

**From:** Larson, Thomas  
**To:** [Yu, Olivia, EMNRD](#)  
**Cc:** [Camille J Bryant](#); [Ferguson, John \(Midland\)](#); [Project Email Filing](#)  
**Subject:** RE: 074685 Plains-Darr Angell #2 Remedial Action and Delineation Sampling Approval Request ~COR-074685~  
**Date:** Friday, May 5, 2017 9:40:01 AM

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Ms. Yu:

We appreciate your considerations and will proceed with the work as proposed for 1RP-4679.

Best Regards

**Thomas C. Larson, PG**  
**Principal**  
**GHD**

Direct: +1 432 203-8671 | Office +432-686-0086 | M: +1 432 553-1681 | E: [tom.larson@ghd.com](mailto:tom.larson@ghd.com)  
2135 S. Loop 250 West, Midland, Texas 79703 USA | [www.ghd.com](http://www.ghd.com)  
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**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]  
**Sent:** Friday, May 05, 2017 10:36 AM  
**To:** Larson, Thomas  
**Cc:** Camille J Bryant; Ferguson, John (Midland); Project Email Filing  
**Subject:** RE: 074685 Plains-Darr Angell #2 Remedial Action and Delineation Sampling Approval Request ~COR-074685~

Good morning Mr. Larson:

Thank you for the clarification. For this 1RP-4679, NMOCD concurs that chloride delineation is not required.

Thanks,

Olivia Yu  
Environmental Specialist  
NMOCD, District I  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)  
575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

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**From:** Larson, Thomas [<mailto:tom.larson@ghd.com>]

**Sent:** Friday, May 5, 2017 8:56 AM

**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>

**Cc:** Camille J Bryant <[CJBryant@paalp.com](mailto:CJBryant@paalp.com)>; Fergerson, John (Midland) <[John.Fergerson@ghd.com](mailto:John.Fergerson@ghd.com)>; Project Email Filing <[Filing-NA@ghd.com](mailto:Filing-NA@ghd.com)>

**Subject:** 074685 Plains-Darr Angell #2 Remedial Action and Delineation Sampling Approval Request ~COR-074685~

**Importance:** High

Ms. Yu:

This release was from a groundwater remediation system. It was not associated with produced water, but rather – fresh water from the Ogallala aquifer. Consequently, we did not propose chlorides in the assessment and delineation sampling plans. Please reconsider chloride analysis and advise if the NMOCD concurs that hydrocarbon delineation (TPH/BTEX only) is appropriate in this circumstance. Thanks in advance for your considerations and I would be happy to discuss this matter with you in more detail if appropriate.

Best Regards

**Thomas C. Larson, PG**

**Principal  
GHD**

Direct: +1 432 203-8671 | Office +432-686-0086 | M: +1 432 553-1681 | E: [tom.larson@ghd.com](mailto:tom.larson@ghd.com)  
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**From:** Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]

**Sent:** Thursday, May 04, 2017 1:30 PM

**To:** Fergerson, John (Midland)

**Cc:** 'Camille Bryant'; Larson, Thomas

**Subject:** RE: 074685 Plains-Darr Angell #2 Remedial Action and Delineation Sampling Approval Request

Mr. Ferguson:

Please see the attachment for your records. NMOCD approves the proposed delineation activities for 1RP-4679. Please be advised that permissible chloride levels for depth to groundwater indicated at this location is 600 mg/kg obtained and maintained for 10 ft. further. At any depth this value is exceeded, the 10 ft. recommences. Please confirm.

Thanks,

Olivia

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**From:** Fergerson, John (Midland) [<mailto:John.Fergerson@ghd.com>]

**Sent:** Thursday, May 4, 2017 9:14 AM

**To:** Yu, Olivia, EMNRD <[Olivia.Yu@state.nm.us](mailto:Olivia.Yu@state.nm.us)>

**Cc:** 'Camille Bryant' <[CJBryant@paalp.com](mailto:CJBryant@paalp.com)>; Larson, Thomas <[tom.larson@ghd.com](mailto:tom.larson@ghd.com)>  
**Subject:** 074685 Plains-Darr Angell #2 Remedial Action and Delineation Sampling Approval Request

Ms. Olivia Yu,

Attached is the work plan for remedial, delineation sampling, and restoration activity at the Plains-Darr Angell #2 project site in Lea County, NM.

Subsequent to your review, please send reply email with your approval to proceed with the work plan activities.

Your timely response is appreciated and please contact me if you have questions or comments.

Thanks,

**John M. Fergerson, PG**

**GHD**

T: +1 432 686-0086 | D: +1 432 203-8667 | M: +1 432 488-7907 | E: [john.fergerson@ghd.com](mailto:john.fergerson@ghd.com)  
2135 S. Loop 250 West, Midland, Texas 79703 USA | [www.ghd.com](http://www.ghd.com)  
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**APPROVED**  
By Olivia Yu at 11:16 am, May 04, 2017

NMOCD approves the proposed activities for 1RP-4679 delineation workplan. Please be advised that permissible chloride levels for depth to groundwater indicated at this location is 600 mg/kg obtained and maintained for 10 ft. further.

May 4, 2017

Reference No. 074685

Ms. Olivia Yu  
Environmental Specialist  
New Mexico Oil Conservation Division – District 1  
1625 N. French Drive  
Hobbs, New Mexico 88240

VIA EMAIL ONLY  
[Olivia.yu@state.nm.us](mailto:Olivia.yu@state.nm.us)

Dear Ms. Yu:

**Re: Soil Remediation Work Plan – 1RP 4679  
Darr Angell #2 – Groundwater Remediation Site  
Unit O & B, S11 & S14, T15S, R37E  
Lea County, New Mexico**

On behalf of Plains Pipeline, LP (Plains), GHD Services, Inc. (GHD) is pleased to present this work plan to the New Mexico Oil Conservation Division – District 1 office (NMOCD) to remediate hydrocarbons in soil at the above referenced site (the Site). This work plan is being submitted to address soil impacts from a release of groundwater and crude oil from a remediation system above ground storage tank (AST) that is in operation at the Site.

## 1. Project Information and Release/Response Actions

The Site is located on privately owned land and is located in Sections 11 (Unit O) and 14 (Unit B), Township 15 South, Range 37 East, Lea County, New Mexico. The geographical coordinates for the Site are 33.024° North, and 103.167° West. Figure 1 (Topographic Map) and Figure 2 (Aerial Image) depict the Site's location. The depth to groundwater at this location is between 50 and 100 feet below the ground surface (bgs).

According to the NMOCD Form C-141 (attached) the release was discovered on April 11, 2017 at 11:15 a.m. Apparently, pumps in the groundwater remediation system were inadvertently left in the manual operating position causing the system to run continuously. The high level shut off float in the poly tank failed causing the poly tank to be overfilled resulting in a release of approximately 6 barrels of Phase Separated Hydrocarbons (PSH) and approximately 111 barrels of groundwater. Approximately 104 barrels of PSH/groundwater were contained and recovered from the secondary containment. The remaining release PSH/groundwater mixture impacted approximately 5,100 square feet of pastureland.

The release will be evaluated following the NMOCD 1993 document "Guidelines for Remediation of Leaks, Spills and Releases". Soil assessment action levels determined by these guidelines for the Site were assigned a ranking value of 10. This ranking translated to action levels of 10 milligrams per kilogram (mg/kg) or parts per million (ppm) for benzene; 50 ppm for volatile organic hydrocarbons (VOC), including



total BTEX (benzene, toluene, ethylbenzene, xylenes); 1,000 ppm for total petroleum hydrocarbons (TPH).

## **2. Proposed Work Plan Activities**

The scope of work for this project will involve characterization of the release and appropriate soil remediation and site restoration activities. The areal extent of the release was photo documented and mapped with a Trimble unit on April 14, 2017, based on visual observations. On April 19, 2017, GHD an SDR (excavation contractor) field personnel mobilized to the Site to excavate impacted soil from the determined release area, stockpile excavated soil (approximately 50 cubic yards) on polyvinyl, and photo document the excavated area. The soil profile at the Site is very shallow. Horizontal delineation of soil impacts will be performed in each of the four cardinal compass directions. Vertical delineation of affected soils will also be performed. Adsorbed soil impacts will be analyzed by a certified laboratory for TPH by Method 8015 Modified (GRO+DRO+MRO) and BTEX by EPA Method 8021B.

At the request of the landowner, and as allowed by the NMOCD, soils exhibiting TPH and/or BTEX concentrations above regulatory levels will be further excavated and also staged on polyvinyl. Field screening will be utilized to evaluate the completeness of the soil remediation activities. An estimated 8 TPH/BTEX delineation samples are proposed for the release area (Figure 3). Soil remediation and sampling tasks will continue until analytical sampling can demonstrate native soil concentrations are below regulatory levels in the release area.

Excavated impacted soils are non-exempt and will be transported for proper disposal to the NMOCD-permitting Sundance (Parabo) facility in Eunice, New Mexico with proper NMOCD Form C-138 and manifest documentation.

Site restoration will be performed in accommodation to the landowner's requests. The landowner, Darr Angell, will provide that backfill materials. The construction affected area will be contoured and seeded in accordance to Mr. Angell's directives.

Upon completion of remediation, a letter report summarizing activities to date will be submitted. The letter report will include a Site description, project history, description of field events, a discussion of results, and recommendations. The report will include:

- A scaled site plan showing the locations of the pit and other site features (including latitude and longitude coordinates);
- Tabulation of field screening and laboratory analytical test results;
- Copies of waste manifests; and
- Final site photographs.



GHD is prepared to initiate the scope of work immediately, subsequent to Plains and NMOCD approvals, the availability of resources and stakeholder concurrence. A start date and schedule of report submittals will be provided following receipt of subcontractor availability.

If you have any questions or comments with regard to this work plan, please do not hesitate to contact GHD's Midland office at (432) 686-0086. Your timely response to this correspondence is appreciated.

Sincerely,

GHD

A handwritten signature in blue ink, appearing to read "John Ferguson", written over a light gray rectangular background.

John Ferguson  
Senior Project Manager

A handwritten signature in blue ink, appearing to read "Thomas C. Larson", written over a light gray rectangular background.

Thomas C. Larson  
Midland Operations Manager

JNF/pd

Encl.: C-141

Figure 1 – Site Location Topographic Map

Figure 2 – Site Detail Aerial Image

Figure 3 – Release Area with Proposed Delineation Sample Locations Map

cc: Ms. Camille Bryant, Plains via email only  
Mr. Thomas C. Larson via email only

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	Plains Pipeline, LP	Contact	Camille Bryant
Address	577 US Hwy. 385 N., Seminole, TX 79360	Telephone No.	(575) 441-1099
Facility Name	Darr Angell #2	Facility Type	Groundwater Remediation Site
Surface Owner	Darr Angell	Mineral Owner	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	14	15S	37E					Lea

Latitude N 33.024° Longitude W 103.167°

**NATURE OF RELEASE**

Type of Release	PSH/Water	Volume of Release	117 barrels	Volume Recovered	110 barrels
Source of Release	Poly Tank	Date and Hour of Occurrence	4/11/2017 @ 11:15	Date and Hour of Discovery	4/11/2017 @ 11:15
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Verbal notification to Olivia Yu		
By Whom?	Camille Bryant	Date and Hour	4/11/2017 @ 15:35		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

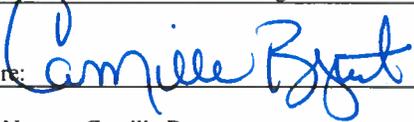
If a Watercourse was Impacted, Describe Fully.\*

**RECEIVED**  
By Olivia Yu at 9:36 am, Apr 14, 2017

Describe Cause of Problem and Remedial Action Taken.\*A second party consultant inadvertently left the groundwater remediation system in the manual operating position causing the recovery pumps to run continuously. The high level shut off switch on the poly tank failed causing the poly tank and secondary containment to overflow resulting in a release of approximately 6 barrels of PSH and approximately 111 barrels of groundwater. Approximately 104 barrels of PSH/groundwater was recovered from the secondary containment. The remaining released PSH/groundwater mixture impacted approximately 5,100 square feet of pasture land.

Describe Area Affected and Cleanup Action Taken. The impacted area will be remediated as per applicable 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: Camille Bryant	Approved by: 	
Title: Remediation Coordinator	Approval Date: 4/14/2017	Expiration Date:
E-mail Address: cj Bryant@paalp.com	Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: 4/13/2017 Phone: (575) 441-1099	see attached directive	

\* Attach Additional Sheets If Necessary

1RP-4679

fOY1710434757

nOY1710435180

pOY1710435668

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 4/13/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 1R-4679 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

*The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]*

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 1 office in Hobbs on or before 5/14/2017. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

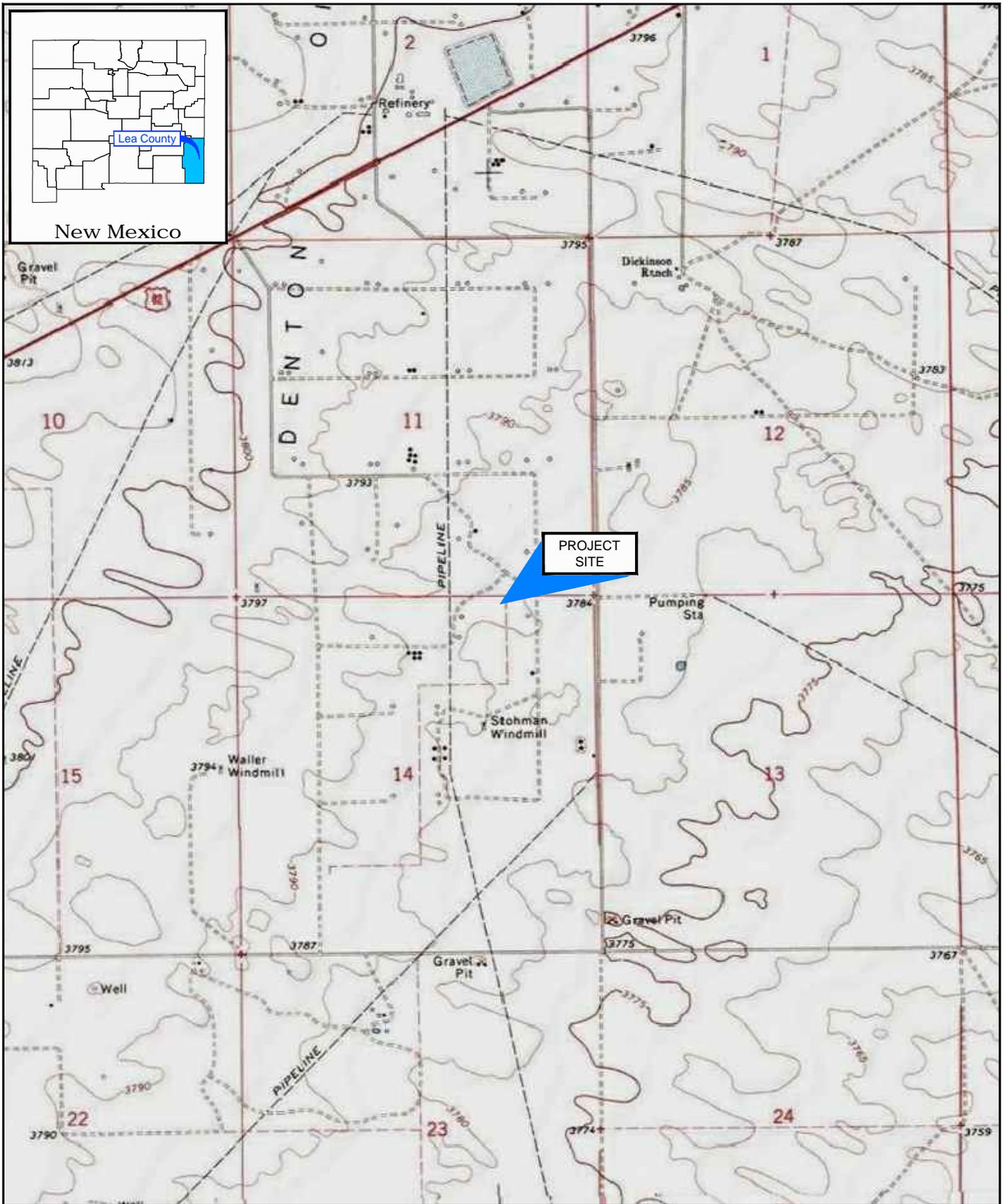
- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

**Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.**

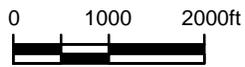
**Jim Griswold**

OCD Environmental Bureau Chief  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505  
505-476-3465  
jim.griswold@state.nm.us



Source: USGS 7.5 Minute Quad "Prairieview, New Mexico"

Scale: 1" = 1 Mile



Coordinate System:  
NAD 1983 StatePlane-  
New Mexico East (US Feet)



PLAINS PIPELINE L.P.  
LEA COUNTY, NEW MEXICO  
DARR ANGELL No.2

SITE LOCATION MAP

074685-00  
May 3, 2017

FIGURE 1



Ú' :&KQ as ^A ÁCFI Ö [ \* ^A Q as ^' : Ö as K U ] c { a : A E C E F      Šas Š ) \* A E C G Á P [ : c E E i i Á ^ c



Coordinate System:  
 NAD 1983 StatePlane-  
 New Mexico East (US Feet)



PLAINS PIPELINE L.P.  
 LEA COUNTY, NEW MEXICO  
 DARR ANGELL No.2

SITE DETAIL MAP

074685-00  
 May 3, 2017

FIGURE 2

