

September 18, 2008

James Bearzi, Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505



**Re: Response to: NOTICE OF DISAPPROVAL
RAILROAD RACK LAGOON FAN-OUT AREA
EXCAVATION WORK PLAN
WESTERN REFINING SOUTHWEST, INC. GALLUP REFINERY
EPA ID #: NMD000333211
HWB-GRCC-07-002**

Dear Mr. Bearzi:

The purpose of this letter is to respond to comments provided by the New Mexico Environmental Department (NMED) in a letter to the Gallup Refinery dated July 22, 2008. The July 22, 2008 letter provides NMED's comments on the Railroad Rack Lagoon Fan-Out Area Excavation Work Plan (Excavation Plan) prepared by Trihydro. The Excavation Plan, dated May 2, 2008, was provided to NMED on May 12, 2008 with a cover letter that was provided by Gallup Refinery. A revised Excavation Plan is provided with this letter as an attachment.

This letter is organized such that each comment response number listed below corresponds to the NMED comment number in the letter dated July 22, 2008.

Please note that figure numbers in the revised Excavation Plan have changed because additional figures have been included. For example, Figure 1 in the draft Excavation Plan is now Figure 4.

Comment Response 1

The cover letter dated May 12, 2008 referenced a sample location as "L-1". The sample location that the cover letter is referring to is "I-1". This was a typographical error – the text "L-1" should be read as "I-1." There were no samples collected from any location labeled as the "L-1"

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RAILROAD RACK OVERFLOW DITCH AND FAN-OUT AREA
SOIL INVESTIGATION WORK PLAN
WESTERN REFINING COMPANY
GALLUP REFINERY
GALLUP, NEW MEXICO

September 17, 2008

Project #: 072-013-001

SUBMITTED BY: Trihydro Corporation

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location. Thus, we do not believe revisions to Figure 1 and the Excavation Plan to include “L-1” are needed.

Because this letter serves as a new cover letter to the Excavation Plan, a revised cover letter referencing “I-1” instead of “L-1” is not needed.

Comment Response 2

Test pit location B-9 was referenced in the “Completed Field Work” section of the Excavation Plan in an attempt to provide continuity between this Excavation Plan and previous project documents. The B-9 location was discussed in a Project Status Report letter dated October 2, 2007 that was addressed to the Gallup Refinery and also provided to NMED. The purpose of this Excavation Plan is to address contamination in and around the B-8 location, therefore a figure showing the B-9 test pit location and sample results was not originally included. The “Completed Field Work” section of the Excavation Plan has been revised to provide more continuity between the documents. Figure 3 has been provided to show the excavated area and sample results for B-9.

Trihydro has also added Figures 1 and 2 to the Excavation Plan to show the original soil boring locations as identified in Attachment 1 of NMED’s September 19, 2006 *Approval with Modifications Work Plan for Investigation of the Overflow Ditch and Fan-Out Area of Railroad Rack Lagoon, SWMU #8*. These figures were previously submitted as Figures 3 and 4 of the *Railroad Rack Lagoon Overflow Ditch and Fan-Out Area, SWMU #8 Subsurface Investigation* report dated February 8, 2007.

Comment Response 3

The October 2, 2007 letter from Trihydro to Gallup and NMED states, “At B-9, the center sample of the excavation at the 3 ft-bgs interval exceeded the 890 mg/kg clean up level. The four corner samples were below the clean up level, effectively delineating the horizontal extent of contamination at this location. A hand auger was used to collect an additional sample from the center of the B-9 excavation at a depth of 5 ft bgs. Analytical results showed that the DRO concentration was below the clean up level effectively delineating the vertical extent of contamination at B-9. The depth of the B-9 excavation was increased to 5 ft bgs. The excavated soil remains stock piled on the plastic sheeting and will be transported to the land farm pending NMED approval. The excavation will be backfilled with native soil upon completion of the investigation. It is Trihydro’s understanding that no additional sampling is required at B-9.”

The second paragraph of the "Completed Field Work" section of the Excavation Plan has been revised to clarify that the B-9 sample location showed DRO sample results above 890 mg/kg at 2 and 3 feet bgs, but that the sample results were below the DRO clean up level at 5 feet bgs. As a result, the soil was excavated to 5 feet and stock piled.

Comment Response 4

Figure 6 has been updated to show the proposed confirmation sample locations. NMED provided confirmation sampling guidance in the Railroad Rack Lagoon Overflow Ditch and Fan-Out Area, SWMU # 8 Subsurface Investigation, dated March 14, 2007. This guidance says: "If the excavation does not exceed three feet below ground surface (bgs), the Permittee may collect confirmation samples from the bottom of the excavation only. If the excavation exceeds three feet bgs, then confirmation samples must be collected from all sidewalls of the excavation in addition to from the base of the excavation." Based on the above mentioned NMED guidance, Trihydro's experience on similar types of projects, and historical data, Trihydro proposes to collect confirmation samples as discussed in the "Confirmation Sampling" section of the revised Excavation Plan. The location of confirmation sample CS-8 has been chosen to alleviate NMED's concern regarding the area southwest of B-8, in the outflow ditch between B-8 and B-9. Depending on the sample analytical results, additional excavation may be needed in between the B-8 and B-9 excavations.

Comment Response 5

The "Procedures" section (now referred to as "Excavation Procedures") of the revised Excavation Plan has been rewritten to include confirmation sampling. Figure 6 shows the additional confirmation sample locations. This figure is included in the Excavation Plan with additional excavation information.

Comment Response 6

The excavated soil will be disposed of in the Gallup Northeast Oil Conservation Division (OCD) Land Farm in accordance with Permit Number GW-032. This has been addressed in the "Excavation Procedures" section of the revised Excavation Plan.

Comment Response 7

The Permittee will wait until the results of the confirmation samples indicate that the DRO contamination is below 890 mg/kg before backfilling the remedial excavation. This is addressed in the "Procedures" section of the revised Excavation Plan.

If you have any questions, or if we can be of further service to you, please do not hesitate to call Dr. Gaurav Rajen at (505) 722-0227, or myself at (505) 722-3833.

Sincerely,



Ed Riege
Environmental Manager

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1.0 INTRODUCTION

Western Refining Company owns and operated the Gallup (formerly Ciniza) Refinery located on 880 acres near Gallup, New Mexico. The Gallup Refinery (Gallup) is capable of processing approximately 26,000 barrels per day (BPD) of crude oil. Four Corners area crude and other pipeline crudes, such as West Texas, are the primary feedstocks to Gallup. In September, 2006 Gallup requested the assistance of Trihydro Corporation (Trihydro) to collect samples to determine the presence or absence of residual contamination at the Railroad Rack Overflow Ditch and Fan-out Area (Fan-out Area) locations.

The New Mexico Environmental Department (NMED) has requested an Excavation Plan (Plan). This document has been prepared to satisfy the Plan required by NMED and to assist in the excavation and disposal of soil in the Fan-out Area that exceeds diesel range organics (DRO) concentrations of 890 mg/kg. NMED and Gallup agreed that the Industrial Direct Exposure level for #3 and # 6 Fuel Oil of 890 mg/kg would be used as the DRO cleanup standard (verbal agreement with Hope Monzeglio, Dave Cobrain, and Jim Lieb).



2.0 COMPLETED FIELD WORK

Trihydro was contracted to collect samples to determine the presence or absence of residual contamination at the Overflow Ditch and Fan-out Area locations. The initial field work for this project was conducted in October 2006 and a report was submitted to Gallup and NMED, titled Railroad Rack Lagoon Overflow Ditch and Fan-out Area, SWMU #8 Subsurface Investigation dated February 8, 2007. The results of this investigation prompted NMED to request that Gallup excavate soil contaminated with DRO in the vicinity of the two test pit locations, "B-8" and "B-9." Trihydro was onsite and completed the initial sampling and excavation of soil from these test pits during the week of May 21, 2007. Figure 1 shows the locations of the original boreholes as approved by NMED and their relative distances to the edges of the fan-out area. Figure 2 shows the sampling locations, identifies the original sample depths and results, and was modified from Figure 1 to reflect field measurements of the Fan-out Area.

Samples were originally collected from the B-9 sample location at 2 and 5 feet below ground surface (ft-bgs) using a hand auger on October 17, 2006. The soil sample DRO concentration from the 2 foot sample result was above the clean-up standard (890 mg/kg) and the 5 foot sample result was below the DRO cleanup standard. The B-9 sample location was excavated to a depth of 3 ft-bgs in May 2007 and confirmation samples were collected on May 21, 2007. The "B-9 Center" sample location's result was above the cleanup standard. Another soil sample was collected at 5 ft-bgs at this location on May 23, 2007 using a hand auger. This sample result was below the DRO cleanup standard. The depth of the B-9 excavation was increased to 5 ft-bgs. The excavated soil remains stockpiled. Figure 3 shows the excavated area and sample results.

The soil sample result from the southeast corner of original B-8 excavation was reported at a concentration higher than the DRO cleanup standard. Gallup requested that Trihydro collect additional samples from the contaminated area around B-8 and delineate the impacted soil that would need to be excavated to meet the objectives of the project. The additional samples were collected during the week of August 20, 2007. One of the objectives of the August sampling event was to minimize the amount of soil that would potentially need to be excavated. It was anticipated that the August 2007 soil sample results would be below the DRO cleanup standard approved by NMED. However, the August data collection showed several samples results above the DRO cleanup standard.

Therefore, after conversations with Gallup personnel, it was decided to delineate the contamination by using a larger step-out distance to meet project objectives. Field work utilizing this method commenced on December 17, 2007.



The soil samples collected during this event effectively delineated the horizontal and vertical extent of DRO contamination associated with B-8. The December 17, 2007 field event and results are described below.

2.1 DECEMBER 2007 FIELD EVENT

2.1.1 HORIZONTAL DELINEATION

Soil samples were collected extending outward in a radial pattern at 20, 40, and 60 feet away from existing boreholes K, G, I, and M at depths of 3, 8, and 13 ft-bgs. As shown on Figure 4, boreholes K, G, I, and M were the outermost DRO contaminated soil sample locations based on the August 2007 event. The 20 foot step-out locations are designated as M-1, I-1, G-1, and K-1. Boreholes M-1, I-1, G-1, and K-1 were installed on December 17, 2007 using a CME 75 drill rig. A 6 ¼ inch hollow stem auger was advanced to 1 foot above the discrete sampling depth. A split-spoon sampling device was then advanced from 1 foot above to 1 foot below the discrete sampling depth. Samples were taken directly from the split spoon sampling device at depths of 3, 8, and 13 ft-bgs. Samples were submitted to the Laboratory for 24-hour analysis on the same day. No visual contamination or odor was noted at any of these boreholes during sampling. Borehole logs were recorded for each location and a photograph was taken of each split spoon. The field documentation for this field work will be provided, as needed, as part of Trihydro's Railroad Rack Lagoon Fan-out Area Final Report upon completion of the excavation of DRO contaminated soils.

On December 18, 2007, while waiting for laboratory results of the December 17, 2007 sampling, boreholes K-2, K-3, G-2, G-3, I-2, and M-2 were installed and sampled in the same manner described above. The remaining proposed boreholes, M-3 and I-3, were installed and sampled on December 19, 2007. These samples were to be analyzed in the event the 20-foot step-out interval samples (M-1, I-1, G-1, and K-1) were not below the cleanup standard.

2.1.2 VERTICAL DELINEATION

Existing borehole B8 (B8-NEW-SE-S1) was drilled to a depth of 23 ft-bgs to vertically delineate the extent of DRO contamination. This borehole was selected for vertical delineation because the previous sampling event showed that this borehole had a DRO exceedance of 2,600 mg/kg at 7 ft-bgs. Samples were collected on December 17, 2007 at 8, 13, 18, and 23 ft-bgs using a CME 75 drill rig and the same method described in Section 2.1.1. These samples were submitted to Hall Environmental in Albuquerque, NM (Laboratory) for 24- hour DRO analysis on the same day that they were collected.



2.1.3 SAMPLE RESULTS

Samples were submitted to the Laboratory for analysis. The laboratory analyzed the samples using USEPA Method 8015B. The results for samples collected from new boreholes M-1, I-1, G-1, and K-1 at depths of 3, 8, and 13 ft-bgs and existing borehole B8 (B8-NEW-SE-S1) at 8, 13, 18, and 23 ft-bgs were non-detect for DRO. Trihydro believes that this new data effectively delineates both the horizontal and vertical extent of DRO contamination associated with test pit B-8. These results are illustrated on Figure 4. Laboratory reports will be provided as part of the final report after the completion of the excavation. Based on the fact that samples from M-1, I-1, G-1, K-1, and B (B8-NEW-SE-S1) met the project objectives, additional step-out samples were not analyzed.



3.0 EXCAVATION PLAN

Trihydro proposes to excavate soil horizontally and vertically to the extents that have been determined to be above DRO cleanup standards based on laboratory analysis. These extents of soil impacts are illustrated on Figure 4. The DRO contaminated zone has been divided into three areas that will be excavated to varying depths to remove DRO contaminated soil. The green area on Figure 4 will be excavated to a depth of 3 ft-bgs. The blue and pink areas will be excavated to 5 and 13 ft-bgs, respectively. Based on calculations generated from the areas shown on Figure 4, the total volume of soil that requires excavation is approximated to be 145 cubic yards. The anticipated final volume of soils requiring disposal would be approximately 240 cubic yards due to a 1.5 expansion factor and a 10 percent contingency.



4.0 EXCAVATION PROCEDURES

4.1 STAKING THE BOUNDARIES

The areas that will require excavation were staked by Trihydro personnel on April 11, 2008. A photograph illustrating the staked locations is presented as Figure 5. Sampling locations from previous events had been staked and labeled at the time of sample collection and these stakes currently remain in the ground as illustrated on Figure 5. These locations were used as reference points when the excavation boundary stakes were installed on April 11, 2008. The boundaries of the area to be excavated to 3 ft-bgs illustrated in green on Figure 4 have been marked with green ribbon (Figure 5). The boundaries of the areas to be excavated to 5 and 13 ft-bgs (blue and pink areas on Figure 4, respectively) have been marked with orange and pink ribbon, respectively (Figure 5). These boundaries will be estimated in the field during the excavation and documented in the final report.

4.2 EXCAVATION

Excavation will be performed by or under the supervision of Trihydro personnel. A clean, decontaminated backhoe will be used to complete the excavation. The staked boundaries will be excavated to the corresponding depths illustrated on Figure 4. Excavated soil will either be immediately transported to Gallup's Northeast Oil Conservation Division (OCD) Land Farm or temporarily stock piled on plastic sheeting until it can be transported to the Land Farm. The Land Farm volume will be more than adequate for the excavated soil from the Fan-out Area. The soil will be managed in the Land Farm in accordance with the OCD Land Farm Permit Number GW-032.

Upon completion of the excavation and receipt of sample results that verify that DRO concentrations are below the cleanup standard, the area will be backfilled with clean native material obtained from within the Refinery boundary.

4.3 CONFIRMATION SAMPLING

To confirm that the objectives of the project have been met, confirmation soil sampling will be conducted. Trihydro proposes to collect 10 additional soil samples to confirm that DRO impacted soil has been removed. Proposed confirmation soil sample locations have been placed in areas where the least amount of existing data is available and are illustrated on Figure 6. The confirmation soil sampling plan was developed based on guidance from NMED, Trihydro's experience on similar types of projects, and historical data. The existing data was considered when determining confirmation sampling density. For example, NMED's previous confirmation sampling guidance states



that "confirmation samples must be collected from all sidewalls of the excavation." The area to be excavated to 13 ft-bgs has four sidewalls. However, four samples with DRO concentrations below the cleanup standard have already been collected from the sidewalls of this area (as the result of previous delineation activities). Because of this, Trihydro believes that one additional sidewall confirmation sample collected from the area to be excavated to 13 ft-bgs will be sufficient to demonstrate that DRO contaminated soil has been removed from this area. To date, 59 soil samples associated with B-8 have been analyzed to delineate DRO contaminated soil. This existing data will be used in conjunction with the 10 new proposed confirmation samples to show that DRO contaminated soil has been removed. A summary of the proposed soil confirmation sampling is presented in Table 1.



5.0 REPORTING

As requested in a letter from NMED dated March 14, 2007, an investigation report will be submitted to NMED within 90 days of completion of the excavation. This report will be similar in style and format to Gallup Refinery's Railroad Rack Lagoon Overflow Ditch and Fan-out Area, SWMU #8 Subsurface Investigation (Report) dated February 8, 2007. It will include appropriate field forms, photos, and analytical data obtained from each field event that were not included in the February 8, 2007 report as well as photos of the excavation itself.



6.0 FIELD DOCUMENTATION AND LOGGING

Field observations are critical to the verification of appropriate excavation procedures. Field observations made during the excavation will be recorded in a field log book by Trihydro personnel. The following information will be recorded, in indelible ink, where appropriate:

- Date and name of observer.
- Names and affiliations of excavation team members.
- Names and affiliations of others present at the excavation site.
- Weather conditions.
- Health and safety measures implemented.
- Excavation site condition upon arrival.
- Deviations from or clarifications of excavation procedures.
- Miscellaneous conditions which the excavation team finds noteworthy.
- Backhoe make and model.
- Odor qualities (sweet, sulfurous, strong, etc.) will also be recorded if casually noticed; however, field personnel will be cautioned against unnecessary exposure to volatile constituents.

6.1 PHOTOGRAPHS

Photographs will be used to substantiate and augment the field notes. Photo-documentation will be utilized to show that the staked boundaries have been excavated to the appropriate depths. Each photograph will be numbered and recorded on a photograph log.

6.2 INVESTIGATIVE DERIVED WASTE

Wastes associated with the excavation, other than the excavated soil itself, are expected to be minimal. Disposable personal protective equipment (PPE) and plastic sheeting used for stock piling will be managed by Gallup according to appropriate regulations.



6.3 EQUIPMENT DECONTAMINATION PROCEDURES

Sampling equipment will be decontaminated prior to sampling in the field and after sampling at each location.

Sampling equipment will be disassembled into component parts prior to decontamination. Sampling devices will be decontaminated using warm non-phosphate detergent solution (e.g., Simple Green) and then rinsing with well water.

Sampling devices will be dried before use by air drying or with clean paper towels. Decontaminated sampling devices and containers will be stored in contaminant-free locations or containers until use.

To ensure proper equipment decontamination, one equipment blank will be collected from the hand auger sampler per day of sampling. Equipment blanks will be collected in appropriate containers.

Because the backhoe will be in contact with DRO contaminated soil the shovel of backhoe will be cleaned and decontaminated prior to the excavation and again after the excavation is complete. This will help prevent cross-contamination. The cleaning pad located at Gallup will be utilized for this decontamination.



7.0 HEALTH AND SAFETY PROCEDURES

Personnel operating the backhoe will be properly trained. The Trihydro site specific Health and Training Plan will be followed. An excavation permit for the area will be obtained from Gallup by Trihydro personnel.

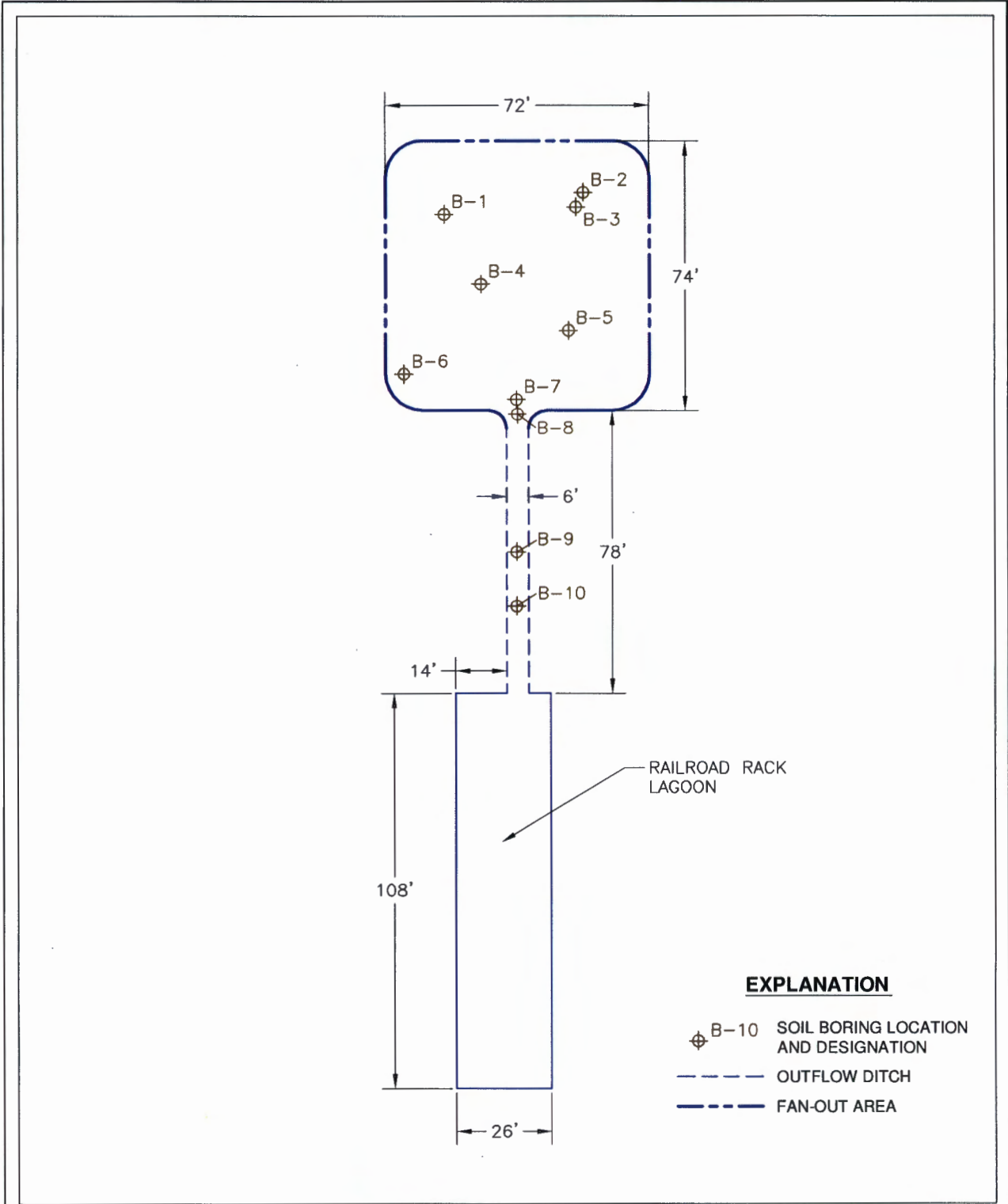


TABLES

**TABLE 1. PROPOSED SOIL CONFIRMATION SAMPLING PLAN
WESTERN REFINING, LLC, GALLUP REFINERY, GALLUP, NEW MEXICO**

Sample ID	Analysis	Sidewall or Base	Depth (ft-bgs)	Methodology	Justification
CS-1	DRO by USEPA Method 8015B	Base	13	Grab (Hand Auger)	Excavation is > 3 ft-bgs, base and sidewall samples required.
CS-2	DRO by USEPA Method 8015B	Sidewall	9	Grab (Hand Auger)	Excavation is > 3 ft-bgs, base and sidewall samples required. Sidewall sample depth is half way between top and bottom of the excavation (5 and 13 ft-bgs, respectively).
CS-3	DRO by USEPA Method 8015B	Base	5	Grab (Hand Auger)	Excavation is > 3 ft-bgs, base and sidewall samples required.
CS-4	DRO by USEPA Method 8015B	Sidewall	4	Grab (Hand Auger)	Excavation is > 3 ft-bgs, base and sidewall samples required. Sidewall sample depth is half way between top and bottom of the excavation (3 and 5 ft-bgs, respectively).
CS-5	DRO by USEPA Method 8015B	Base	3	Grab (Hand Auger)	Excavation is 3 ft-bgs, sidewall samples not necessary.
CS-6	DRO by USEPA Method 8015B	Base	3	Grab (Hand Auger)	Excavation is 3 ft-bgs, sidewall samples not necessary.
CS-7	DRO by USEPA Method 8015B	Base	3	Grab (Hand Auger)	Excavation is 3 ft-bgs, sidewall samples not necessary.
CS-8	DRO by USEPA Method 8015B	Base	3	Grab (Hand Auger)	Excavation is 3 ft-bgs, sidewall samples not necessary.
CS-9	DRO by USEPA Method 8015B	Base	3	Grab (Hand Auger)	Excavation is 3 ft-bgs, sidewall samples not necessary.
CS-10	DRO by USEPA Method 8015B	Base	3	Grab (Hand Auger)	Excavation is 3 ft-bgs, sidewall samples not necessary.

FIGURES



EXPLANATION

- ⊕ B-10 SOIL BORING LOCATION AND DESIGNATION
- OUTFLOW DITCH
- FAN-OUT AREA

FIGURE 1

**RAILROAD RACK LAGOON
OVERFLOW DITCH AND FAN-OUT AREA**

**WESTERN REFINING, LLC
GALLUP REFINERY
GALLUP, NEW MEXICO**



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Drawn By: RES	Checked By: RA	Scale: 1" = 40'	Date: 7/31/08	File: 072RROVERFLOW_200608
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