

February 24, 2017



Re: Permission to Install Liner and Backfill Sec. D  
Former Maljamar Station  
NMOCD Reference No. 2RP-2504  
Plains SRS No. HDO-95-61 Former Maljamar Station  
Latitude 32.71932° / Longitude -103.82819°  
Eddy County, New Mexico

Terracon Consultants Inc. (Terracon), on behalf of Plains Marketing, L.P. (Plains), has prepared this *Permission to Install Liner and Backfill Sec. D* for the release site known as the Former Maljamar Station (hereafter referred to as the “site”).

## INTRODUCTION AND BACKGROUND INFORMATION

On September 22, 2016, representatives of Plains, the Bureau of Land Management (BLM), (NMOCD) and Terracon met to discuss remediation activities conducted to date, along with proposed activities designed to continue advancing the site toward an approved closure. During the meeting, Plains proposed the following:

- To advance the floor of the existing excavation in the areas represented by sample points Sec. B – Floor #6, Sec. C-11 Floor (S. Wall), Sec. C-14 Floor (S. Wall), Sec. C-14 Floor (SW. Wall), Sec. D-4, Sec. D-6 and Sec. D-9 to 14 feet (ft.) below grade surface (bgs), or until concentrations of TPH are less than 7,500 mg/kg. Advance the floor of the existing excavation in the areas represented by sample points Sec. D-7 and D-11 to beyond 20 and 18 ft. bgs, respectively.
- Excavated soil would be temporarily stockpiled on-site, before being treated with the existing screen machine and fertilizer spray rig, and placed into approximate 500-cubic-yard (cy) bio-piles.
- Upon advancing the floor of the existing excavation in the areas represented by sample points Sec. B – Floor #6, Sec. C-11 Floor (S. Wall), Sec. C-14 Floor (S. Wall), Sec. C-14 Floor (SW. Wall), Sec. D-4, D-6, D-9, D-7 and D-11, the excavation would be brought up to a grade of approximately 10' bgs with treated soil exhibiting TPH concentrations that are less than 7,500 mg/kg.
- Upon bringing the excavation up to the 10 ft. bgs grade, 20-mil poly liner will be placed in the floor of the excavation atop soil exhibiting TPH concentrations between NMOCD Recommended Remediation Action Level (RRAL) and 7,500 mg/kg TPH. An approximate 6-inch layer of pad sand will be installed above and below the liner to help maintain its integrity during backfilling activities. This engineering control is designed to mitigate the vertical migration of contaminants left in-situ by shedding moisture to beyond the horizontal extent of the affected area.

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Environmental



Facilities



Geotechnical



Materials

## Proposed Remediation Strategy

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- After placing the liner in the floor of the excavation, the excavation will be backfilled with treated soil exhibiting BTEX and TPH concentrations that are below the NMOCD RRAL.
- The final soil cover would consist of approximately 2 to 3 ft. of locally sourced, non-impacted sand.

These proposed remediation activities discussed during the September 22, 2017 meeting were subsequently approved.

## REMEDIATION ACTIVITY LOG

### September 28, 2016

Remediation activities resumed at the site. Treated soil bio-piles exhibiting TPH concentrations of less than 5,000 mg/kg were consolidated into a large stockpile. Untreated soil stockpiles were crushed and treated with the existing screen machine and fertilizer spray rig, and placed into approximate 500-cy bio-piles. A Site and Sample Location Map is provided at Attachment #1.

### October 31, 2016

Terracon collected four (4) five-point composite soil samples (BP #8 through BP #11) from the treated soil bio-piles and submitted them to the laboratory for analysis of BTEX and TPH. Laboratory analytical results indicated benzene concentrations were less than the applicable laboratory sample detection limit (SDL) in each of the submitted soil samples. Total BTEX concentrations ranged from less than the laboratory SDL in soil sample BP #8 to 0.0904 mg/kg in soil sample BP #10. Analytical results indicated TPH concentrations ranged from 3,230 mg/kg in soil sample BP #8 to 5,570 mg/kg in soil sample BP #9. Each of the submitted soil samples exhibited BTEX and TPH concentrations that were less than the NMOCD RRAL with the exception of soil sample BP #9, which exhibited a TPH concentration of 5,570 mg/kg. Treated soil bio-piles represented by soil samples BP #8, BP #10 and BP #11 were placed into the existing soil stockpile containing treated bio-piles exhibiting BTEX and TPH concentrations less than the NMOCD RRAL. The treated soil bio-pile represented by soil sample BP #9 was segregated from treated soil bio-piles exhibiting TPH concentrations of less than 5,000 mg/kg. A table summarizing Concentrations of Benzene, BTEX, TPH & Chloride in Soil – Bio-Piles and Assorted Fill Material is provided as Attachment #2.

### November 7, 2016

Terracon collected two (2) five-point composite soil samples (BP #12 and BP #13) from the treated soil bio-piles and submitted them to the laboratory for analysis of BTEX and TPH. Laboratory analytical results indicated soil sample BP #12 exhibited a benzene concentration less than the laboratory SDL, a total BTEX concentration of 0.0051 mg/kg and a TPH concentration of 3,320 mg/kg. Soil sample BP #13 exhibited a benzene concentration less than the laboratory SDL, a total BTEX concentration of 0.0097 mg/kg and a TPH concentration of 2,620 mg/kg. Each of the submitted soil samples exhibited BTEX and TPH concentrations that were less than the NMOCD RRAL. Treated soil bio-piles represented by soil samples BP #12 and BP #13 were placed into the existing soil stockpile containing treated bio-piles exhibiting BTEX and TPH concentrations less than the NMOCD RRAL.

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### November 18, 2016

In accordance with the objectives set forth during the September 22, 2016 meeting, affected soil in the areas represented by sample points Sec. C-14 Floor (S. Wall), Sec. C-14 Floor (SW. Wall), Sec. D-4 and Sec. D-9 was excavated an additional 2 ft. from the current grade (10 ft. bgs). Upon excavating the affected areas, confirmation soil samples [Sec. C-14 @ 12' – Floor (S. Wall), Sec. C-14 @ 12' – Floor (SW. Wall), Sec. D-4 @ 12' – Floor and Sec. D-9 @ 12' – Floor] were collected from the base of the excavated areas and submitted to the laboratory for analysis of BTEX and TPH concentrations. Laboratory analytical results indicated BTEX and TPH concentrations were less than the applicable laboratory SDL in each of the submitted soil samples with the exception of soil sample Sec. D-9 @ 12' – Floor, which exhibited a total BTEX concentration of 0.0425 mg/kg and a TPH concentration of 1,950 mg/kg. Each of the submitted soil samples exhibited BTEX and TPH concentrations that were less than the NMOCD RRAL. Excavated soil was crushed and treated with the existing screen machine and fertilizer spray rig, and placed into approximate 500 cy bio-piles. A table summarizing Concentrations of Benzene, BTEX, TPH & Chloride in Soil – Current Excavation is provided as Attachment #3.

In addition, Terracon collected three (3) five-point composite soil samples (BP #9b, BP #14 and BP #15) from the treated soil bio-piles and submitted them to the laboratory for analysis of BTEX and/or TPH. Laboratory analytical results indicated soil sample BP #9b exhibited a TPH concentration of 5,600 mg/kg. Analytical results indicated soil sample BP #14 exhibited a benzene concentration of less than the laboratory SDL, a total BTEX concentration of 0.00814 mg/kg and a TPH concentration of 969 mg/kg. Soil sample BP #15 exhibited a benzene concentration of 0.00149, a total BTEX concentration of 0.0712 mg/kg and a TPH concentration of 1,750 mg/kg. Each of the submitted soil samples exhibited BTEX and TPH concentrations that were less than the NMOCD RRAL with the exception of BP #9b, which exhibited a TPH concentration of 5,600. Treated soil bio-piles represented by soil samples BP #14 and BP #15 were placed into the existing soil stockpile containing treated bio-piles exhibiting BTEX and TPH concentrations of less than the NMOCD RRAL. The treated soil bio-pile represented by soil sample BP #9b was segregated for use as backfill material beneath the 20-mil liner in accordance with the objectives set forth during the September 22, 2016 meeting.

### December 15, 2016

In accordance with the objectives set forth during the September 22, 2016 meeting, affected soil in the area represented by sample point Sec. D-11 was excavated an additional 8 ft. from the current grade (10 ft. bgs). Upon excavating the affected area, confirmation soil sample Sec. D – 11 @ 18' – Floor was collected from the base of the excavated area and submitted to the laboratory for analysis of BTEX and TPH concentrations. Laboratory analytical results indicated soil sample Sec. D – 11 @ 18' – Floor exhibited a benzene concentration less than the laboratory SDL, a total BTEX concentration of 0.0270 mg/kg and a TPH concentration of 6,000 mg/kg. Upon collecting the necessary confirmation soil sample and receiving NMOCD and BLM permission, the excavated area was backfilled with the treated soil bio-pile represented by soil sample BP #9b and a portion of the rock/reject pile.

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Excavated soil was crushed and treated with the existing screen machine and fertilizer spray rig, and placed into approximate 500 cy bio-piles.

In addition, Terracon collected five (5) soil samples (Sec. D – 11 SSW @ 15', Sec. D – 12 SSW @ 8', Sec. D – 13 SSW @ 8', Sec. D – 14 SSW @ 8' and Sec. D – 14 ESW @ 8') from the sidewall of the excavated area and submitted them to laboratory for analysis of BTEX and TPH concentrations. Laboratory analytical results indicated benzene and total BTEX concentrations were less than the applicable laboratory SDL in each of the submitted soil samples with the exception of soil sample Sec. D-12 SSW @ 8', which exhibited a total BTEX concentration of 0.05271 mg/kg. Analytical results indicated TPH concentration ranged from less than the applicable laboratory SDL in soil samples Sec. D – 13 SSW @ 8', Sec. D – 14 SSW @ 8' and Sec. D – 14 ESW @ 8' to 6,000 mg/kg in soil sample Sec. D – 12 SSW @ 8'. Each of the submitted soil samples exhibited BTEX and TPH concentrations that were less than the NMOCD RRAL with the exception of soil sample Sec. D – 12 SSW @ 8', which exhibited a TPH concentration of 6,000 mg/kg.

### **January 9, 2017**

Terracon collected four (4) five-point composite soil samples (BP #16 through BP #19) from the treated soil bio-piles and submitted them to the laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated benzene concentrations ranged from less than the laboratory SDL in soil sample BP #19 to 0.0914 mg/kg in soil sample BP #18. Total BTEX concentrations ranged from 0.1413 mg/kg in soil sample BP #19 to 22.1404 mg/kg in soil sample BP #18. Analytical results indicated TPH concentrations ranged from 1,080 mg/kg in soil sample BP #19 to 3,890 mg/kg in soil sample BP #18. Analytical results indicated chloride concentrations ranged from 5.59 mg/kg in soil sample BP #19 to 50.2 mg/kg in soil sample BP #16. Each of the submitted soil samples exhibited BTEX, TPH and chloride concentrations that were less than the NMOCD RRAL. Treated soil bio-piles represented by soil samples BP #16 through BP #19 were placed into the existing soil stockpile containing treated bio-piles exhibiting BTEX and TPH concentrations less than the NMOCD RRAL.

### **January 12, 2017**

In accordance with the objectives set forth during the September 22, 2016 meeting, affected soil in the area represented by sample point Sec. D-7 was excavated an additional 12 ft. from the current grade (10 ft. bgs). Upon excavating the affected area, confirmation soil sample Sec. D – 7 @ 22' – Floor was collected from the base of the excavated area and submitted to the laboratory for analysis of BTEX and TPH concentrations. Laboratory analytical results indicated soil sample Sec. D – 7 @ 22' – Floor exhibited a benzene concentration of 0.6810 mg/kg, a total BTEX concentration of 17.031 mg/kg and a TPH concentration of 6,340 mg/kg. Upon collecting the necessary confirmation soil sample, the excavated area was backfilled with a portion of the soil stockpile containing treated soil bio-piles exhibiting BTEX and TPH concentrations of less than the NMOCD RRAL.

In addition, affected soil in the area represented by sample point Sec. D-6 was excavated an additional 2 ft. from the current grade (10 ft. bgs). Upon excavating the affected area, confirmation soil sample Sec. D – 6 @ 12' – Floor was collected from the base of the excavated area and submitted to the laboratory

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for analysis of BTEX and TPH concentrations. Laboratory analytical results indicated soil sample Sec. D – 6 @ 12' – Floor exhibited a benzene concentration of 0.573 mg/kg, a total BTEX concentration of 30.613 mg/kg and a TPH concentration of 9,470 mg/kg. Based on laboratory analytical results, additional excavation would be required in the area represented by soil sample Sec. D – 6 @ 12' – Floor.

Excavated soil was crushed and treated with the existing screen machine and fertilizer spray rig, and placed into approximate 500-cy bio-piles.

In addition, one (1) confirmation soil sample (Sec. D-15 @ 3' – Floor) was collected from the floor of the excavated area in the southeast corner of the remediation site and submitted to the laboratory for analysis of BTEX and TPH concentrations. Laboratory analytical results indicated soil sample Sec. D-15 @ 3' – Floor exhibited a BTEX concentration less than the applicable laboratory SDL and a TPH concentration of 2,530 mg/kg.

### January 19, 2017

The floor of the excavation in the area represented by soil sample Sec. D – 6 @ 12'- Floor was advanced to 14 ft. bgs. After advancing the floor of the excavation, one (1) confirmation soil sample (Sec. D – 6 @ 14' – Floor) was collected from the base of the excavation. In addition, a test trench was advanced within the floor of the excavation. During the advancement of the test trench, two (2) soil samples (Sec. D – 6 @ 15' – Floor and Sec. D – 6 @ 16' – Floor) were collected in an effort to determine the vertical extent of soil impacts in the area represented by soil sample Sec. D-6 @ 12'. Collected soil samples were submitted to the laboratory for analysis of TPH concentrations. Upon collecting the necessary soil samples, the excavated area was temporarily backfilled with the excavated soil pending the results of laboratory analysis. Laboratory analytical results indicated TPH concentrations ranged from 9,500 mg/kg for soil sample Sec. D-6 @ 14' – Floor to 5,910 mg/kg for soil sample Sec. D-6 @ 15' – Floor. Soil sample Sec. D-6 @ 16' – Floor was also analyzed for concentrations of BTEX. Laboratory analytical results indicated soil sample Sec. D-6 @ 16' – Floor exhibited a benzene concentration of 1.05 mg/kg and a total BTEX concentration of 78.13 mg/kg. Based on laboratory analytical results, additional excavation would be required in the area represented by soil samples Sec. D – 6 @ 14' – Floor and Sec. D-6 @ 16' – Floor.

The floor of the excavation in the area represented by sample point Sec. C – 11 (S. Wall) was advanced to 14 ft. bgs. After advancing the floor of the excavation, soil sample Sec. C – 11 @ 14' – Floor (S. Wall) (Floor) was collected from the base of the excavated area and submitted to the laboratory for analysis of BTEX and TPH concentrations. Upon collecting the necessary soil sample, the excavated area was temporarily backfilled with the excavated soil pending the results of laboratory analysis. Laboratory analytical results indicated soil sample Sec. C – 11 @ 14' – Floor (S. Wall) exhibited a benzene concentration of 0.378 mg/kg, a total BTEX concentration of 82.37 mg/kg and a TPH concentration of 9,570 mg/kg. Based on laboratory analytical results, additional excavation would be required in the area represented by soil sample Sec. C – 11 @ 14' – Floor (S. Wall).



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### January 27, 2017

The floor of the excavation in the area represented by sample point Sec. D – 6 was advanced to 18 ft. bgs. After advancing the floor of the excavation, soil sample Sec. D – 6 @ 18' – Floor was collected from the base of the excavated area and submitted to the laboratory for analysis of TPH concentrations. Upon collecting the necessary soil sample, the excavated area was temporarily backfilled with the excavated soil pending the results of laboratory analysis. Laboratory analytical results indicated soil sample Sec. D – 6 @ 18' – Floor exhibited a TPH concentration of 12,700 mg/kg. Based on laboratory analytical results, additional excavation would be required in the area represented by soil sample Sec. D – 6 @ 18' – Floor.

The floor of the excavation in the area represented by sample point Sec. C – 11 (S. Wall) was advanced to 16 ft. bgs. After advancing the floor of the excavation, confirmation soil sample Sec. C – 11 @ 16' – Floor (S. Wall) (Floor) was collected from the base of the excavated area and submitted to the laboratory for analysis of BTEX and TPH concentrations. Laboratory analytical results indicated soil sample Sec. C – 11 @ 16' – Floor (S. Wall) (Floor) exhibited a benzene concentration of less than the laboratory SDL, a total BTEX concentration of 0.159 mg/kg and a TPH concentration of 2,840 mg/kg. Upon collecting the necessary soil sample, the excavated area was backfilled with a portion of the soil stockpile containing treated soil bio-piles exhibiting BTEX and TPH concentrations of less than the NMOCD RRAL.

### February 2, 2017

A test trench was advanced within the floor of the excavation in the area represented by soil sample Sec. D – 6 @ 18'- Floor. During the advancement of the test trench, five (5) soil samples (Sec. D – 6 @ 20', Sec. D – 6 @ 22', Sec. D – 6 @ 24', Sec. D – 6 @ 26' and Sec. D – 6 @ 28') were collected in an effort to determine the vertical extent of soil impacts in the area represented by soil sample Sec. D-6 @ 18'- Floor. Collected soil samples were submitted to the laboratory for analysis of TPH and BTEX concentrations. Upon collecting the necessary soil samples, the excavated area was temporarily backfilled with the excavated soil pending the results of laboratory analysis. Laboratory analytical results indicated TPH concentrations ranged from 7,460 mg/kg for soil sample Sec. D-6 @ 28' to 834 mg/kg for soil sample Sec. D-6 @ 22'. Analytical results indicated benzene concentrations ranged from less than the applicable laboratory SDL for soil samples Sec. D-6 @ 22' and Sec. D-6 @ 26' to 0.116 mg/kg for soil sample Sec. D-6 @ 28'. Analytical results indicated BTEX concentrations ranged from 2.03 mg/kg for soil sample Sec. D-6 @ 22' to 56.99 mg/kg for soil sample Sec. D-6 @ 28'.

### February 16, 2017

The floor of the excavation in the area represented by soil sample Sec. D-6 @ 28' was advanced to 32 ft. bgs. During the advancement of the floor, confirmation soil samples Sec. D-6 @ 30' – Floor and Sec. D-6 @ 32' – Floor were collected from the base of the excavated area and submitted to the laboratory for analysis of BTEX and TPH concentrations. Laboratory analytical results indicated soil sample Sec. D-6 @ 30' – Floor exhibited a benzene concentration of less than the laboratory SDL, a total BTEX concentration of 2.94 mg/kg and a TPH concentration of 3,170 mg/kg. Analytical results indicated soil sample Sec. D-6 @ 32' – Floor exhibited a benzene concentration of less than the laboratory SDL, a total BTEX concentration of 0.0156 mg/kg and a TPH concentration of 148 mg/kg. Upon collecting the

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necessary confirmation soil sample, the excavated area was backfilled with a portion of the soil stockpile containing treated soil bio-piles exhibiting BTEX and TPH concentrations of less than the NMOCD RRAL.

## CONCLUSION

Remediation activities conducted at the site met the objectives set forth by the NMOCD and BLM during the September 22, 2016 meeting. Laboratory analytical results from confirmation soil samples collected from the floors of the excavated areas (and associated delineation trenches) indicate affected soil exhibiting benzene and BTEX concentrations above the NMOCD RRAL and/or 7,500 mg/kg TPH has been removed.

Laboratory analytical results from confirmation soil samples collected from the sidewalls of the excavated area indicate BTEX and TPH concentrations were less than the NMOCD RRAL in each of the submitted soil samples with the exception of Sec. D – 12 SSW @ 8', which exhibited a TPH concentration of 6,000 mg/kg.

## PROPOSED ACTIVITIES

As per the objectives set forth during the September 22, 2016 meeting with the NMOCD and BLM, Plain's proposes the following activities to continue advancing the remediation site toward approved closure:

- Place the remaining rock/reject pile in the excavated areas characterized by sample points Sec. C-14 (SW. Wall), Sec. C-14 (S. Wall), Sec. D-4 and Sec. D – 9. Backfill the remaining portions of the excavated areas along with the any additional shallow sub excavations to approximately 10 ft. bgs with the treated soil stockpile containing bio-piles exhibiting BTEX and TPH concentrations of less than the NMOCD RRAL.
- Upon backfilling the excavated area to the 10 ft. bgs grade, sand represented by soil samples Sand Stockpile #1 through #6 will be placed in the floor of the excavation and graded to provide an approximate 6 in. layer of padding.
- On completion of the installation of the approximate 6 in. layer of pad sand, a 20-mil poly liner will be installed in the floor of the excavation, atop soil exhibiting TPH concentrations above the NMOCD RRAL. The liner will chemically welded and/or sewn. This engineering control is designed to mitigate vertical migration of contaminants left in-situ by shedding moisture to beyond the horizontal extent of the affected area. The portion of the liner in the southwest corner of Section D will be brought up the southern sidewall in the area represented by soil samples Sec. D – 11 SSW @ 15' and Sec. D – 12 SSW @ 8' to facilitate its use in the road crossing and/or Section A if applicable. Please reference Attachment #4 - Proposed Liner and Maximum TPH Concentration Map for liner installation details.

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- On completion of the liner installation, sand represented by soil samples Sand Stockpile #1 through #6 will be placed in the floor of the excavation and graded to provide an approximate 6 in. layer of padding on top of the liner.
- On completion of the installation of the pad sand, the excavated area will be backfilled to approximately 2 to 3 ft. bgs with stockpiled sand represented by soil samples Sand Stockpiles #1 through #6 and/or stockpiled soil containing treated soil bio-piles exhibiting BTEX and TPH concentrations of less than the NMOCD RRAL.
- Upon backfilling and compacting the excavated area, the caliche access road will be rerouted across the remediation site to facilitate the excavation of affected soil to the south of the current excavation represented by soil sample Sec. D – 12 SSW @ 8' and the inferred road crossing.
- Affected soil in the area represented by soil sample Sec. D – 12 SSW @ 8', the road crossing and Section A will be excavated, crushed and treated with the existing screen machine and fertilizer spray rig and placed into approximate 500-cy bio-piles.
- Laboratory analytical results from confirmation soil samples collected from the excavated area and associated bio-piles will be provided to the NMOCD and BLM prior to any additional backfilling activities.

If you have any questions or need any additional information, please feel free to contact Camille Bryant, Remediation Coordinator for Plains Marketing by phone at 575-441-1099, or by email at [CJBryant@paalp.com](mailto:CJBryant@paalp.com).

Sincerely,

**Terracon Consultants, Inc.**

A handwritten signature in blue ink, reading "Joel Lowry".

Joel Lowry  
Project Geologist  
Lubbock

A handwritten signature in blue ink, reading "Erin Loyd".

Erin Loyd, PG  
Senior Associate  
Office Manager – Lubbock

### Attachments:

Attachment #1- Site and Sample Location Map

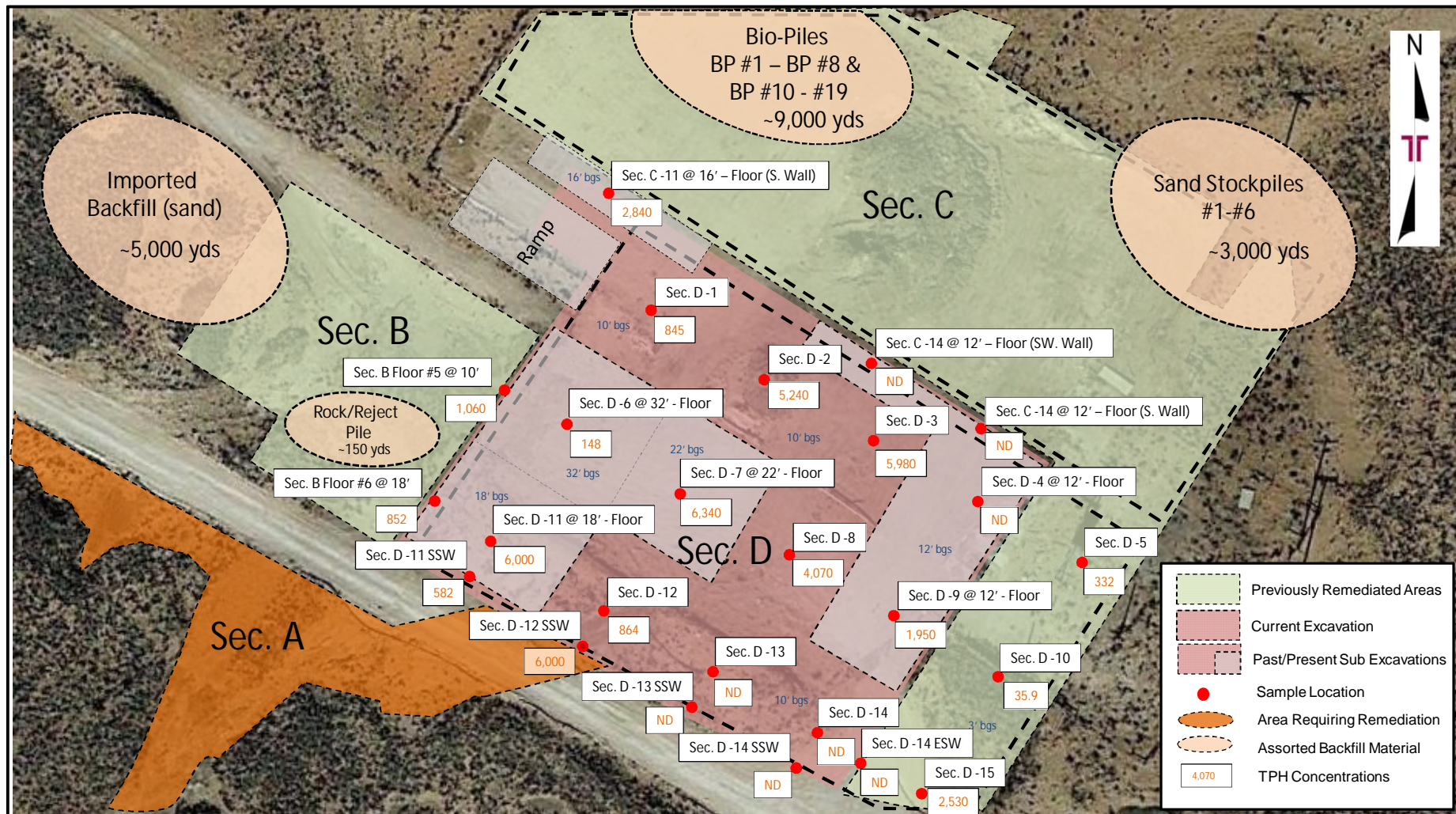
Attachment #2- Concentrations of Benzene, BTEX, TPH & Chloride in Soil – Bio-Piles and Assorted Fill Material

Attachment #3- Concentrations of Benzene, BTEX, TPH & Chloride in Soil – Current Excavation

Attachment #4- Proposed Liner and Maximum TPH Concentration Map

Attachment #5- Photographic Log





Project No.	AR167154	<b>Attachment #1 – Site and Sample Location Map</b>  Former Maljamar Station 32.71932°, -103.82819° Eddy County, New Mexico	
Scale:	1" ~ 25'		
Source:	Google Earth		
Date:	2016		
<b>Terracon</b> Consulting Engineers & Scientists 5827 50th St. Suite 1 Lubbock, Texas 79424 PH. (806) 300-0104 FAX. (806) 797 0947			

ATTACHMENT #2  
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL - BIOPILES AND ASSORTED FILL MATERIAL  
FORMER MALJAMAR STATION

PLAINS MARKETING, LP  
FORMER MALJAMAR STATION  
EDDY COUNTY, NEW MEXICO  
PLAINS SRS: HDO-95-61 FORMER MALJAMAR STATION  
NMOCD REFERENCE #: 2RP-2504

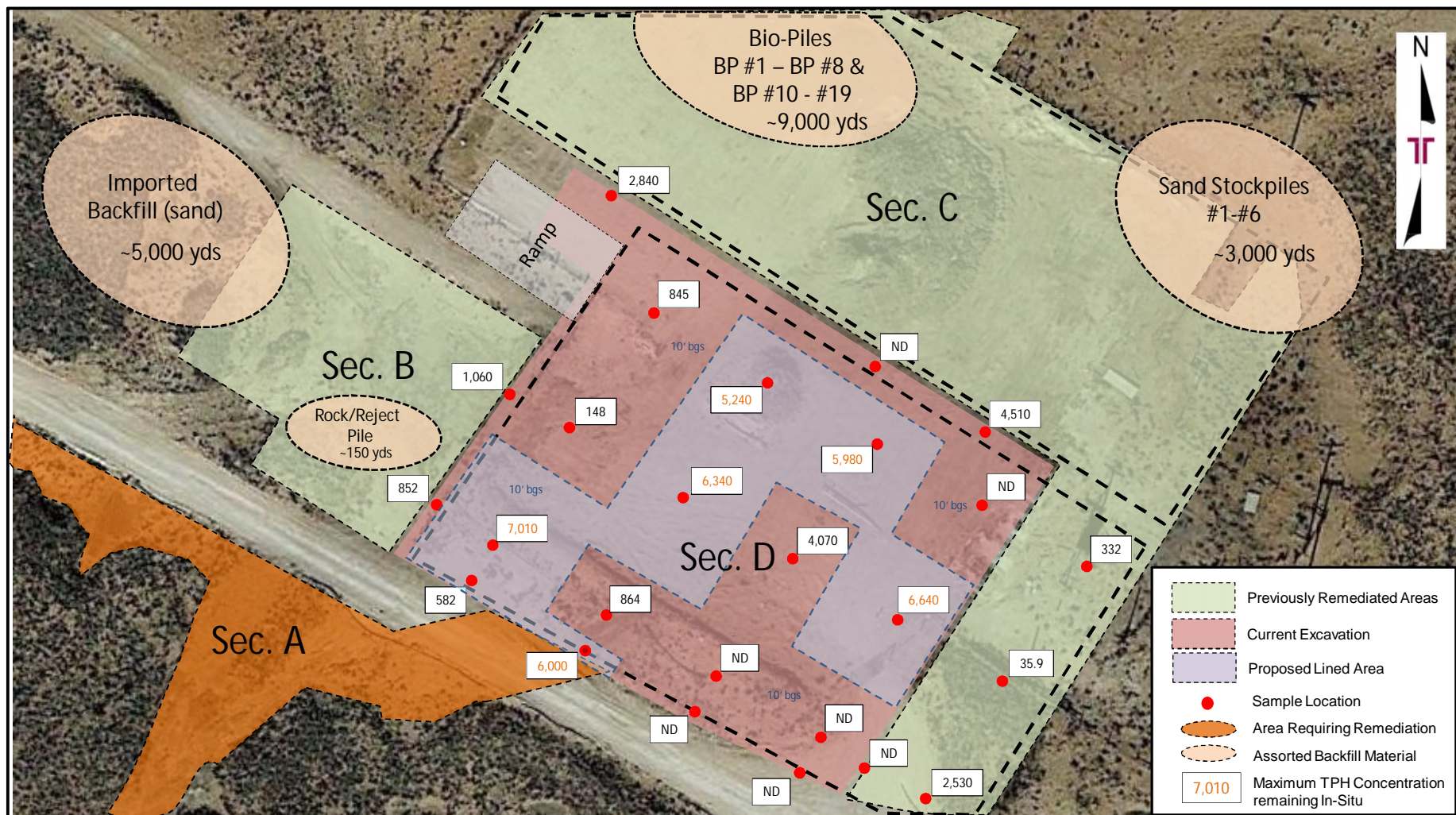
SAMPLE LOCATION	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030							METHOD: 8015M			TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	300.1 CHLORIDE (mg/Kg)
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	M.P. - XYLENES (mg/Kg)	O-XYLENE (mg/Kg)	XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
Sand Stockpile #1	11/16/2015	Stockpiled	<0.0208	<0.0417	0.0279	0.0421	0.0235	0.0656	0.0935	54.8	915	228	1,200	4.53
Sand Stockpile #2	11/16/2015	Stockpiled	<0.0208	<0.0417	0.1300	0.3970	0.1300	0.5270	0.6570	113	1,610	376	2,100	11.3
Sand Stockpile #3	12/17/2015	Stockpiled	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<26.3	314	83.8	397	<1.05
Sand Stockpile #4	12/17/2015	Stockpiled	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<0.0021	<26.6	134	38.4	173	<1.06
Sand Stockpile #5	5/12/2016	Stockpiled	<0.0011	<0.0021	0.0033	0.0049	<0.0011	0.0049	0.0082	59.4	1,110	188	1,360	22.4
Sand Stockpile #6	5/12/2016	Stockpiled	<0.0010	<0.0021	<0.0010	<0.0010	0.0011	0.0011	0.0011	73.3	1,610	295	1,980	20.3
Caliche Stockpile #21	5/23/2016	Treated	-	-	-	-	-	-	-	986	8,880	1,010	<b>10,900</b>	27.1
Caliche Stockpile #22	5/23/2016	Treated	-	-	-	-	-	-	-	810	7,290	988	<b>9,080</b>	23.4
Caliche Stockpile #23	5/23/2016	Treated	-	-	-	-	-	-	-	809	6,920	932	<b>8,660</b>	20.6
Caliche Stockpile #24	5/23/2016	Treated	-	-	-	-	-	-	-	791	6,910	925	<b>8,630</b>	20.3
Caliche Stockpile #25	6/6/2016	Treated	-	-	-	-	-	-	-	339	3,830	507	4,680	78.8
Caliche Stockpile #26	6/6/2016	Treated	-	-	-	-	-	-	-	359	4,990	646	<b>6,000</b>	19.8
Caliche Stockpile #27	6/6/2016	Treated	-	-	-	-	-	-	-	403	4,870	641	<b>5,910</b>	27.7
Caliche Stockpile #28	6/6/2016	Treated	-	-	-	-	-	-	-	357	4,660	618	<b>5,640</b>	25.9
Caliche Stockpile #29	6/6/2016	Treated	-	-	-	-	-	-	-	807	7,470	921	<b>9,190</b>	15.5
Caliche Stockpile #30	6/6/2016	Treated	-	-	-	-	-	-	-	852	6,500	817	<b>8,170</b>	15.9
Caliche Stockpile #31	6/6/2016	Treated	-	-	-	-	-	-	-	748	7,000	821	<b>8,570</b>	15.2
Caliche Stockpile #32	6/6/2016	Treated	-	-	-	-	-	-	-	916	7,600	829	<b>9,340</b>	15.6
Caliche Stockpile #33	6/20/2016	Treated	-	-	-	-	-	-	-	836	6,100	842	<b>7,780</b>	28.5
Caliche Stockpile #34	6/20/2016	Treated	-	-	-	-	-	-	-	500	4,020	537	<b>5,060</b>	20.7
Caliche Stockpile #35	6/20/2016	Treated	-	-	-	-	-	-	-	731	5,020	818	<b>6,570</b>	21.8
Caliche Stockpile #36	6/20/2016	Treated	-	-	-	-	-	-	-	801	5,860	633	<b>7,300</b>	22.4
BP #1	6/30/2016	Treated	<0.0211	0.181	<0.0211	1.420	0.340	1.760	1.941	1,100	10,200	1,800	<b>13,100</b>	-
BP #2	6/30/2016	Treated	<0.0213	0.316	<0.0213	1.850	0.569	2.419	2.735	1,220	11,000	1,930	<b>14,200</b>	-
BP #1b	7/13/2016	Treated	-	-	-	-	-	-	-	465	10,400	1,950	<b>12,800</b>	-
BP #2b	7/13/2016	Treated	-	-	-	-	-	-	-	366	9,640	1,620	<b>11,600</b>	-
BP #3	7/13/2016	Treated	-	-	-	-	-	-	-	465	10,300	1,830	<b>12,600</b>	-
BP #1c	8/19/2016	Treated	-	-	-	-	-	-	-	694	6,650	1,480	<b>8,830</b>	-
BP #2c	8/19/2016	Treated	-	-	-	-	-	-	-	612	7,170	1,390	<b>9,170</b>	-
BP #3b	8/19/2016	Treated	-	-	-	-	-	-	-	476	5,540	1,100	<b>7,120</b>	-
BP #4	8/19/2016	Treated	-	-	-	-	-	-	-	337	5,250	1,120	<b>6,710</b>	-
BP #5	8/19/2016	Treated	-	-	-	-	-	-	-	339	5,360	1,130	<b>6,890</b>	-
BP #6	8/19/2016	Treated	-	-	-	-	-	-	-	366	4,660	1,000	<b>6,020</b>	-
BP #7	8/19/2016	Treated	-	-	-	-	-	-	-	405	4,730	899	<b>6,040</b>	-
BP #1d	9/22/2016	Treated	<0.00110	<0.00220	0.00259	0.00521	0.00329	0.00850	0.01109	123	2,150	501	2,770	-
BP #2d	9/22/2016	Treated	<0.00108	<0.00215	0.00239	0.00508	0.00295	0.00803	0.01042	158	2,670	610	3,430	-
BP #3c	9/22/2016	Treated	<0.00112	<0.00225	<0.00112	<0.00225	<0.00112	<0.00225	<0.00225	34.7	970	251	1,260	-
BP #4b	9/22/2016	Treated	<0.00112	<0.00225	<0.00112	<0.00225	<0.00112	<0.00225	<0.00225	<28.1	845	253	1,100	-
BP #5b	9/22/2016	Treated	<0.00111	<0.00222	<0.00111	<0.00222	<0.00111	<0.00222	<0.00222	<27.8	1,040	306	1,350	-
BP #6b	9/22/2016	Treated	<0.00112	<0.00225	<0.00112	<0.00225	<0.00112	<0.00225	<0.00225	<28.1	750	235	984	-
BP #7b	9/22/2016	Treated	<0.00115	<0.00230	<0.00115	<0.00230	<0.00115	<0.00230	<0.00230	72.7	1,740	453	2,270	-
BP #8	10/31/2016	Treated	<0.0213	<0.0426	<0.0213	<0.0426	<0.0213	<0.0426	<0.0426	216	2,530	484	3,230	-
BP #9	10/31/2016	Treated	<0.0211	<0.0421	<0.0211	0.0543	0.0429	0.0972	0.0429	793	3,990	785	<b>5,570</b>	-
BP #10	10/31/2016	Treated	<0.0213	<0.0426	0.0338	0.1340	0.0566	0.1906	0.0904	265	2,800	486	3,550	-
BP #11	10/31/2016	Treated	<0.0211	<0.0421	0.0272	0.0611	0.0429	<0.0211	0.0701	305	3,140	534	3,980	-
BP #12	11/7/2016	Treated	<0.00108	<0.00215	0.00161	0.0035	<0.00108	0.0035	0.0051	226	2,540	549	3,320	-
BP #13	11/7/2016	Treated	<0.00109	<0.00217	0.00121	0.00465	0.00387	0.0085	0.0097	166	2,090	366	2,620	-
BP #9b	11/18/2016	Backfill	-	-	-	-	-	-	-	266	4,480	858	<b>5,600</b>	-
BP #14	11/18/2016	Treated	<0.00100	<0.00100	0.00610	0.00114	0.000900	0.00204	0.00814	42.1	776	151	969	-
BP #15	11/18/2016	Treated	0.00149	0.00509	0.0299	0.0290	0.00568	0.0347	0.0712	208	1,290	250	1,750	-
BP #16	1/9/2017	Treated	0.0380	<0.0440	<0.0220	0.0752	0.110	0.1852	0.2232	316	901	<137	1,260	50.2
BP #17	1/9/2017	Treated	0.0321	0.3550	2.85	3.84	1.96	5.8000	9.0050	482	2,010	318	2,810	9.66
BP #18	1/9/2017	Treated	0.0914	0.9990	7.56	9.3400	4.1500	13.4900	22.1404	855	2,600	432	3,890	7.30
BP #19	1/9/2017	Treated	<0.0217	<0.0435	0.0539	0.0609	0.0265	0.0874	0.1413	48	843	194	1,080	5.59
NMOCD Recommended Remediation Action Level			10						50				5,000	1,000

ATTACHMENT #3  
CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL - CURRENT EXCAVATION  
FORMER MALJAMAR STATION

PLAINS MARKETING, LP  
FORMER MALJAMAR STATION  
EDDY COUNTY, NEW MEXICO  
PLAINS SRS: HDO-95-61 FORMER MALJAMAR STATION  
NMOCD REFERENCE #: 2RP-2504

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030							METHOD: 8015M			TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	300.1 CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	M.P. - XYLENES (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)		
Sec. B - Floor #5	3'	4/1/2015	Excavated	-	-	-	-	-	-	-	541	4,790	619	5,950	-
Sec. B - Floor #5 @ 10'	10'	9/13/2016	In-Situ	<0.00547	0.0453	0.394	0.475	0.112	0.587	1.026	156	757	146	1,060	-
Sec. B - Floor #6	3'	4/1/2015	Excavated	-	-	-	-	-	-	-	833	9,260	388.0	10,500	-
Sec. B - Floor #6 @ 10'	10'	9/16/2016	Excavated	-	-	-	-	-	-	-	2,620	4,530	700.0	7,850	-
Sec. B - Floor #6 @ 18'	18'	12/15/2016	In-Situ	<0.00111	<0.00222	<0.00111	<0.00222	<0.00111	<0.00222	<0.00222	53.4	447	81.4	582	-
Sec. C - 11 @ 10' - Floor (S. Wall)	10'	6/23/2016	Excavated	-	-	-	-	-	-	-	942	11,300	2,090	14,400	-
Sec. C - 11 @ 14' - Floor (S. Wall)	14'	9/13/2016	Excavated	0.00120	0.0200	0.0871	0.177	0.0961	0.2731	0.3814	681	1,810	310	2,800	-
Sec. C - 11 @ 16' - Floor (S. Wall)	16'	9/13/2016	In-Situ	-	-	-	-	-	-	-	<29.1	111	<29.1	111	-
Sec. C - 11 @ 14' - Floor (S. Wall) (Floor)	14'	1/19/2017	Excavated	0.378	4.79	21.4	37.6	18.2	55.8	82.37	2,410	5,910	1,240	9,570	-
Sec. C - 11 @ 16' - Floor (S.Wall) (Floor)	16'	1/26/2017	In-Situ	<0.0227	<0.0455	0.0409	0.118	<0.0227	0.118	0.159	151	2,320	369	2,840	-
Sec. C - 14 @ 10' - Floor (S. Wall)	10'	6/23/2016	Excavated	-	-	-	-	-	-	-	662	10,100	1,780	12,500	-
Sec. C - 14 @ 14' - Floor (S. Wall)	14'	9/13/2016	In-Situ	0.0125	0.136	0.4450	0.7780	0.3120	1.0900	1.5350	990	2,990	529	4,510	-
Sec. C - 14 @ 16' - Floor (S. Wall)	15'	9/13/2016	In-Situ	-	-	-	-	-	-	-	835	1,830	305	2,970	-
Sec. C - 14 @ 12' - Floor (S. Wall)	12'	11/18/2016	In-Situ	<0.00118	<0.00235	<0.00118	<0.00235	<0.0018	<0.00235	<0.00235	<29.4	<29.4	<29.4	<29.4	-
Sec. C - 14 @ 10' - Floor (SW. Wall)	10'	6/23/2016	Excavated	-	-	-	-	-	-	-	554	6,930	1,060	8,540	-
Sec. C - 14 @ 14' - Floor (SW. Wall)	14'	9/13/2016	In-Situ	-	-	-	-	-	-	-	315	1,500	313	2,130	-
Sec. C - 14 @ 16' - Floor (SW. Wall)	16'	9/13/2016	In-Situ	-	-	-	-	-	-	-	<29.4	<29.4	<29.4	<29.4	-
Sec. C - 14 @ 12' - Floor (SW. Wall)	12'	11/18/2016	In-Situ	<0.00111	<0.00222	<0.00111	<0.00222	<0.00111	<0.00222	<0.00222	<27.8	<27.8	<27.8	<27.8	-
Sec. D - 1 @ 6' - Floor	6'	3/30/2016	Excavated	<0.0011	<0.0023	<0.0011	0.0051	0.0042	0.0093	0.0093	32.0	618	196	845	21.9
Sec. D - 2 @ 6' - Floor	6'	3/30/2016	Excavated	-	-	-	-	-	-	-	966	8,460	1,480	10,906	122
Sec. D - 2 @ 10' - Floor	10'	6/23/2016	In-Situ	-	-	-	-	-	-	-	386	4,150	702	5,240	-
Sec. D - 2 @ 14'	14'	8/18/2016	In-Situ	<0.00109	<0.00217	<0.00109	<0.00217	<0.00109	<0.00217	<0.00217	<27.2	36.5	<27.2	36.5	-
Sec. D - 3 @ 5.5' - Floor	5.5'	3/30/2016	Excavated	-	-	-	-	-	-	-	2,340	10,200	1,840	14,380	19.6
Sec. D - 3 @ 10' - Floor	10'	6/23/2016	In-Situ	-	-	-	-	-	-	-	407	4,770	774	5,980	-
Sec. D - 3 @ 14'	14'	8/18/2016	In-Situ	<0.00108	<0.00215	<0.00108	0.00268	<0.00108	0.00268	0.00268	<26.9	476	74.2	550	-
Sec. D - 4 @ 5' - Floor	5'	3/30/2016	Excavated	-	-	-	-	-	-	-	3,000	14,900	3,670	21,570	22.3
Sec. D - 4 @ 10' - Floor	10'	6/23/2016	Excavated	-	-	-	-	-	-	-	455	18,800	3,590	22,900	-
Sec. D - 4 @ 14'	14'	8/18/2016	In-Situ	<0.00114	<0.00227	<0.00114	<0.00227	<0.00114	<0.00227	<0.00227	<28.4	<28.4	<28.4	<28.4	-
Sec. D - 4 @ 12'	12'	11/18/2016	In-Situ	<0.00109	<0.00217	<0.00109	<0.00217	<0.00109	<0.00217	<0.00217	<27.2	<27.2	<27.2	<27.2	-
Sec. D - 5 @ 3' - Floor	3'	3/30/2016	Excavated	<0.0011	<0.0023	0.0040	0.0043	<0.0011	0.0043	0.0082	<25.3	241	91.3	332	16.8
Sec. D - 6 @ 6' - Floor	6'	3/30/2016	Excavated	-	-	-	-	-	-	-	2,310	11,500	2,160	15,970	10.2
Sec. D - 6 @ 10' - Floor	10'	6/23/2016	Excavated	-	-	-	-	-	-	-	3,120	20,000	3,770	26,900	-
Sec. D - 6 @ 14'	14'	8/18/2016	Excavated	-	-	-	-	-	-	-	2,320	3,720	599	6,640	-
Sec. D - 6 @ 16'	16'	8/18/2016	Excavated	-	-	-	-	-	-	-	1,530	3,030	484	5,040	-
Sec. D - 6 @ 18'	18'	8/18/2016	In-Situ	<0.00112	<0.00225	<0.00112	<0.00225	<0.00112	<0.00225	<0.00225	<28.1	125	<28.1	125	-
Sec. D - 6 @ 12' - Floor	12'	1/12/2017	Excavated	0.573	4.15	9.25	11.7	4.94	16.640	30.613	2,440	5,990	1,040	9,470	-
Sec. D - 6 @ 14' - Floor	14'	1/19/2017	Excavated	-	-	-	-	-	-	-	2,500	5,930	1,060	9,500	-
Sec. D - 6 @ 15' - Floor	15'	1/19/2017	Excavated	-	-	-	-	-	-	-	1,410	3,820	677	5,910	-
Sec. D - 6 @ 16' - Floor	16'	1/19/2017	Excavated	1.05	8.68	21.80	32.3	14.3	46.60	78.13	2,190	5,050	903	8,140	-
Sec. D - 6 @ 18' - Floor	18'	1/26/2017	Excavated	-	-	-	-	-	-	-	3,650	7,770	1,320	12,700	-
Sec. D - 6 @ 20'	20'	2/2/2017	Excavated	0.0531	1.69	10.1	13.4	5.8	19.24	31.08	1,030	2,110	<298	3,140	-
Sec. D - 6 @ 22'	22'	2/2/2017	Excavated	<0.00238	<0.0476	0.65	0.945	0.442	1.39	2.03	244	590	<149	834	-
Sec. D - 6 @ 24'	24'	2/2/2017	Excavated	0.038	0.44	8.91	10.4	4.79	15.19	24.57	1,130	2,700	338	4,170	-
Sec. D - 6 @ 26'	26'	2/2/2017	Excavated	<0.0244	0.473	7.67	8.60	3.95	12.55	20.69	634	2,140	264	3,350	-
Sec. D - 6 @ 28'	28'	2/2/2017	Excavated	0.116	1.69	23.90	24.0	7.29	31.29	56.99	2,280	4,640	537	7,460	-
Sec. D - 6 @ 30' - Floor	30'	2/16/2017	Excavated	<0.0220	0.07	1.66	1.0	0.20	1.21	2.94	547	2,110	510	3,170	-
Sec. D - 6 @ 32' - Floor	32'	2/16/2017	Excavated	<0.00110	<0.00220	0.00741	0.00593	0.00229	0.00822	0.0156	<27.5	120	28.0	148	-
Sec. D - 7 @ 6' - Floor	6'	3/30/2016	Excavated	-	-	-	-	-	-	-	6,340	16,100	3,240	25,680	15.1
Sec. D - 7 @ 10' - Floor	10'	6/23/2016	Excavated	-	-	-	-	-	-	-	5,000	24,600	4,820	34,500	-
Sec. D - 7 @ 14'	14'	8/18/2016	Excavated	-	-	-	-	-	-	-	5,180	9,250	1,630	16,000	-
Sec. D - 7 @ 16'	16'	8/18/2016	Excavated	-	-	-	-	-	-	-	4,610	8,970	1,740	15,300	-
Sec. D - 7 @ 18'	18'	8/18/2016	Excavated	-	-	-	-	-	-	-	2,690	6,280	1,180	10,100	-
Sec. D - 7 @ 20'	20'	8/18/2016	Excavated	-	-	-	-	-	-	-	4,150	8,510	1,580	14,200	-
Sec. D - 7 @ 22'	22'	8/18/2016	In-Situ	<0.00118	0.0617	0.455	0.927	0.424	1.351	1.8677	1,090	2,570	464	4,130	-
Sec. D - 7 @ 22' - Floor	22'	1/12/2017	In-Situ	0.6810	0.3000	6.96	6.80	2.29	9.090	17.031	1,360	4,200	769	6,340	-
Sec. D - 8 @ 5.5' - Floor	5.5'	3/30/2016	Excavated	-	-	-	-	-	-	-	1,200	8,090	1,480	10,770	26.4
Sec. D - 8 @ 10' - Floor	10'	6/23/2016	In-Situ	<0.00102	<0.00204	<0.00102	<0.00204	<0.00102	<0.00204	<0.00204	<128	3,360	708	4,070	-
Sec. D - 9 @ 5' - Floor	5'	3/30/2016	Excavated	-	-	-	-	-	-	-	1,610	8,390	1,590	11,590	10.6
Sec. D - 9 @ 10' - Floor	10'	6/23/2016	Excavated	-	-	-	-	-	-	-	584	6,560	1,130	8,270	-
Sec. D - 9 @ 14'	14'	8/18/2016	In-Situ	-	-	-	-	-	-	-	1,830	4,030	779	6,640	-





Project No. AR167354  
 Scale: 1" ~ 25'  
 Source: Google Earth  
 Date: 2016

**Terracon**  
 Consulting Engineers & Scientists  
 5827 50th St. Suite 1 Lubbock, Texas 79424  
 PH: (806) 300-0104 FAX: (806) 797 0947

#### Attachment #4 – Proposed Liner and Maximum TPH Concentration Map

Former Maljamar Station  
 32.71932°, -103.82819°  
 Eddy County, New Mexico



## Proposed Remediation Strategy

Former Maljamar Station ■ Eddy County, New Mexico

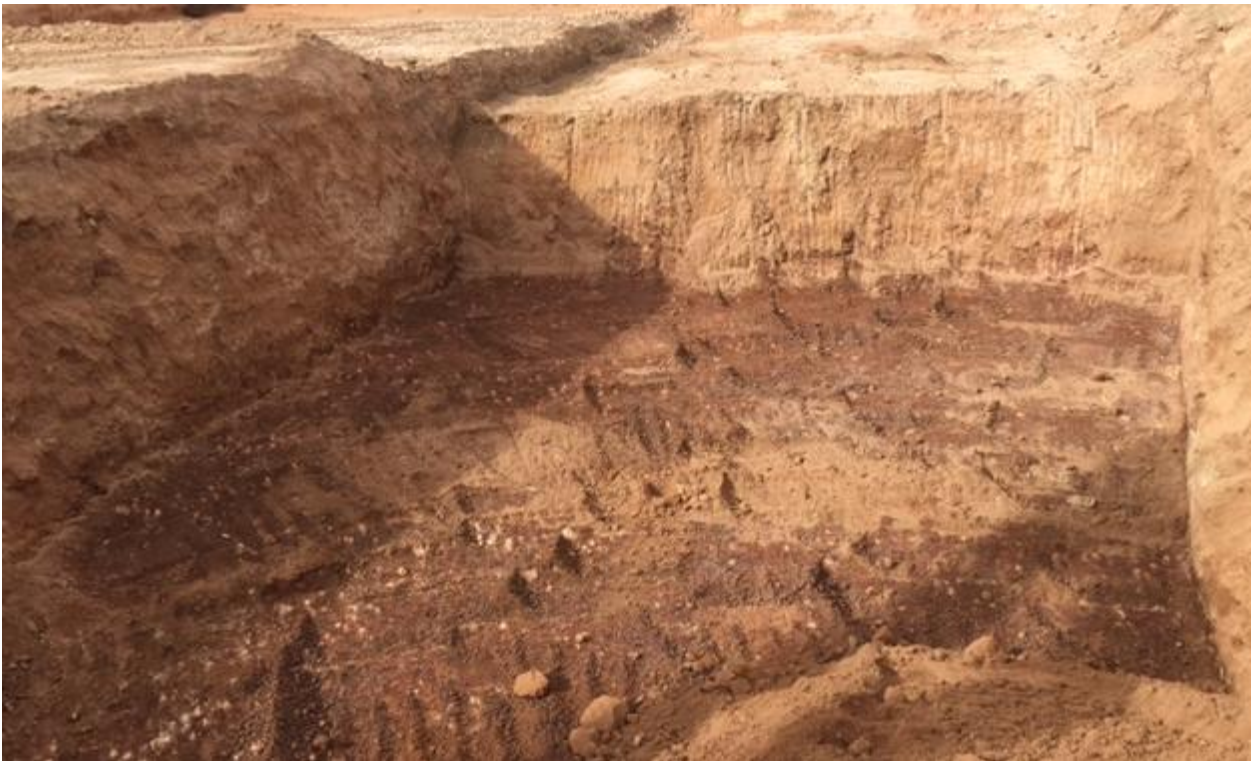
NMOCD Ref. No. 2RP-2504 ■ Terracon Project No. AR167154

**Terracon**

### Photographic Log



**PHOTO 1:** View of the excavated areas represented by sample points Sec. C -14 (SW. Wall) and Sec. -14 (S. Wall), facing east.



**PHOTO 2:** View of the excavated area represented by sample point Sec. D -11, facing east.



## Proposed Remediation Strategy

Former Maljamar Station ■ Eddy County, New Mexico

NMOCD Ref. No. 2RP-2504 ■ Terracon Project No. AR167154

**Terracon**



**PHOTO 3:** View of the excavated area represented by sample point Sec. D -6, facing east.



**PHOTO 4:** View of the excavated area represented by sample point Sec. D- 6, facing west.

## Proposed Remediation Strategy

Former Maljamar Station ■ Eddy County, New Mexico

NMOCD Ref. No. 2RP-2504 ■ Terracon Project No. AR167154

**Terracon**



**PHOTO 5:** View of the excavated area represented by sample point Sec. D -7, facing west.





## Proposed Remediation Strategy

Former Maljamar Station ■ Eddy County, New Mexico

NMOCD Ref. No. 2RP-2504 ■ Terracon Project No. AR167154

**Terracon**

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**PHOTO 6:** View of the excavated area represented by sample point Sec. C -11, facing west.

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**PHOTO 7:** View of Section D after backfilling after backfilling activities, facing southeast.

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**PHOTO 8:** View of the remaining rock/reject stockpile proposed to be used to backfill portions of the excavated areas represented by sample points Sec. C -14 (SW. Wall), Sec. C -14 (S. Wall), Sec. D-4 and Sec. D-9, facing southeast.

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