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Houston, TX • (281) 362-2714

December 18, 2013

Mr. Geoffrey Leking
Environmental Specialist
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, NM 88240

RE: NABORS HOBBS RECLAMATION PLANT INVESTIGATION, LEA COUNTY, NEW MEXICO – Address questions in Mr. Leking email of October 30, 2013.

Dear Mr. Leking,

EnTech Consulting Corp. (EnTech) on behalf of Nabors Completion & Production Services Co. (Nabors) delineated soil contamination at Nabors Reclamation Plant Facility (facility) located west of Hobbs, NM (**Figure 1**). The Reclamation Plant Area is located adjacent to their Salt Water Disposal facility (**Figure 2**). The purpose of this letter is to address your questions and concerns raised in your email to Darrell Moore dated October 30, 1013. Unfortunately the original email was not received by Darrell until you resubmitted it on November 27, 2013.

The document dated August 15, 2013 is the most recent document submitted for your review.

The excavation was approximately 1-2 feet deep where the massive caliche cap rock was encountered. The boring log for Nabors water well report indicated this caliche layer is 16 feet thick. During the excavation photographs were taken. Photographs are enclosed in Attachment A. **Photo 1,** depicts the excavation and location of sidewall samples and shallow borings BH-1 through BH-3, which were

collected after removal of the surface pea gravel. These samples were scraped from the top of the hard caliche cap rock. The depth of BH-1 through BH-3 were 6-9 inches deep, as the pea gravel was thinner in outer section of the pea gravel base on which the tanks were originally located. All samples were collected following New Mexico Oil Conservation Division's (NMOCD) stated limit in their "Guidelines for Remediation of Spills, Leaks, and Releases", when screening with an OVM and removing affected soils with OVM readings above 100 ppm. These samples were initially collected to delineate the horizontal extent of contamination. As the OVM readings were well below 100 on the sidewall samples and BH-1 through BH-3 sample, we anticipated the analytical results would be below regulatory limits. Upon receipt of laboratory analytical results with TPH-DRO concentrations ranging from less than the detection limit to 752 mg/kg, we then dug the perpendicular trenches to further delineate horizontal limits of contamination away from the main excavation. The location of these trenches were specifically chosen to further delineate areas of contamination above 400 mg/kg TPH-DRO. The results of the samples collected at the end of these trenches were all below 100 mg/kg TPH-DRO. The green area in **Figure 3** is the extra excavation that we have proposed so that contamination identified in the initial samples can be remove to a point where TPH concentration are below 100 mg/kg at the end of the trenches. This should allay your fears that there are not more samples on the periphery besides BH-3.

BH-4 was taken in the middle of the excavation at a depth of approximately 2 feet. It too was a sample of the hard caliche cap rock. A photograph log of other pictures is enclosed in Attachment A. Initially a backhoe was used however, it was replaced with an excavator to complete the perpendicular trenches.

The reason why the two deeper borings were drilled was to delineate the depth of affected soil. In discussions with Mr. Moore you had indicated, if the contaminants were bound in the upper cap rock and there were no contaminants below the cap rock, then the possibility of low concentrations of TPH (>1,000 mg/kg) to migrate was minimal and therefore would not need to be excavated. Therefore, Deep Boring 1 was drilled 13 feet to the north of the location for sample BH-4, and deep boring 2 was drilled 12 feet south of sample BH-4. All samples collected from each

boring, when analyzed, were below the laboratory detection limit all the parameters analyzed for.

The fluid at a Reclamation plant are generally associated with crude oil.

I hope this letter addresses your questions and concerns. If you can please revisit the project conclusions and recommendations in our letter dated August 15, 2013, it would be appreciated.

We are confident that this approach will remove any risk to the environment and satisfy NMOCD's concerns. If you have any questions, please feel free to contact me at (713) 201-5704 or at my email chan.patel@entechservice.com . If necessary we can meet with you in person and go over any of the details presented in our letters submitted to you.

We look forward to your response.

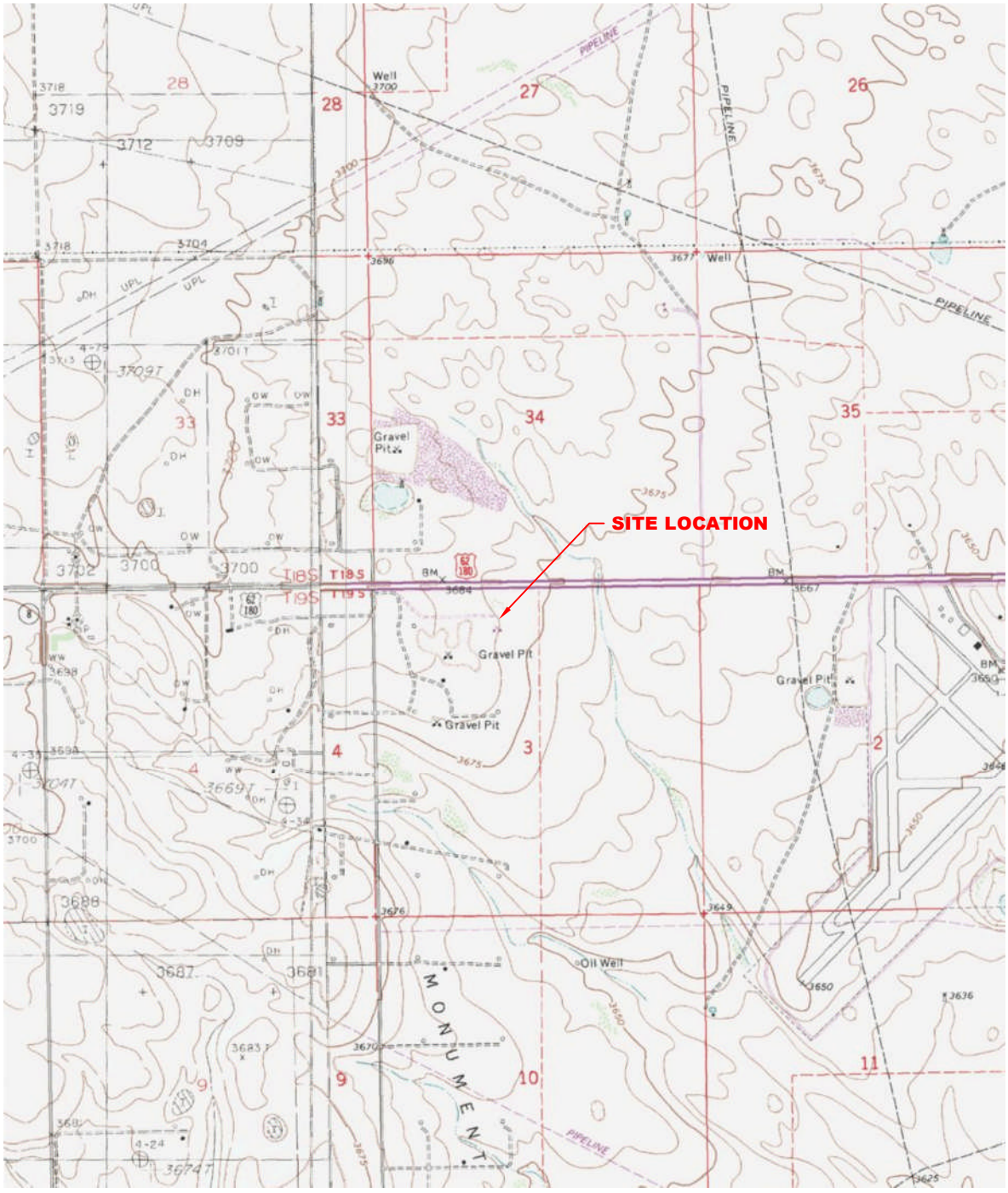
Sincerely,
ENTECH CONSULTING CORP.

Chan Patel
Sr. Project Manager

Darrell Moore
Geologist

Figures 1, 2 and 3
Attachment A
Photo 1 – Sample locations
Photograph log

Cc Les Teague (Nabors-Corporate)
Freeman Young (Nabors-Hobbs NM)



0 1/2

Miles

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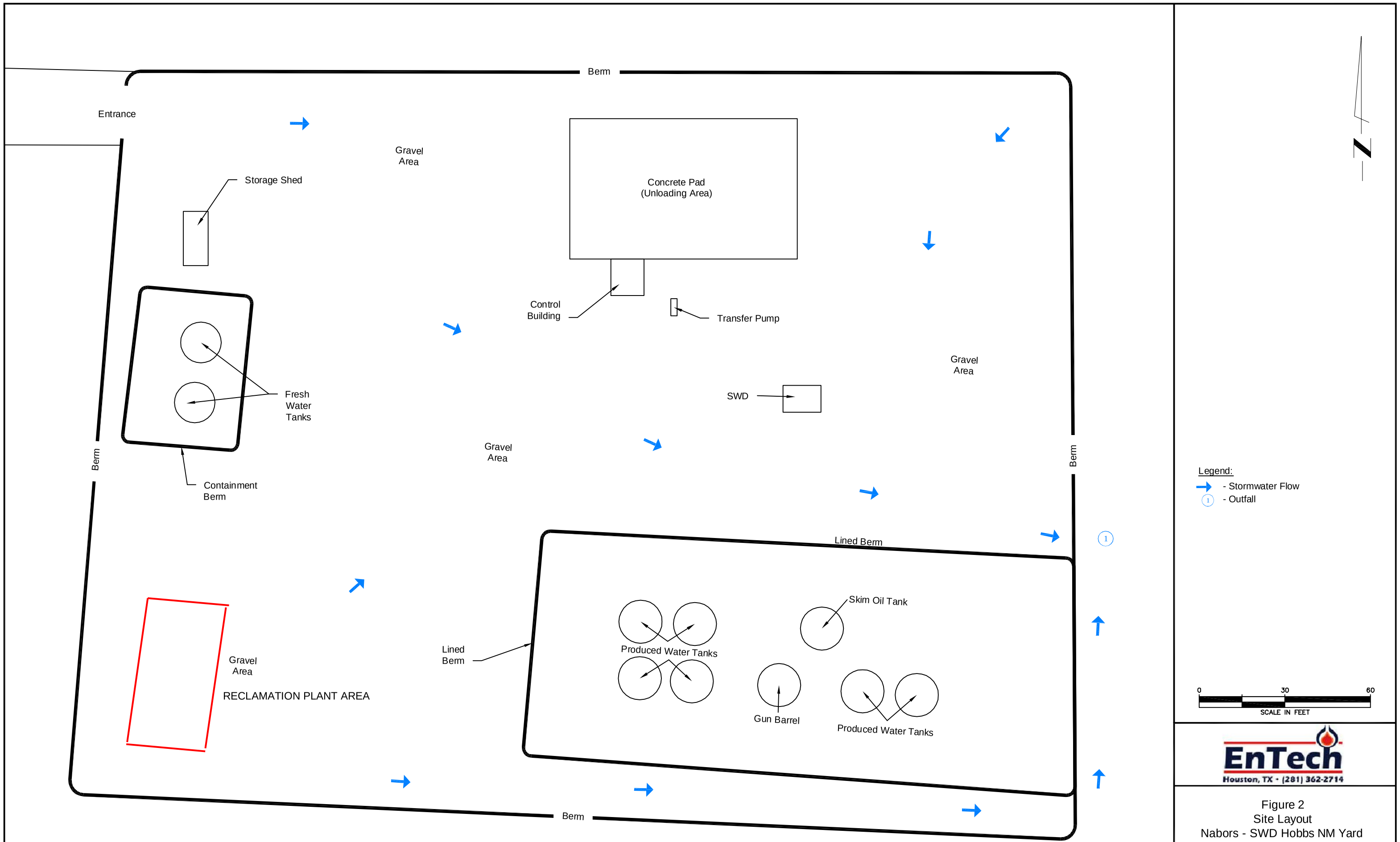
Figure 1
Site Location Map
Nabors - SWD Hobbs NM Yard
Hobbs, New Mexico

Job No.: NWS12023	DATE: 7/12



Legend:

- Stormwater Flow
- (1) - Outfall

0 30 60

SCALE IN FEET

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Figure 2
Site Layout
Nabors - SWD Hobbs NM Yard
Hobbs, New Mexico

Job No.: NWS12023 | DATE: 7/12

Fresh Water Tank

SW-8	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	91.4	5.6

55'

SW-8

SW-1	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	<50.0	2.1

SW-1

SW-7	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	84.3	40.8

SW-7

Boring #1

Boring #1 Depth (feet)	BTEX mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg
5	<0.0200	<2.00	<50.0
10	0.0235	<2.00	<50.0
15	<0.0200	<2.00	<50.0
20	<0.0200	<2.00	<50.0

BH-1 Chloride

BH-1 Chloride	Chloride mg/Kg
	<20

BH-1	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	752	25.8

T-5

BH-1

Nabors Trench #5	TPH (C10-C28) mg/Kg	OVM ppm
	67.2	1.9

65'

BH-4	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg
	<0.0200	<0.0200	2.1	855

BH-4

BH-2 Chloride	Chloride mg/Kg
	<20

BH-2 Chloride

Boring #2

Boring #2 Depth (feet)	BTEX mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg
5	<0.0200	<2.00	<50.0
10	<0.0200	<2.00	<50.0
15	<0.0200	<2.00	<50.0
20	<0.0200	<2.00	<50.0

SW-6

SW-6	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	139	7.6

SW-2	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	189	9.5

SW-2

SW-5	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	440	8.9

SW-4	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	270	8.1

SW-4

SW-5

T-4

Nabors Trench #4	TPH (C10-C28) mg/Kg	OVM ppm
	27.5	0.8

SW-3	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	527	12

T-1

SW-3

T-2

BH-2	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	416	10.4

BH-2

Nabors Trench #1	TPH (C10-C28) mg/Kg	OVM ppm
	12.5	1.3

BH-3

Nabors Trench #2	TPH (C10-C28) mg/Kg	OVM ppm
	27.3	0.5

T-3

Nabors Trench #3	TPH (C10-C28) mg/Kg	OVM ppm
	38.8	0.6

BH-3	BTEX mg/Kg	Xylene mg/Kg	TPH-GRO mg/Kg	TPH-DRO mg/Kg	OVM ppm
	<0.0200	<0.0200	<2.00	54.9	10.1

Stock Piled Dirt (50 yds)

Pea Gravel (15 yds)

LEGEND:

10'

Trenches T1-5 — T1-5 — Bucket Width

Approx. Depth 2'

Area to be Excavated

0 10

FEET

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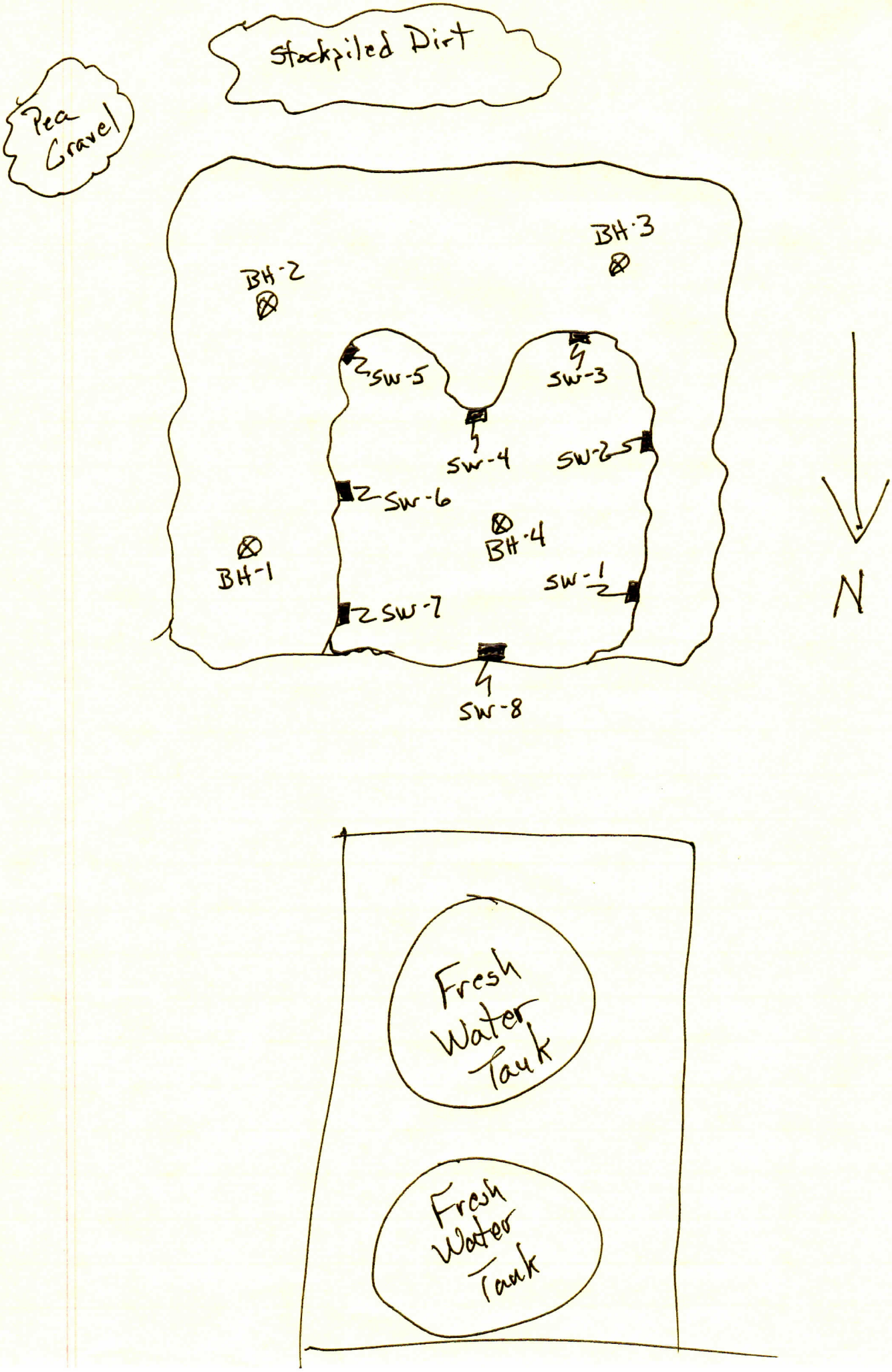
Figure 3
Analytical Results for Trench Samples
Nabors - Hobbs Reclamation Plant
Hobbs, New Mexico

Job No.: NWS12032 | DATE: 7/13


SW-1
SW-2
SW-3
SW-4
SW-5
SW-6
SW-7
SW-8
BH-1
BH-3
BH-4


Stockpiled Dirt
Pea Gravel
BH-2
BH-3
SW-5
SW-3
SW-4
SW-2
SW-6
BH-4
BH-1
SW-1
SW-7
SW-8
N
Fresh Water Tank
Fresh Water Tank

Photograph 1. Looking North at site before starting remediation. Tank in background is a fresh water tank.

Photograph 2. Looking Northwest at site before work begins with fresh water tanks in background.

Photograph 3. Looking west with affected soil near the middle of site.

Photograph 4. Looking south at backhoe digging in caliche. Caliche was hit at about 1 foot.

Photograph 5. Looking West at backhoe digging along south edge..

Photograph 6. Looking south at backhoe digging along west edge. These trenches were used to delineate the edge of contamination. Not to be confused with perpendicular trenches that were dug later.

Photograph 7. Looking south at backhoe digging inside contaminated area.

Photograph 8. Grading site after excavation of affected soil.

Photograph 9. Looking North at Site after excavation activities.