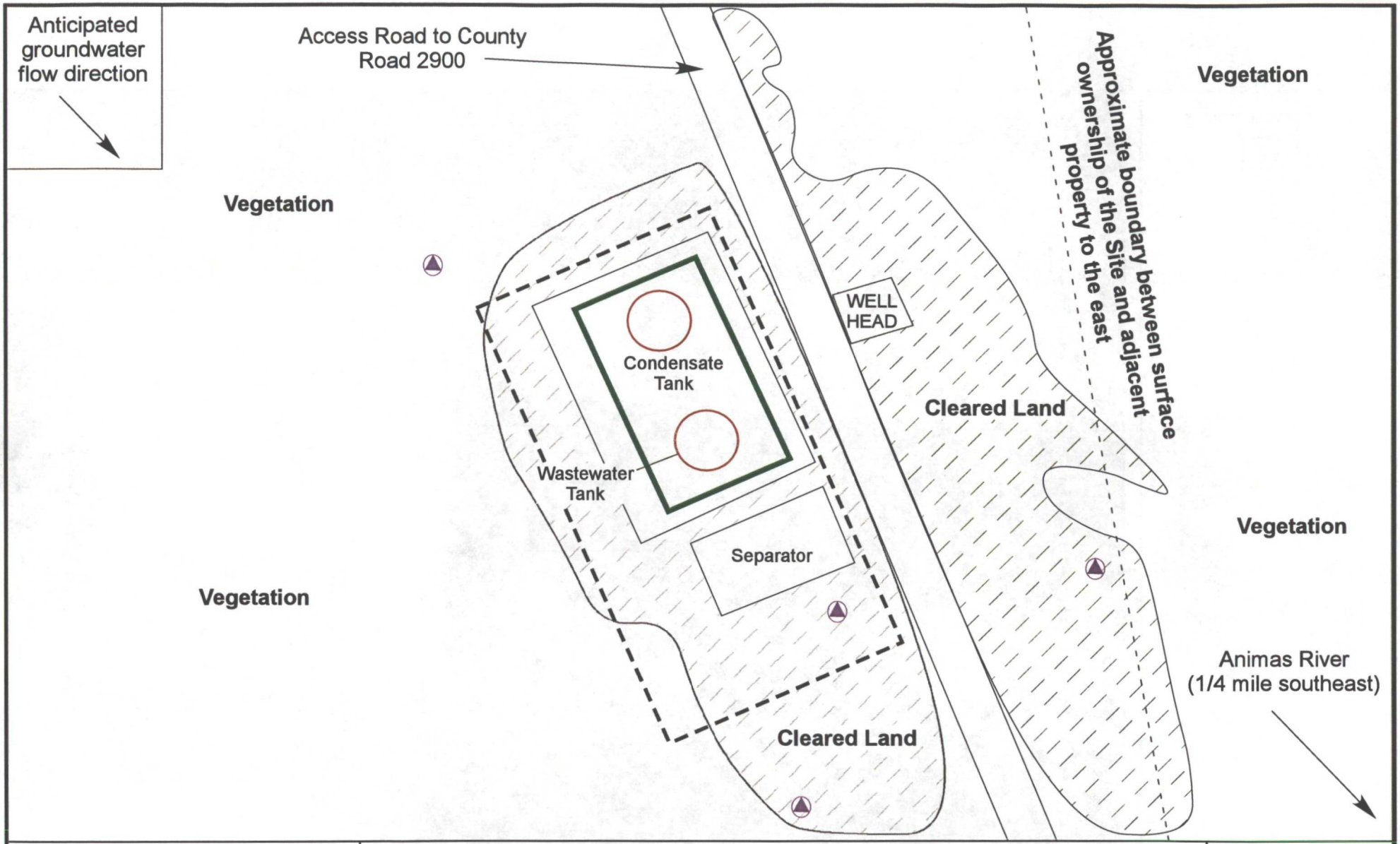


FIGURE 2:
SITE LAYOUT MAP
CONOCOPHILLIPS COMPANY
RANDLEMAN #1 OIL AND GAS PRODUCTION WELL
Sec 13, T31N, R11W
Aztec, New Mexico

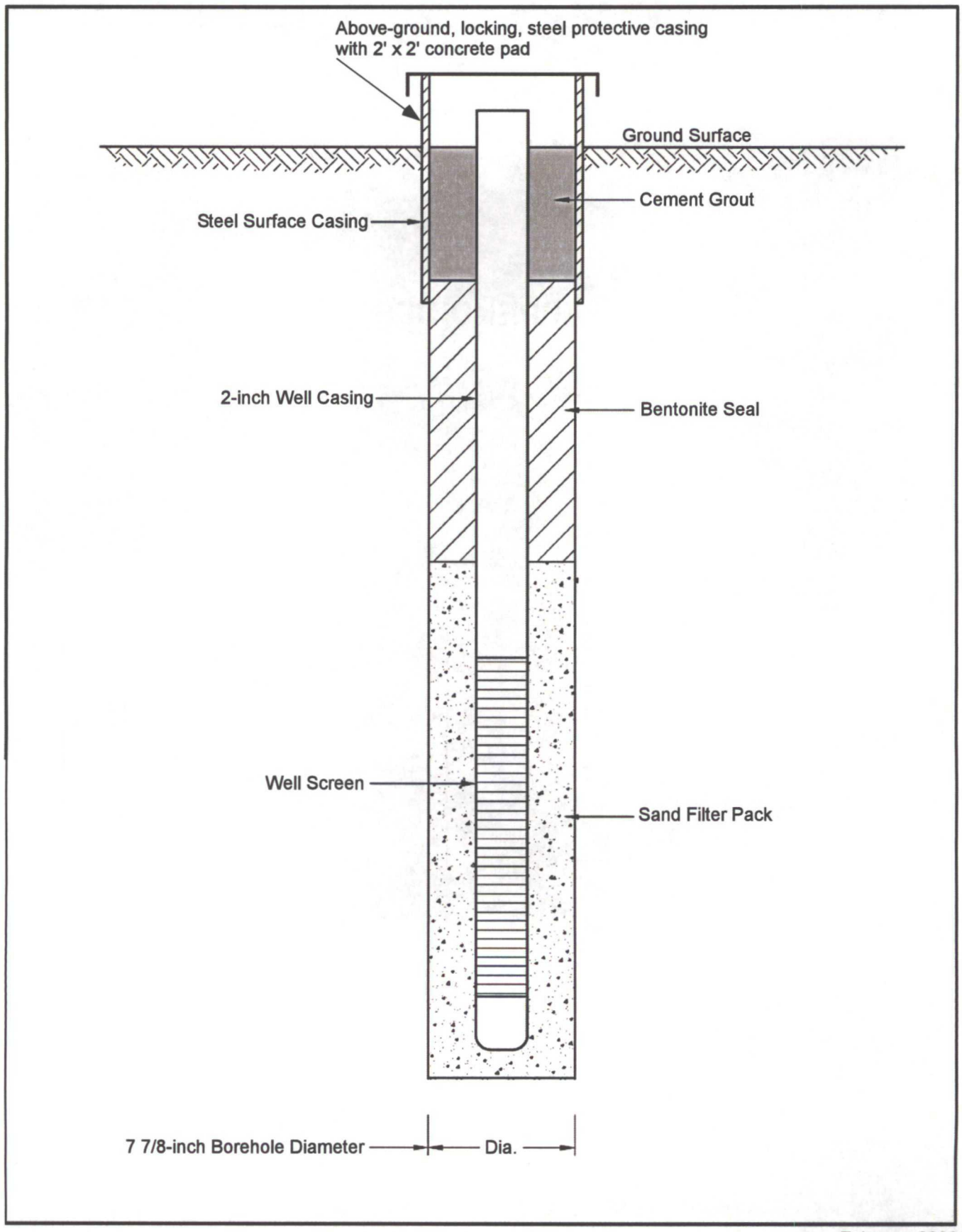
LEGEND

- GENERAL AREA of EXCAVATION
- FORMER CONDENSATE TANK AND WASTEWATER TANK LOCATION
- BERM
- PROPOSED MONITORING WELL

0 15 30
FEET

N

TETRA TECH, INC.



February 2009

Figure 3
Typical Monitoring Well Completion Diagram

APPENDICES

APPENDIX A
Historical Analytical Table

Appendix A - Historical Analytical Results

Randleman #1 Well Site - Aztec, New Mexico

Soil Samples		Analytes (ppm)	
Sample ID	**Date**	**TPH (Method 418.1)**	**PID**
North Wall Comp	2/26/2009	8	**274.0**
North Wall Comp 2	2/26/2009	NA	6.8
Bottom West Side Comp 1	2/26/2009	36	51.2
Bottom West Side Comp 2	2/26/2009	**104**	48.8
West Wall Comp	2/26/2009	36	38.7
East Wall Comp	2/26/2009	44	74.8
Bottom East Side Composite	2/26/2009	**772**	**641.0**
South Wall Composite	2/26/2009	**1,080**	**898.0**
West Bottom at 8' BGS	2/27/2009	12	3.5
South-East Wall Comp	2/27/2009	32	**186.0**
South-East Wall Comp 2	2/27/2009	NA	53.9
South Wall Composite	2/27/2009	40	64.3
South-East Corner Bottom at 8'	2/27/2009	**5,220**	**1,079.0**
South-East Corner Bottom at 13'	2/27/2009	**7,970**	**1,236.0**
South-East Corner Bottom at 15'	2/27/2009	**200**	**878.0**
South-East Corner Bottom at 20'	2/27/2009	ND	21.2
Bottom Composite at 20' BGS	3/2/2009	**512**	**664.0**
NMOCD Recommended Action Levels		100	100

Groundwater Samples		Analytes (ug/L)				
Sample ID	**Date**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**Total Naphthalenes**
GW 25 - 30' Deep	3/2/2009	**523**	282	391	**935**	**34.4**
NMWQCC Groundwater Quality Standards		10	750	750	620	30.0

Notes:

ppm - parts per million
ug/L - milligrams per liter
NMOCD - New Mexico Oil Conservation Division
NMWQCC - New Mexico Water Quality Control Commission
Constituents in **BOLD** note action level/groundwater quality standard exceedence
NA - not analyzed
TPH - total petroleum hydrocarbons
PID - photoionization detector results for organic vapor analysis
Comp - composite
All samples obtained by Envirotech, Inc. of Farmington, NM.
bgs - below ground surface
ND - not detected

APPENDIX B
C-141 Form

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

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Burlington Resources, a wholly owned subsidiary of ConocoPhillips Company		Contact: Gwen R. Frost	
Address: 3401 E. 30th St., Farmington, NM 87402		Telephone No.: 505-326-9549	
Facility Name: Randleman #1		Facility Type: Gas Well	API # 30-045-10698
Surface Owner: Private	Mineral Owner: Private		Lease No.: Fee

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	13	T31N	R11W	1750'	South	1650'	West	San Juan

Latitude 36.895910° N Longitude 107. 9447500° W

NATURE OF RELEASE

Type of Release – Condensate	Volume of Release – 60 BBL Condensate	Volume Recovered – 0 BBL
Source of Release: Hole in production tank	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 2/23/09 – 9:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD - Brandon Powell via phone	
By Whom? Gregg Wurtz	Date and Hour – 2/23/09 – 4:30 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* On February 23, 2009, a COPC employee discovered a hole on back side of production tank and an approximate 60 BBL condensate was spilled in the berm. Upon discovery, the MSO shut in the well and notified a Supervisor. All spilled fluids remained in the berm. None of the fluids were recoverable.

Describe Area Affected and Cleanup Action Taken.* All of the spilled fluids remained on location. The spill impacted soil on the ground surface around the tank. The production tank will be removed and affected soils will be excavated. To prevent reoccurrence, COPC will continue to perform tank inspections.

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

Signature: Gwen R. Frost	OIL CONSERVATION DIVISION	
Printed Name: Gwen R. Frost	Approved by District Supervisor:	
Title: Environmental Engineer	Approval Date:	Expiration Date:
E-mail Address: gwendolynne.frost@conocophillips.com	Conditions of Approval:	Attached ☐
Date: 2/24/09 Phone: 505-326-9549		

* Attach Additional Sheets If Necessary

APPENDIX C
Soil Boring and Monitoring Well Completion Log Forms

Lithology Record

Project/Client: ______________________

Borehole: ______________ **Method:** ______________

Geologist: ______________________

Date: ______________________

Driller: ______________________

Page ___ of ___

Interval (ft.)	Group Name and Description	USCS Class	Color	Moisture Content	Consistency of Cohesive Soils (Clay)	Density of Non-Cohesive Soils (Sand)	Angularity/Shape of Particles	Cementation & Type	Structure	Dry Strength	Plasticity	Additional Information	% Rec. (ft/ft)
Blow Ct. Sample: Y N Analytes: Time:	PID:			dry damp moist wet sat.	v. soft soft firm (stiff) hard v. hard	v. loose loose m. dense dense v. dense	angular subangular subrounded rounded flat elongated	none weak moderate strong CHOOSE: Calcareous OR Silicious	stratified laminated fissured slickensided blocky lensed homogenous interbedded	none low medium high v. high	nonplastic low medium high		
Blow Ct. Sample: Y N Analytes: Time:	PID:			dry damp moist wet sat.	v. soft soft firm (stiff) hard v. hard	v. loose loose m. dense dense v. dense	angular subangular subrounded rounded flat elongated	none weak moderate strong CHOOSE: Calcareous OR Silicious	stratified laminated fissured slickensided blocky lensed homogenous interbedded	none low medium high v. high	nonplastic low medium high		
Blow Ct. Sample: Y N Analytes: Time:	PID:			dry damp moist wet sat.	v. soft soft firm (stiff) hard v. hard	v. loose loose m. dense dense v. dense	angular subangular subrounded rounded flat elongated	none weak moderate strong CHOOSE: Calcareous OR Silicious	stratified laminated fissured slickensided blocky lensed homogenous interbedded	none low medium high v. high	nonplastic low medium high		
Blow Ct. Sample: Y N Analytes: Time:	PID:			dry damp moist wet sat.	v. soft soft firm (stiff) hard v. hard	v. loose loose m. dense dense v. dense	angular subangular subrounded rounded flat elongated	none weak moderate strong CHOOSE: Calcareous OR Silicious	stratified laminated fissured slickensided blocky lensed homogenous interbedded	none low medium high v. high	nonplastic low medium high		

TETRA TECH, INC.

Well Completion Diagram

Job Name _____

Job No. _____ Date _____

Project Manager _____

Well I.D. _____

Field Geologist _____

Driller _____

Equipment _____

Materials

_____ Pounds _____ Filter Pack

_____ Pounds _____ Bentonite Seal

_____ Gallons _____ Grout

_____ Pounds _____ Concrete

_____ Feet of native fill/ slough

_____ Feet of _____ inch _____ pvc _____ Blank Casing

_____ Feet of _____ inch _____ Slotted Screen

_____ Feet of _____ Outer Casing

_____ Feet of _____ Sump/ Silt Trap

Placement Method _____

Notes _____

_____

Development

Method _____

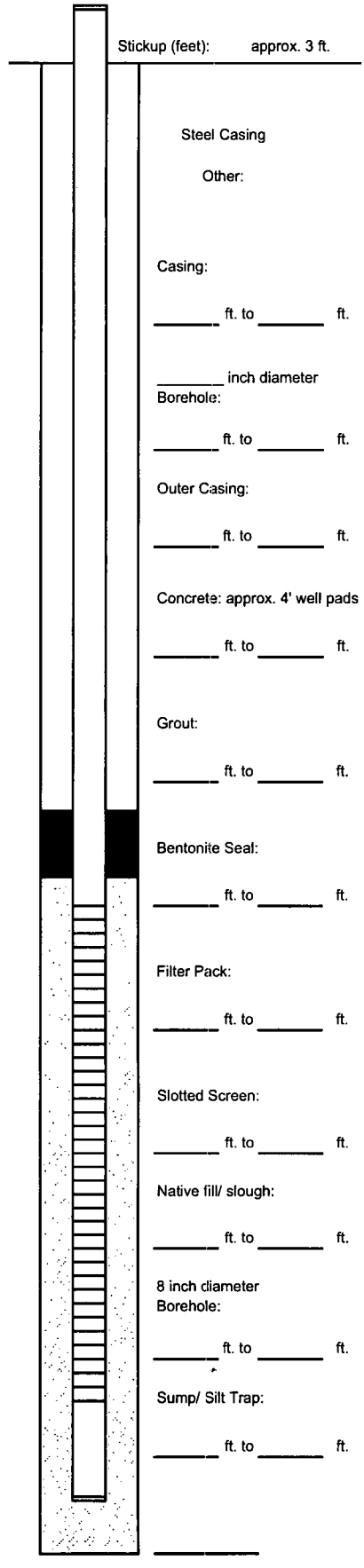
Date _____

Amount Purged _____ gallons

Notes _____

_____

Well ID MW-



APPENDIX D
Groundwater Sampling Form

WATER SAMPLING FIELD FORM

Project No. _____ _____ of _____

Site Location _____

Site/Well No. MW-_____ Coded/ Replicate No. _____ Date _____

Weather _____ Time Sampling Began _____ Time Sampling Completed _____

EVACUATION DATA

Description of Measuring Pt (MP) _____

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP _____ Water-Level Elevation _____

Held _____ Depth to Water Below MP _____ Diameter of Casing 2 inch / 4 inch

Wet _____ Water Column in Well _____ Gallons Pumped/Bailed Prior to Sampling _____

Gallons per Foot _____

Gallons in Well _____ Sampling Pump Intake (feet below land surface) _____

Purging Equipment _____

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	TDS	DO	DO%	ORP	Other

Sampling Equipment Low Flow Pump / Disposable Bailer

Constituents Sampled	Container Description	Preservative

Remarks _____

Sampling Personnel _____

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3" ½ = 0.50	6" = 1.46

APPENDIX E
Site Contacts

Site Contacts

Name	Affiliation	Work Phone	Cell Phone
Kelly Blanchard	Tetra Tech, Inc.	505-237-8440	505-975-2563
Ana Moreno	Tetra Tech, Inc.	505-237-8440	505-440-8640
Gary Desselle	Tetra Tech, Inc.	505-237-8440	505-288-0680
Christine Matthews	Tetra Tech, Inc.	505-237-8440	
Brandon Powell	New Mexico Oil Conservation Division District 3 (Aztec)	505-334-6178, x 15	505-320-0200
Glen Von Gonten	New Mexico Oil Conservation Division District 4 (Santa Fe)	505-476-3488	
Bryan Nydoske	WDC Exploration and Wells District Manager	505-865-5222	505-991-3578
April Pohl	Envirotech Landfarm Administrator - Soil Disposal	505-632-0615	505-320-6431
David Brackney (or GW Riley or Bill McPherson)	Riley Industrial - Day lighting	505-327-4947	
Gwen Frost	ConocoPhillips San Juan Business Unit	505-326-9549	505-215-3121
Mike Mankin	ConocoPhillips PTRRC	505-599-4098	505-947-8602
Maxwell Blair	ConocoPhillips PTRRC	505-599-4021	505-320-2732
Terry Lauck	ConocoPhillips Risk Management and Remediation Site Manager	918-661-0935	918-815-0556