



TETRA TECH, INC.

1703 W. Industrial Ave.  
Midland, Texas 79701  
(432) 686-8081

August 10, 2007

Mr. Larry Johnson  
New Mexico Oil Conservation Division  
1625 N. French Dr.  
Hobbs, NM 88240

Ms. Trishia Bad Bear  
US Bureau of Land Management  
414 West Taylor  
Hobbs, NM 88240

RE: Wyatt A Federal Work Plan - Revised  
Lea County, New Mexico  
Unit E, Sec. 33, T17S, R33E  
OCD RP#1518

Dear Mr. Johnson:

On Behalf of ConocoPhillips, Tetra Tech, Inc. (Tetra Tech) submits this work plan to perform a subsurface investigation at ConocoPhillips' MCA Wyatt A Federal (Site; Figure 1). This work is in support of ConocoPhillips efforts to delineate and remediate a recent 21 barrel crude oil release onto an oil field road (10 x 1,100 feet; C141 attached) and on the backside of the battery. The Site is below and located approximately 0.4 miles southwest of the Mescalero Ridge. It is approximately 5.9 miles southeast of ConocoPhillips' Maljamar office. (32.79480N, 103.37433W). The State of New Mexico is the land administrator.

Wyatt A is located in the Querecho Plains of eastern New Mexico. This area generally consists of a thin cover of Quaternary sand dunes overlying the undivided Triassic Upper Chinle Group.<sup>1</sup> The Pyote and Dune Series soil at the Site consists of very deep well-drained sand and sandy loam. Typically, the surface layer is yellowish red to dark reddish-brown fine sand. It is underlain by yellowish red sandy clay. Below this is light yellowish brown gravelly fine sandy loam.<sup>2</sup>

Depth to water in the vicinity of the Site is estimated to be approximately 90 feet below ground surface (fbgs). This interpretation is based potentiometric surface contours described by Nicholson and Clebsch<sup>1</sup> for groundwater conditions in Southern Lea County. The New Mexico Office of State Engineer's database<sup>3</sup> did not yield any depth to groundwater information in this area. The United States Geological Survey's database<sup>4</sup> only described groundwater conditions above Mescalero Ridge. Nicholson and Clebsch did indicate a well approximately 2.1 miles to the northwest that registered groundwater at 70 fbgs.

Fresh surface water is not present in the area. There are dry playas that briefly hold water following a rainfall event. The nearest playa is approximately 330 feet northwest of the site.

<sup>1</sup> Nicholson Jr., A. and A. Clebsch, 1961. Geology and Ground-Water Conditions in Southern Lea County, New Mexico. USGS, GW Rpt 6, Socorro, NM. pp. 123.

<sup>2</sup> U.S. Department of Agriculture, Natural Resources Conservation Services. Web Soil Survey Database.

<sup>3</sup> New Mexico Office of State Engineer. W.A.T.E.R.S. Database.

<sup>4</sup> United States Geological Survey. Groundwater Levels for the Nation Database.

Following the ranking criteria presented in "Guidelines for Remediation of Leaks, Spills, and Releases" promulgated on August 13, 1993 by the NMOCD, this Site has the following score:

<u>Criteria</u>		<u>Ranking Score</u>
Depth to groundwater	<100 feet	10
Distance from water source	>1000 feet	0
Distance from domestic water source	>200 feet	0
Distance from surface water body	<1,000 feet	<u>10</u>
<b>Total Ranking Score</b>		<b>20</b>

The remediation action level for a ranking score of >19 is 10 parts per million (ppm) for benzene, 50 ppm for total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 100 ppm for total petroleum hydrocarbons (TPH).

### **Scope of Work**

To delineate the lateral and vertical extent of the crude oil affected area, Tetra Tech will perform the following activities:

1. A backhoe will be used to dig exploratory trenches in the affected area.
2. The New Mexico Oil Conservation Division (NMOCD) and the BLM will be notified 48 hours prior to initiation of the site investigation.
3. It is anticipated that five (3) 15-foot long trenches will be excavated across the 1,100-foot long affected area and two (2) trenches will be excavated on the back side of the battery (Figure 2). Soil samples will be collected every five feet from 3 locations (clean left, affected area, clean right) in each trench. Soil samples collected from the trenches will be field tested using chloride and electrical conductivity (EC) field screened techniques<sup>5,6</sup> to find the vertical and lateral clean boundary of the release area. A photo-ionization detector (PID) will be used to screen for volatile organic hydrocarbons (VOC). Diesel range petroleum hydrocarbons (TPH<sub>DRO</sub>) will be field screened using a PetroFLAG System.<sup>7</sup> Field analyses using a chloride test kit and EC test will determine that a clean boundary of less than (<) 1,000 milligrams per kilogram (mg/kg) chloride and < 1,000 micro Siemens per meter (µS/m) EC. VOC and TPH<sub>DRO</sub> field analysis will determine the clean boundary of < 10 parts per million (ppm) VOC and < 100 ppm TPH.

<sup>5</sup> U.S. Environmental Protection Agency Grant No. R827015-01-1. IPEC Guidelines for Remediation of Small Brine Spills, January 12, 2004. Univ. of Tulsa, OK.

<sup>6</sup> Conner, J.A. and C.J. Newell. 2004. Strategies for Addressing Oil Field Brine Releases to Plants, Soil and Groundwater. Publ. No. 4758, American Petroleum Institute, Washington D.C. p 25.

<sup>7</sup> U.S. Environmental Protection Agency, 2001. Innovative Technology Verification Report, Dexsil Corporation PetroFLAG™ System. Prepared by Tetra Tech EM Inc. for USEPA National Exposure Research Laboratory Office of Research and Development. EPA/R-01/092.

4. Six to Nine soil samples from each soil trench (highest salinity and TPH<sub>DRO</sub> reading and basal sample, (45 possible) will be submitted to a laboratory for confirmation analyses. The samples will be placed into glass sample jars, sealed with Teflon-lined lids, and placed on ice for transportation to an analytical laboratory where they will be analyzed for chloride (USEPA Method 300.0A), electrical conductivity (Standard Method 2510B SW-846 Method 9050A), total petroleum hydrocarbons (TPH<sub>DRO</sub> and TPH<sub>GRO</sub>, Method 8015) and benzene, ethylbenzene, toluene and total xylenes (BTEX, Method 8260). In addition, the basal samples (5) from each soil trench will be analyzed for BTEX and chloride synthetic precipitation leaching potential (SPLP<sub>BTEX</sub> and SPLP<sub>Cl</sub>; USEPA Method 1312/8015 & 300.0A, respectively). These analyses will be used to confirm clean boundaries have been identified.
5. Excavated soil will be returned to the trench for handling during site remediation.

Tetra Tech will supervise and direct all subcontractor activities, and prepare a findings report describing and documenting what was done at the Site, including a site map. This report on activities, results, and recommendations will be submitted for ConocoPhillips, BLM's and NMOCD's review and approval.

### Project Schedule

ConocoPhillips has authorized Tetra Tech to proceed and Tetra Tech is prepared to commence work on this project immediately following receipt of NMOCD's and BLM's notification to proceed.

Mr. Greg Pope will serve as the Project Manager and will have the authority to commit whatever resources are necessary to support the project team. It will be Mr. Pope's responsibility to ensure that the Client's needs are met in terms of scope of work and schedule. Mr. Pope is located in Tetra Tech's Midland, Texas, office.

If you concur with this Work Plan, please authorize by giving me or Mr. Greg Pope notification to proceed. Please contact me or Mr. Pope if you have any questions or require additional information.

Sincerely,

**Tetra Tech, Inc.**

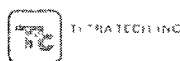
**Charles Durrett**  
Digitally signed by Charles Durrett  
DN: CN = Charles Durrett, C = US, O =  
Tetra Tech  
Date: 2007.09.10 08:51 -05'00'

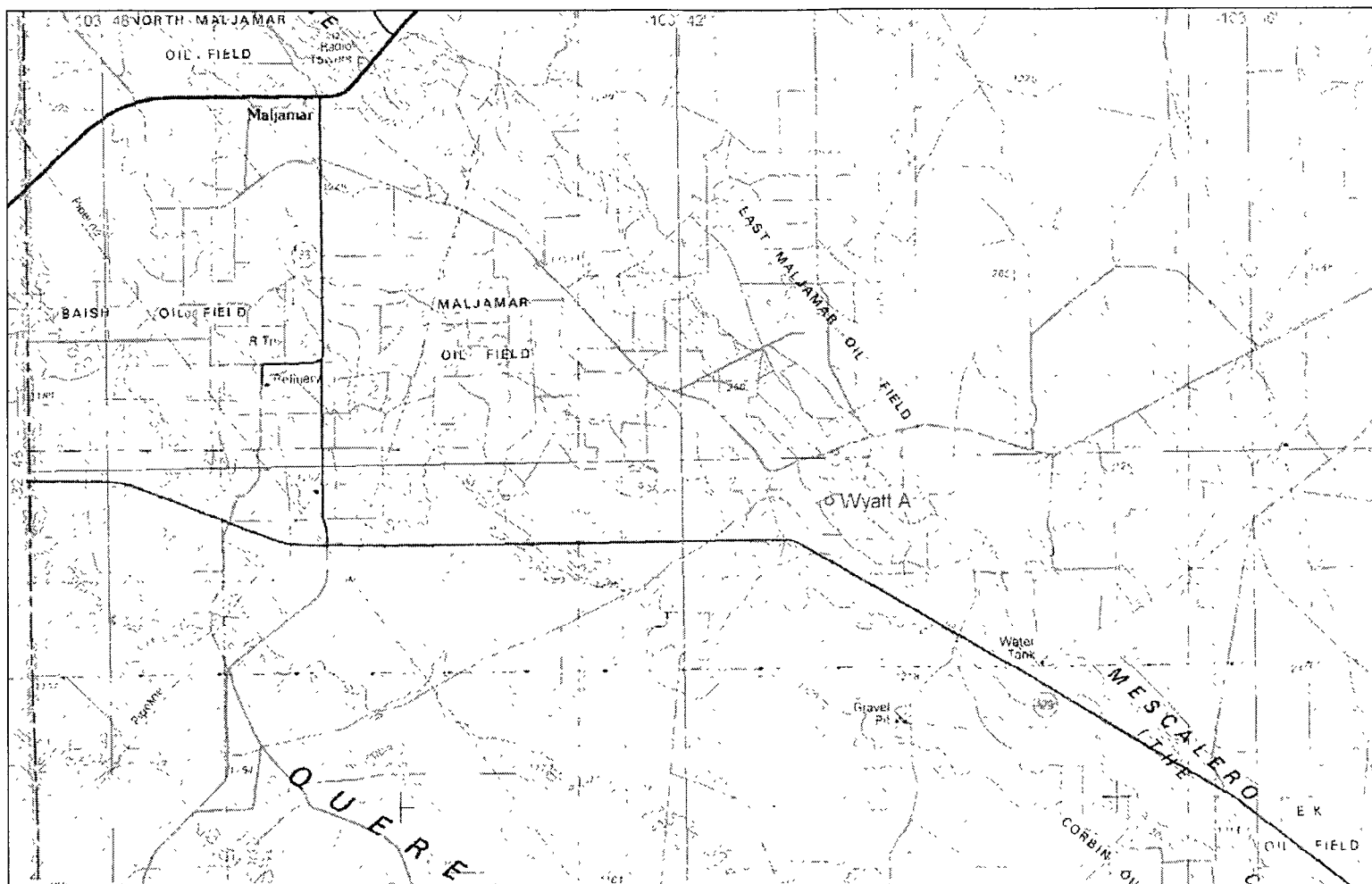
Charles Durrett  
Office Manager

Greg W. Pope, P.G.  
Project Manager


Cc: Mickey Garner, ConocoPhillips

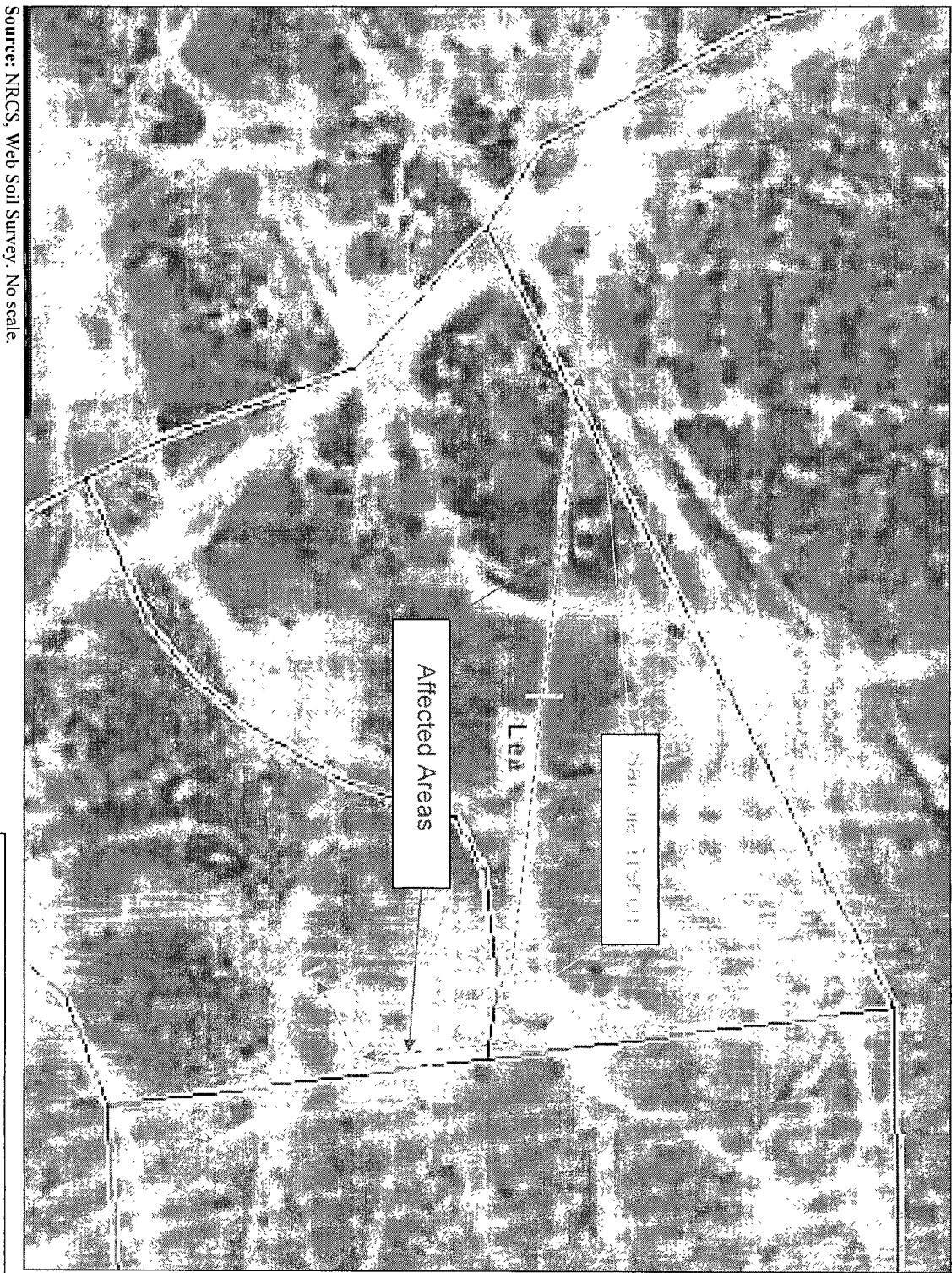
Attachment






Source: USGS, 1978. Hobbs New Mexico – Texas Topographic Map 1:24,000 scale.

 TETRA TECH, INC.	
<b>ConocoPhillips</b>	<b>Southeastern New Mexico Unit</b>
<b>Figure 1. Wyatt A Federal Crude Oil Release Site</b>	



Source: NRCS, Web Soil Survey. No scale.

 TETRA TECH, INC.	Southeastern New Mexico Unit
<b>ConocoPhillips</b>	Wyatt A Federal Crude Oil Release Site and Sampling Locations.

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 <b>ConocoPhillips Company</b>	Contact <b>Mickey Garner</b>	
Address <b>3300 North A St. Bldg 6, Midland, TX 79705-5406</b>	Telephone No. <b>505.391.3158</b>	
Facility Name <b>Wyatt A Federal</b>	Facility Type <b>Oil and Gas</b>	
Surface Owner <b>State of New Mexico</b>	Mineral Owner <b>BLM</b>	Lease No <b>NM108507</b>

**LOCATION OF RELEASE**

Unit Letter <b>E</b>	Section <b>33</b>	Township <b>17S</b>	Range <b>33E</b>	Feet from the	North/South Line	Feet from the	East/West Line	County <b>Lea</b>
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Latitude **N 32.79480** Longitude **W 103.67433**

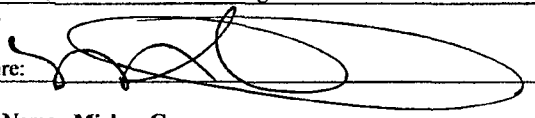


**NATURE OF RELEASE**

Type of Release <b>Crude Oil</b>	Volume of Release <b>21bbl (21oil, 0water)</b>	Volume Recovered <b>(4oil, 0water)</b>
Source of Release <b>300 bbl Steel Tank</b>	Date and Hour of Occurrence <b>7-29-2007 02:00</b>	Date and Hour of Discovery <b>7-29-2007 07:30</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? <b>Pat Richards NMOCD</b>	
By Whom? <b>Mickey Garner</b>	Date and Hour <b>7-29-2007 17:52</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <b>N/A</b>	
If a Watercourse was Impacted, Describe Fully.* <b>N/A</b>		

Describe Cause of Problem and Remedial Action Taken.\*  
**The source of discharge was a hole in the bottom of a 300 bbl steel tank. A vacuum truck was called out to pick up free liquids.**

Describe Area Affected and Cleanup Action Taken.\*  
**The area affected is an 1100' X 10' section of prepared location pad and roadway. No vegetation was affected. The area will be delineated and remediated in accordance with NMOCD guidelines.**

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Mickey Garner</b>	Approved by District Supervisor: 	
Title: <b>HSER Lead</b>	Approval Date: <b>8-3-07</b>	Expiration Date: <b>10-3-07</b>
E-mail Address: <b>Mickey.D.Garner@conocophillips.com</b>	Conditions of Approval: <b>SUBMITAL OF FINAL C-141</b>	Attached <input type="checkbox"/> 
Date: <b>7-31-2007</b> Phone: <b>505.391.3158</b>		

- Attach Additional Sheets If Necessary

W/ DELINEATION & CLEANUP DOCUMENTATION BY

RP# 1518