

June 23, 2017

New Mexico Oil Conservation Division  
1625 N. French Drive  
Hobbs, New Mexico 88240

# Terracon

**APPROVED**

**By Olivia Yu at 8:24 am, Jun 29, 2017**

Attn: Olivia Yu  
P: (575) 393-6161 Ext. 113  
E: Olivia.Yu@state.nm.us

Re: Proposed Delineation and Work Plan – Plains Alpha Lynch Station  
Plains Marketing L.P.  
Unit Letter “B”, Section 1, Township 21 South, Range 33 East  
Terracon Project No. AR177151

NMOCD approves of the corrective actions and proposed delineation for 1RP-4739. Permissible chloride levels are  $\leq 600$  mg/kg obtained and maintained for a minimum of 5 ft. in depth or as practicable.

## Introduction

Terracon Consultants, Inc. (Terracon) has prepared the following *Delineation and Work Plan* for the crude oil release at Plains Marketing, L.P.’s (Plains) Alpha Lynch Station. The release site is located in Unit Letter “B” of Section 1, Township 21 South, Range 33 East in Lea County, New Mexico, at 32.522267°, -103.524841°. Review of the New Mexico Water Rights Reporting System (NMWRRS) online database indicates depth to groundwater information is not available for Section 1, Township 21 South, Range 33 East. Review of a depth to groundwater gradient map utilized by the NMOCD indicates groundwater is estimated to be encountered at approximately 80 feet below grade surface (bgs). A “Site Location Map” is provided as Attachment #1.

On June 16, 2017, Plains discovered a release occurred at the Alpha Crude Lynch Station facility. The initial Release Notification and Corrective Action (Form C-141) indicates failure of the OAL single expansion joint, due to pressure build up, resulted in the release of approximately 50 barrels (bbls) of crude oil. The crude oil release affected an area measuring approximately 4,000 square feet within the facility. During initial response activities approximately 30 bbls of crude oil was recovered and heavily saturated soil was scraped up and placed on an impermeable polyurethane liner, pending final disposition. A “Proposed Delineation Sample Location Map” is provided as Attachment #2.

## Regulatory Framework

Crude oil facilities in New Mexico are generally regulated by the New Mexico Oil Conservation Division (NMOCD). Contamination of soil due to a surface release of petroleum hydrocarbons is addressed in the NMOCD guidance document titled *Guidelines for Remediation of Leaks, Spills and Releases*, dated August 13, 1993.

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Environmental



Facilities



Geotechnical



Materials

The guidance document provides direction for initial response actions, site assessment, sampling procedures and provides a total ranking score based on the depth to groundwater, distance to private and domestic water sources, and the distance to the nearest surface water body as follows:

| Ranking Score Criteria  |                  |           |
|---|------------------|-----------|
| General Site Characteristics  |                  | Score     |
| Depth to Ground Water   | < 50 feet        | <b>20</b> |
|   | 50 – 99 feet     | <b>10</b> |
|   | > 100 feet       | <b>0</b>  |
| Well Head Protection Area,<br><1,000 feet from water source, or<br><200 feet from private domestic water source | Yes              | <b>20</b> |
|   | No               | <b>0</b>  |
| Distance to Surface Water Body  | < 200 feet       | <b>20</b> |
|   | 200 – 1,000 feet | <b>10</b> |
|   | > 1,000 feet     | <b>0</b>  |

The total ranking score is the sum of the four individual ranking criteria and the basis for determining the recommended remediation action levels at the site. Based on Terracon's evaluation of the site ranking criteria, the Site has an initial total ranking score of 10 points, based on the following:

| Total Ranking Score for Site   |                  |    |           |
|--|------------------|----|-----------|
| Ranking Score Criteria   |                  |    | Score     |
| Depth to Ground Water  | < 50 feet        | 20 | <b>10</b> |
|  | 50 – 99 feet     | 10 |           |
|  | > 100 feet       | 0  |           |
| Well Head Protection Area,<br><1,000 feet from water source, or;<br><200 feet from private domestic water source | Yes              | 20 | <b>0</b>  |
|  | No               | 0  |           |
| Distance to Surface Water Body   | < 200 feet       | 20 | <b>0</b>  |
|  | 200 – 1,000 feet | 10 |           |
|  | > 1,000 feet     | 0  |           |
| <b>Total Ranking Score</b>   |                  |    | <b>10</b> |

Recommended remediation action levels for a site with a total ranking score of 10 points are as follows:

- Benzene – 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene and xylene (BTEX) – 50 mg/kg
- Total petroleum hydrocarbons (TPH) – 1,000 mg/kg

### **Delineation Plan**

Upon excavating heavily impacted soil from within the release margin, representative soil samples will be collected in an effort to characterize the floor of the current excavation as well as from deeper intervals in an effort to determine the vertical extent of soil impacts. Sample locations will be established at approximately five (5) locations (DS-1 through DS-5) including the primary pooling area, affected areas adjacent to the above ground pipelines, the southwestern terminus and from the northern flow path. Collected soil samples will be submitted to the laboratory for analysis of BTEX and TPH in accordance with EPA Methods 8015M Ext. and 8021B, respectively.

### **Proposed Remediation Strategy**

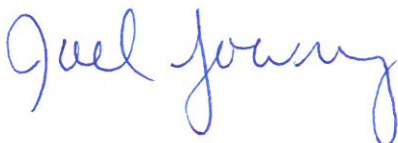
Plain's proposes the following remediation and confirmation sampling activities designed to advance the site toward an NMOCD-approved closure:

- Impacted soil exhibiting BTEX and/or TPH concentrations above the NMOCD Recommended Remediation Action Levels will be excavated to the maximum extent practicable and stockpiled on-site, atop a 20-millimeter polyurethane liner, pending disposal at an NMOCD-permitted disposal facility.
- Upon excavating impacted soil from within the release margins, confirmation soil samples will be collected from the floor and sidewalls of the excavated area at approximately 50 ft. increments and submitted to the laboratory for analysis of BTEX and TPH concentrations. Collection of sidewall soil samples adjacent to the concrete skid may be precluded due to the presence of the concrete footer.
- Upon receiving laboratory analytical results from excavation confirmation soil samples and NMOCD permission, the excavated area will be backfilled with locally-purchased, non-impacted caliche.

Upon completion of remediation activities and receipt of laboratory analytical results from confirmation soil samples, a final C-141 will be prepared along with a *Remediation Summary and Soil Closure Request* summarizing remediation activities and laboratory analytical results from confirmation soil samples.

Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,  
**Terracon Consultants, Inc.**



Joel Lowry  
Project Geologist

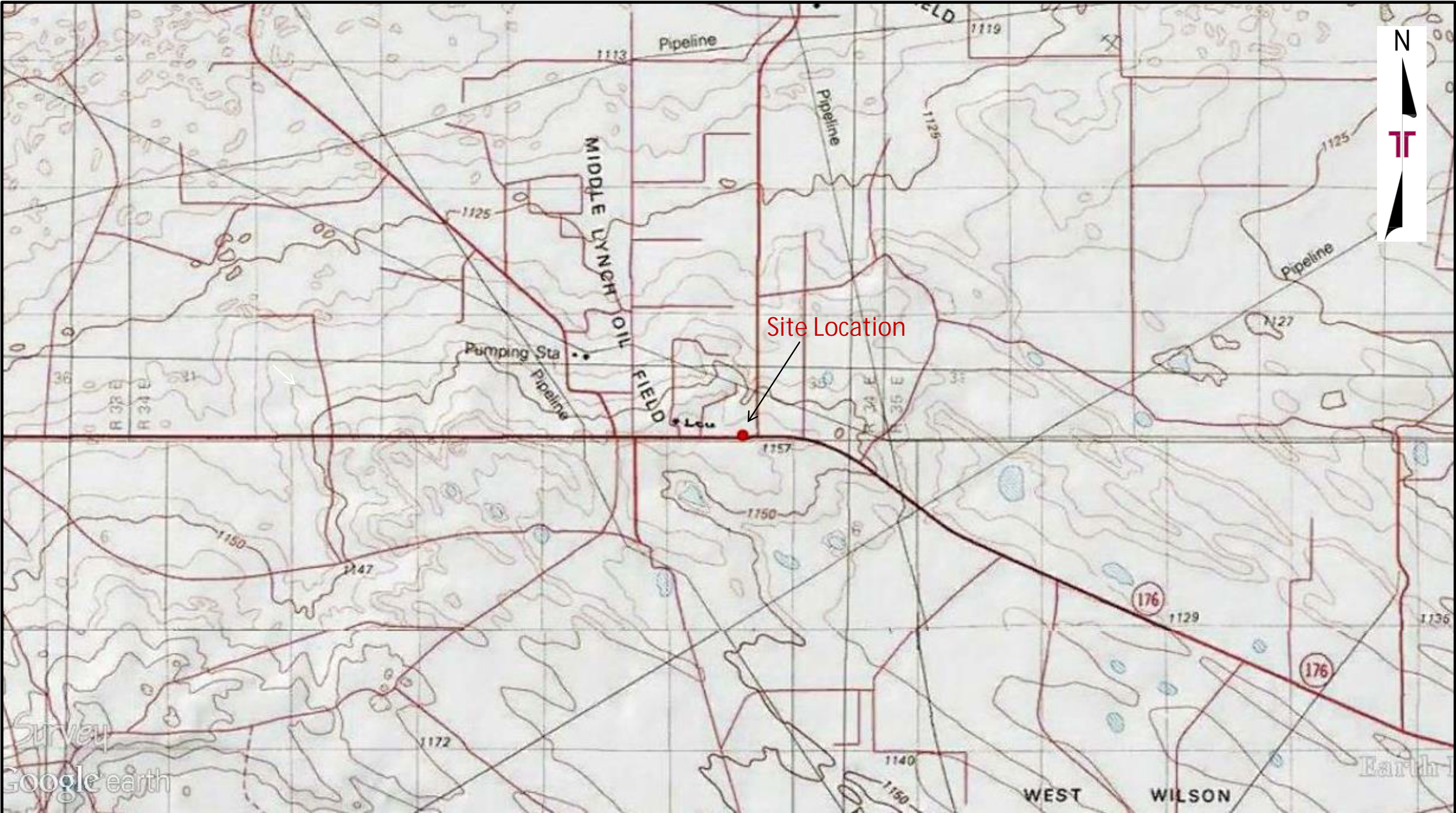
Attachments:

Attachment #1 – Site Location Map

Attachment #2 – Proposed Delineation Sample Location Map

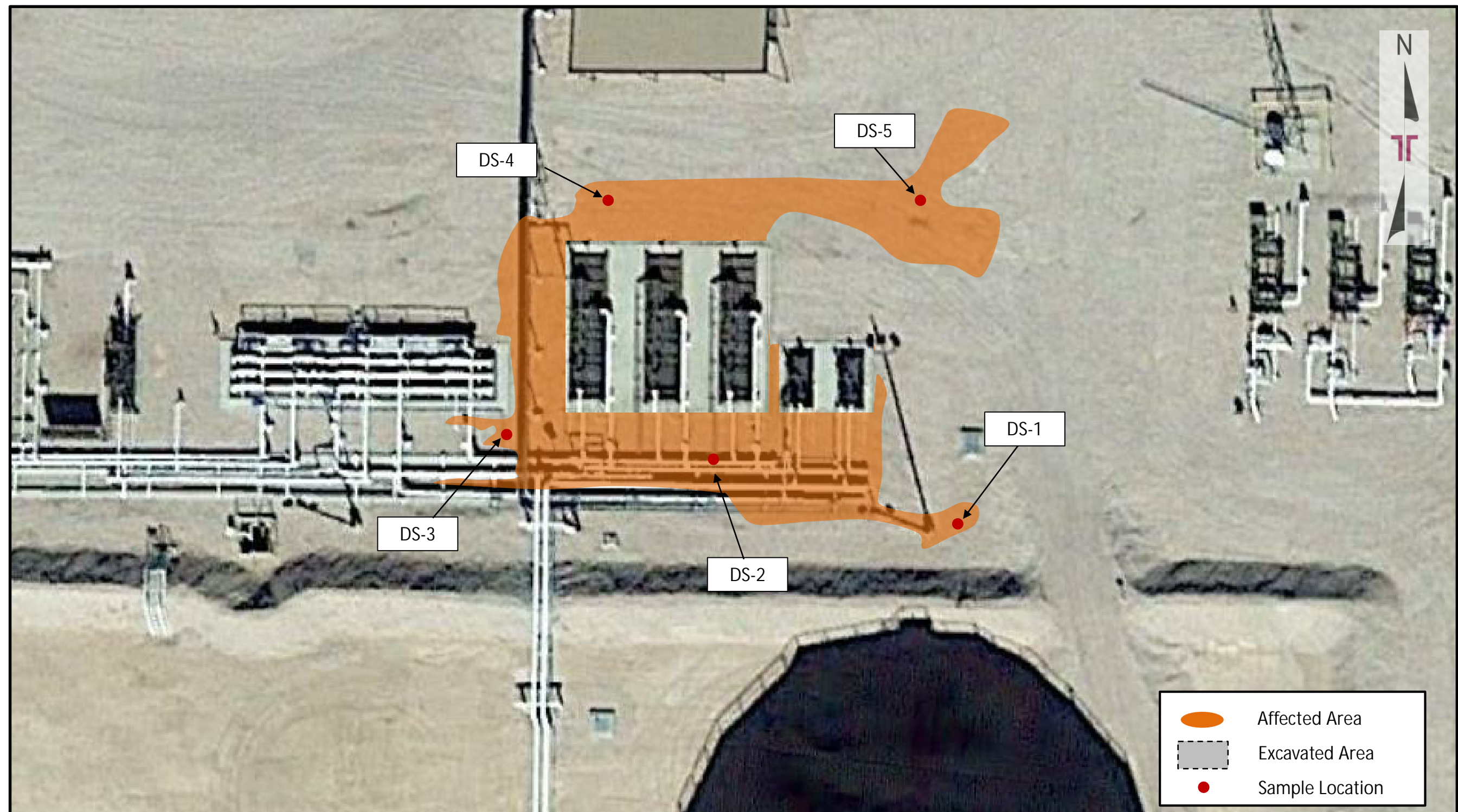
Attachment #3 – Photographic Log






|   |               |   |  |
|---|---------------|---|--|
| Project No.   | AR177151      | Attachment #1 – Site Location Map           |  |
| Scale:  | 1" = ~ 6,000' | Plains Alpha Lynch Station                  |  |
| Source:   | Google Earth  | 32.522267°, -103.524841°                    |  |
| Date:   | 2014          | Lea County, Texas                           |  |
| <b>Terracon</b><br>Consulting Engineers & Scientists<br>5827 50 <sup>th</sup> St. Suite 1<br>PH. (806) 300-0104 |               | Lubbock, Texas 79424<br>FAX. (806) 797 0947 |  |





|             |              |   |  |  |
|-------------|--------------|---|--|--|
| Project No. | AR177151     |  <p>5827 50<sup>th</sup> St. Suite 1<br/>PH. (806) 300-0104</p> <p>Lubbock, Texas 79424<br/>FAX. (806) 797 0947</p> | Attachment #2 – Proposed Delineation Sample Location Map |  |
| Scale:      | 1" = ~ 30'   |   | Plains Alpha Lynch Station                               |  |
| Source:     | Google Earth |   | 32.522267°, -103.524841°                                 |  |
| Date:       | 2014         |   | Lea County, Texas  |  |

## Photographic Log



**PHOTO 1:** View of surface staining from the initial release, facing northwest.



**PHOTO 2:** View of surface staining from the initial release, facing east.





**PHOTO 3:** View of surface staining from the initial release, facing northeast.



**PHOTO 4:** View of surface staining from the initial release, facing south.