



June 23, 2010



Mr. James P. Bearzi
Chief – Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

RE: NMED's "NOTICE OF DISAPPROVAL
RAILROAD RACK LAGOON OVERFLOW DITCH AND FAN-OUT AREA,
SWMU No. 8 SUBSURFACE INVESTIGATION FINAL REPORT
WESTERN REFINING COMPANY SOUTHWEST, INC., GALLUP REFINERY EPA
ID # NMD000333211
HWB-WRG-10-002"

Dear Mr. Bearzi:

The purpose of this letter is to respond to the New Mexico Environment Department's (NMED) comments to the *Railroad Rack Lagoon Overflow Ditch and Fan-Out Area, SWMU No. 8, Subsurface Investigation Final Report* (Report), dated January 6, 2010, submitted on behalf of Western Refining Company Southwest Inc., Gallup Refinery (Western). NMED issued comments to the Report in a *Notice of Disapproval*, dated May 12, 2010.

NMED's May 12 comments are repeated below for convenience. Each comment is followed by Western's response. NMED Comment 1 has been divided into subcomments so that each topic could be addressed separately.

NMED Comment 1

NMED's December 11, 2009 *Approval with Modifications*, required the Permittee to define the vertical and horizontal extent of contamination at the overflow and fan-out area. From the Report, it is not clear that the Permittee completed the task to define the vertical extent of contamination. Table 1 (DRO Analytical Data Summary) lists results that are above the Total Petroleum Hydrocarbon (TPH) Diesel Range Organics (DRO) cleanup level of 890 mg/kg.

Response to Comment 1

Table 1 of the Report lists all DRO data associated with the B-8 and B-9 excavations. These two locations were determined to be the only areas of concern based on the October 2006 investigation. In order to define the vertical and horizontal extent of

contamination, contaminated soil must be identified. Therefore, Western deemed it appropriate to show the results of the contaminated soil on Table 1 and Figure 5. When DRO exceedances were discovered, the excavation was expanded to remove the DRO contaminated soil and additional confirmation samples were collected. Table 2 (as subset of Table 1) has been created to show the confirmation samples collected at the base and sidewalls of the excavation. These samples have DRO concentrations below the cleanup level of 890 mg/kg, thus delineating the vertical and horizontal extent of contamination. Table 2 is included as an attachment to this correspondence and, upon NMED approval, will be included in a revised version of the Report.

NMED Comment 1 cont'd

Figure 5 (Railroad Rack Lagoon Overflow Ditch B-8 Excavation Areas and DRO Results) presents sample results and areas that were excavated, but it does not appear that confirmation samples were collected at the bottom of the excavation. The excavation bottom samples were required by NMED's March 14, 2009 letter *Approval with Direction* which stated “[i]f the excavation does not exceed three feet below ground surface (bgs), the Permittee may collect confirmation samples from the bottom of the excavations only. If the excavation exceeds three feet bgs, then confirmation samples must be collected from all sidewalls of the excavations in addition to from the base of the excavations.” The Permittee did not follow this directive, for example, in Area 3, which was excavated to seven feet; confirmation samples were not collected from the base of this excavation.

Response to Comment 1 cont'd

Sample CS-14, located on the northwest corner of Area 3, was collected at 7 ft bgs from the edge of Areas 3 and 4. Thus, it can be considered a base confirmation sample for Area 3 and a sidewall confirmation sample for Area 4.

Sample CS-22 was collected approximately 2 feet north of Area 3. CS-22 was collected at 7 ft bgs to vertically delineate DRO contamination discovered in samples CS-19, CS-20, and CS-21 (3 ft bgs, 3.5 ft bgs, and 3.5 ft bgs, respectively). These samples, in part, necessitated extending the depth of the excavation in Area 3 (from 3 ft bgs to 7 ft bgs). Sample CS-22 was initially planned to be a base confirmation sample in Area 3; there are no DRO exceedances in the immediate vicinity of this sample location necessitating excavation deeper than 7 ft bgs. However, due to the nature of excavating with a backhoe (i.e. the precision and accuracy of the backhoe) and the fact that the areas were measured after the excavation had been completed, the portion of Area 3 including CS-22 was excavated to 13 ft bgs. Western believes that CS-22 may still be used to demonstrate vertical delineation (as a base sample) at Area 3 at a depth of 7 ft bgs even though it is technically located approximately 2 feet north of Area 3.

NMED Comment 1 cont'd

In Area 4, which was excavated to 13 feet, the Permittee collected six samples around the perimeter of the excavation at a depth of 13 feet and only three samples were collected from the base of the excavation.

Response to Comment 1 cont'd

Western is unclear as to NMED's comment that six samples were collected from around the perimeter of the excavation at a depth of 13 feet. As presented on Figure 5 and Table 1, three samples were collected from the base at perimeter of the 13 foot excavation (A-1, A-2, and A-3) and three internal base samples were collected from within the 13 foot excavation (CS-1, CS-16, and "B"). Thus, Western believes a total of six base confirmation samples were collected from Area 4. Further, four sidewall samples were collected from the 13-foot excavation. These sidewall samples include B-8 Center (5 feet), E (5 feet), K (5 feet), and M (5 feet).

To help clarify this issue, Western has created Figure 7 to illustrate base and sidewall confirmation samples for each area. The sidewall samples are shown as orange and base samples are shown as magenta. There are a few samples that can be considered both base and sidewall samples. For example, CS-14 is collected at 7 ft bgs on the corner of Area 3 and Area 4. In respect to Area 3, this is a base sample. In respect to Area 4, it is a sidewall sample. These "base/sidewall" samples are illustrated on Figure 7 in cyan. Figure 7 is included as an attachment to this correspondence and, pending NMED approval, will be included in a revised version of the Report.

NMED Comment 1 cont'd

At one point (A (B8-NEW-SE)) there is an increase in DRO concentration with depth and apparently no sample collected to demonstrate that the DRO-contaminated soil was removed.

Response to Comment 1 cont'd

At the time that additional delineation samples were being collected in the vicinity of A(B8-NEW-SE) (henceforth referred to as "A") to help determine the vertical extent of DRO contamination, a hollow stem auger drill rig was being used to collect soil samples. Due to the open excavation immediately adjacent to "A", deeper samples were not able to be safely collected at this exact location. Instead, deeper samples were collected at B(B8-NEW-SE-S1) (henceforth referred to as "B") which also showed DRO exceedances at depths as deep as 7 ft bgs. The "B" sample location is approximately 2 to 3 feet east of "A" and samples collected from 13 ft bgs, 18 ft bgs, and 23 ft bgs were each non-detect for DRO, thus verifying that the 13 ft bgs excavation was sufficient to remove DRO-contaminated soil

NMED Comment 1 cont'd

In order to determine whether or not the removal of all soils containing concentrations of DRO above 890 mg/kg from the fan-out area was completed, the Permittee needed to collect samples from the base and sidewalls of the excavation. Therefore, confirmation samples must be collected at the excavation bottom and from the sidewalls using a systematic sampling pattern and samples must also be collected from areas of visible staining, elevated moisture levels, and contaminated zones identified by field-screening and beneath areas with detected residual contamination.

Response to Comment 1 cont'd

In the March 14, 2009 letter *Approval with Direction*, NMED had originally requested that 13 confirmation samples be collected for the original excavation area. However, because CS-2, CS-4, and CS-8 exceeded the DRO cleanup level, the excavation was expanded and 33 confirmation samples were collected (26 base, 4 sidewall, 3 base/sidewall – see Figure 7).

Western collected confirmation samples in accordance with the locations that NMED approved in the “Approval With Direction, Railroad Rack Lagoon Fan-Out Area Excavation Work Plan, Western Refining Southwest, Inc., Gallup Refinery, EPA ID #: NMD000333211, HWB-GRCC-07-002.” When the size of the excavation was increased due to DRO exceedances, the same methodology was used to collect additional confirmation samples. An example of this methodology is shown using samples CS-19, CS-20, CS-21 and CS-22. Samples CS-19, CS-20, and CS-21 were above the DRO cleanup level at 3 or 3.5 ft bgs. Thus, the excavation was extended to 7 ft bgs in this area and CS-22 (horizontally located in the middle of CS-19, CS-20, and CS-21) was collected to vertically delineate DRO contamination.

As mentioned in section 4.3.3 of the Report, due to limited correlation shown between field screening data and confirmation sampling results, NMED permitted Western to proceed with the excavation utilizing visual observations and confirmation sampling results in lieu of field screening. When areas exhibiting visual contamination were identified, the size of the excavation was expanded and confirmation samples were collected. This was the case for CS-19 and CS-20. When the CS-19 and CS-20 samples were being collected, visible staining was observed. Thus, once the laboratory results were received, it was decided to excavate the area to 7 feet. This was the depth at which the staining was visibly removed.

NMED Comment 1 cont'd

Until the Permittee defines the extent of the contamination, NMED cannot determine if further remediation is necessary. The Permittee must conduct additional confirmation sampling and, if necessary, conduct additional excavation activities if the confirmation samples contain DRO concentrations greater than the acceptable cleanup level.

Response to Comment 1 cont'd

As mentioned in Section 7.0 of the Report, the B8 DRO exceedances discovered during the investigation/excavation are surrounded by a total of 67 soil samples showing DRO concentrations less than the cleanup standard. Western believes these 67 soil samples define the extent of the DRO contamination and no additional confirmation sampling is necessary. A total of 784 cubic yards of DRO-contaminated soil encompassed by these 67 samples has been excavated. Therefore, Western believes no further excavation activities are necessary.

NMED Comment 1 cont'd

In the revised Report, the Permittee must submit a figure depicting the locations of the final confirmation sample locations, depths the samples were taken, and the analytical results. The Permittee must submit proposed confirmation sample locations for NMED approval no less than 30 days before confirmation sampling activities begin.

Response to Comment 1 cont'd

Figure 5 of the Report shows all sample locations, depths, and analytical results. Figure 7 and Table 2 (provided as attachments to this correspondence) have been created to show only the final confirmation sample locations. The revised Report will be updated to include Figure 7 and Table 2.

Note that Figure 7 and Table 2 only show confirmation sample results of those samples that were collected from the base or sidewall of the final excavation. Numerous other samples (for example, CS-24 and CS-18) were also necessary for delineating the DRO contaminated area. However, since these samples were not collected from the base or sidewall of the final excavation, they are not included on Figure 7 or Table 2. Figure 7 and Table 2 will be incorporated into the revised Report.

NMED Comment 2

In Section 3.2 (Excavation Activities), page 3-2, paragraph 3, the Permittee states “[c]onfirmation sample locations were strategically located to supplement the existing DRO data.” The Permittee must include more detail regarding the confirmation sampling (i.e., provide the rationale for the “strategic” location of the confirmation samples). The Permittee must revise

the Report to include specific details regarding the confirmation sampling locations and the logic behind the selection of the sampling locations.

Response to Comment 2

Thirteen original confirmation sample locations and depths were approved by NMED in the "Approval With Direction, Railroad Rack Lagoon Fan-Out Area Excavation Work Plan, Western Refining Southwest, Inc., Gallup Refinery, EPA ID #: NMD000333211, HWB-GRCC-07-002." These locations were selected because limited DRO data existed in these areas. These confirmation samples are identified as CS-1 through CS-13. If a confirmation sample showed a DRO exceedance, the excavation was expanded. As the excavation was expanded, additional confirmation samples were collected to verify that the soil remaining in place was below the DRO cleanup standard. An example of this logic is provided in the response to Comment 1 (CS-19, CS-20, CS-21, and CS-22).

NMED Comment 3

In Section 3.2 (Excavation Activities), page 3-2, paragraph 3, the Permittee states "[d]ue to confirmation sample DRO exceedances, the size of the excavation; as proposed in the 2008 Excavation Work Plan, was increased ... Excavation activities continued through October 2009 due to additional confirmation sample exceedances and visually impacted soil." The Permittee must revise the Report to include additional detail regarding the excavation. For example, the Permittee must state, or include a figure with, the locations where the exceedances were found (e.g., sample location, depth, cardinal direction), discuss the amount of soil removed during each of the excavations, and describe confirmation sampling.

Response to Comment 3

Per the 2008 Excavation Work Plan, confirmation samples CS-1 through CS-13 were collected from the original excavation. The results of these samples, as well as the results of all samples associated with the excavation, are shown on Table 1 and Figure 5 of the Report. Of the original 13 confirmation samples, CS-2, CS-4, and CS-8 exceeded the DRO cleanup standard. Figure 4 shows the proposed excavation area versus the actual excavation area. As shown on Figure 4, the original confirmation sample exceedances prompted the excavation to be expanded generally to the west and southwest. However, each exceedance identified during delineation and excavation activities prompted additional investigation/excavation. As shown on Table 1, 28 exceedances were identified in the B-8 Excavation. Western deemed it more appropriate to illustrate these exceedances on a figure (Figure 5) rather than attempt to describe each of them in the text of the report.

NMED also requested that Western provide the amount of soil removed during each of the excavations. Western considers this to be a single excavation that was continuously expanded until the DRO contaminated soil was delineated and removed. Intermediate volumes were not required as part of the 2008 Excavation Work Plan, thus this information was not recorded or calculated. However, the final total volume is presented in Section 7.0 of the Report.

Confirmation soil sampling procedures are discussed in Section 4.3.2.2 and 4.3.1.2 of the Report.

NMED Comment 4

In Section 3.2 (Excavation Activities), page 3-2 and 3-3, the Permittee states "Test Pit B-8 confirmation sample locations and results are illustrated in Figure 5. Area 1 was excavated to depth of 3 feet below ground surface (ft bgs), and excavation activities in this area were overseen by Trihydro. Area 2 was excavated to a depth of 5 ft bgs by Gallup personnel. Area 3 and 4 excavations were overseen by a combination of Trihydro and Gallup personnel and extended to 7 and 13 ft bgs." The Permittee must revise the Report to discuss the basis for excavation to the various depths (e.g., the confirmation sample detections that indicated the need for additional soil removal). The Permittee must revise Figure 5 or provide an additional figure to show the final confirmation sample locations, see Comment 1.

Response to Comment 4

As presented in the Report, each area was excavated until the outermost samples (both horizontal and vertical) were below the DRO cleanup standard of 890 mg/kg. For example, an exceedance of DRO was discovered at 9 ft bgs at sample location "A." Therefore, this area was excavated to 13 ft bgs which was shown to be below the cleanup standard at sample location "B." The final confirmation samples prompting cessation of the excavation are illustrated on Figure 7 and Table 2. This Figure and Table are provided as attachments to this document and, pending NMED approval, will be provided in the revised Report.

NMED Comment 5

In Section 4.3.1.1 (Delineation Sample Locations), page 4-2, paragraph 2, the Permittee states "[t]he sampling locations in these three delineation sampling events (May, August, and December 2007) were determined based on exceedances identified during the preceding sampling events. These locations are illustrated on Figures 5 and 6." The Permittee must list these sampling locations by name in the text, so that the locations can be identified in the figures. Additionally, Figure 5 appears to illustrate the locations of multiple sampling events beyond the

three delineation events mentioned above. The Permittee must revise the Report to refer to specific sampling locations, instead of referring to the locations generally.

Response to Comment 5

A total of 101 samples were collected throughout the investigation/excavation. Western believes that attempting to discuss each individual sample result, whether or not the result prompted additional excavation, and what direction the excavation was expanded due to the result of the sample would cause more confusion than clarification. Instead, Western provided this information on Figure 5 where the information can be visualized. Each exceedance identified during delineation and excavation activities prompted additional investigation/excavation. The excavation was expanded until data showed that the remaining outermost samples (both horizontally and vertically) were below the cleanup standard.

As mentioned in NMED's comment, the text of the Report refers to three delineation events (May, August, and November 2007). These delineation events were used to determine the initially proposed excavation area presented in the 2008 Excavation Work Plan, dated September 17, 2008. Western considers subsequent field activities (excavation and confirmation sampling) as one, continuous field event, which is why multiple excavation "events" are not discussed in the text. The data collected from excavation and confirmation sampling is presented on Table 1 and Figure 5 in addition to the data collected from the three delineation events, for completeness. Sample IDs, the date which the sample was collected, the depth at which the sample was collected, and whether or not the sample exceeded the DRO cleanup standards are shown on Table 1. Sample locations, depths, and results are shown Figures 5 and 6. The sample dates shown on Table 1 may be used to determine with which event each sample is associated.

NMED Comment 6

In Section 4.3.2.1 (Confirmation Sample Locations), page 4-4, paragraph 1, the Permittee states "[a] total of ten sidewall and base confirmation sample locations were proposed in the 2008 Excavation Work Plan. Three additional locations were added at the suggestion of NMED in the December 11, 2008 Approval with Direction letter provided as Appendix F. These 13 locations were strategically located in areas where DRO delineation data was limited in an attempt to fill potential data gaps. Of the 13 approved confirmation sampling locations, 3 exceeded the DRO cleanup standard prompting expansion of the excavation." The Permittee must revise the Report to be specific regarding the sample location names (e.g., instead of stating, "of the 13 approved sampling locations, 3 exceeded," list the specific location designations).

Response to Comment 6

As shown in Table 1 of the 2008 Excavation Work Plan, the original proposed confirmation sampling locations are designated CS-1 through CS-10. Per NMED's conditional approval, CS-11 through CS-13 were added. As shown in Table 1 and Figure 5 of the Report, CS-2, CS-4, and CS-8 exceeded the DRO cleanup standard. The revised Report will specify CS-2, CS-4, and CS-8 as the three original confirmation sample locations that exceeded the cleanup level.

NMED Comment 7

In Section 4.4 (Investigation Derived Waste), page 4-5, the Permittee states "[e]xcavated soils and soil cuttings produced during the sampling events have been transported to Gallup's Land Farm as permitted by OCD." The Permittee must revise the Report to describe the estimated volume of soil cuttings and excavated soil that were disposed of at the Land Farm.

Response to Comment 7

As stated in Section 7.0 of the Report, approximately 784 cubic yards of soil were excavated from B-8. Dimensions for the B-9 excavation were also included in the Report, however the volume of soil was not. Approximately 3 cubic yards of soil were excavated from B-9. The revised Report will include the total cubic yards of soil excavated from B-9.

NMED Comment 8

In Section 6.1 (Test Pit B-9), the Permittee states "samples collected from each corner of the excavation at depths of 3 ft bgs and the center of the excavation at a depth of 5 ft bgs showed DRO concentrations below the clean up standard." The sample points are illustrated in Figure 6 (Railroad Rack Lagoon Overflow Ditch B-9 Final Excavation Area and Sample Results); the Permittee excavated the ditch to 5 feet, but in the figure it is not apparent that the 3 ft samples are sidewall samples. The Permittee must revise the Report and Figures to differentiate between sidewall and bottom confirmation samples (e.g., use different symbols or colors on the figures, provide additional figures or in a table cross-referenced in the figure key).

Response to Comment 8

If a sample is collected at the boundary of an area at a depth less than the total depth of the area, it is considered a sidewall sample. If a sample is collected at a depth equal to the total depth of a specific area, it is considered a base sample.

The revised Report will be updated to show base and sidewall samples as magenta and orange, respectively. For the B-9 Excavation, Figure 6 will be updated according to this color scheme.

Due to the complexity of Figure 5, Figure 7 has been created for the B-8 Excavation to show only the final confirmation samples. The above mentioned orange and magenta color scheme is used to differentiate between base and sidewall samples. There are a few samples that can be considered both base and sidewall samples. For example, CS-14 is collected at 7 ft bgs on the corner of Area 3 and Area 4. In respect to Area 3, this is a base sample. In respect to Area 4, it is a sidewall sample. These “base/sidewall” samples are illustrated on Figure 7 in cyan.

NMED Comment 9

In Section 6.2 (Test Pit B-8), the Permittee states “As illustrated on Figure 5, between delineation and confirmation sampling activities, a total of 67 soil samples showing DRO concentrations below the cleanup standard have been excavated from the vicinity of Test Pit B-8. A summary of the analytical data is provided as Table 1.” Figure 5 and Table 1 appear to show either residual contamination, or that the Permittee did not collect confirmation samples from the base of the excavation. See Comment 1 regarding Figure 5, Table 1 and additional confirmation sampling requirements.

Response to Comment 9

Figure 5 and Table 1 show all delineation and confirmation sampling data, regardless of whether the data exceeds the DRO cleanup standard or not. The outermost (horizontally and vertically) data do not exceed the cleanup standard. Western deemed it appropriate to include the exceedances so that NMED could see that the DRO contamination has been delineated. Figure 7 and Table 2 have been created to show that confirmation samples below the cleanup standard surround the sidewalls and base of the excavation.

NMED FINAL COMMENT

The Permittee must address all comments contained in this NOD and submit a revised Work Plan to NMED and OCD on or before July 20, 2010. The revised Report must be accompanied by a response letter that details where all revisions have been made, cross-referencing NMED's numbered comments. In addition, the Permittees must submit a redline-strikeout version that includes all changes and edits to the Report (electronic copy) with the response to this NOD.

Final Comment Response

Western believes that the additional explanation provided in this response, along with Figure 7 and Table 2, show that the Fan-out Area DRO contamination has been delineated and excavated. Thus, Western hopes that a revised Work Plan will not be necessary. Upon NMED’s approval of these responses, Western will provide a letter detailing the revisions to the Report and cross-referencing NMED’s numbered comments.

Mr. James Bearzi
June 22, 2010
Page 11

Western will also provide an electronic redline-strikeout version that includes all changes and edits to the Report.

Western believes that, upon NMED receipt of these responses, a meeting between NMED and Western may be mutually beneficial to help clarify the topics presented in this correspondence. If you have any questions, or if we can be of further service to you, please do not hesitate to call me at (307) 745-7474.

Sincerely,



Ed Riege
Environmental Manager

697-039-001

Attachments

cc: H. Monzeglio NMED HWB
K. Van Horn NMED HWB
C. Chavez, OCD
File: Reading File and WRG 2010 File HWB-WRG-10-002

**TABLE 2. FINAL CONFIRMATION SAMPLE ANALYTICAL DATA SUMMARY
RAILROAD RACK LAGOON OVERFLOW DITCH AND FAN-OUT AREA
WESTERN REFINING COMPANY, GALLUP REFINERY, GALLUP, NEW MEXICO**

Excavation B-8				
Date	Sample ID	Base Sample/ Sidewall Sample (Area)	Depth (ft bgs)	Laboratory DRO Result (mg/kg)
10/18/2006	B-7	BS (Area 2)	5	ND(10)
10/17/2006	B-8Center	SS (Area 4)	5	43
5/23/2007	B-8NEW-NW	BS (Area 1); SS (Area 2)	3	130
5/23/2007	B-8NEW-NW	BS (Area 2)	5	310
5/23/2007	B-8NEW-NE	BS (Area 1)	3	130
12/17/2007	B-8NEW-SE-S1 (aka "B")	BS (Area 4)	13	ND(10)
8/20/2007	E	SS (Area 4)	5	ND(10)(UJ)
8/21/2007	J	BS (Area 1); SS (Area 2)	3	250(J)
8/21/2007	J	BS (Area 2)	5	ND(10)(UJ)
8/20/2007	K	SS (Area 4)	5	ND(10)(UJ)
8/21/2007	L	BS (Area 1)	3	42(J)
8/20/2007	M	SS (Area 3); SS (Area 4)	5	ND(10)(UJ)
12/17/2007	K-1	BS (Area 1)	3	ND(10)(UJ)
12/17/2007	G-1	BS (Area 1)	3	ND(10)
12/17/2007	I-1	BS (Area 1)	3	ND(10)(UJ)
12/17/2007	M-1	BS (Area 1)	3	ND(10)
3/17/2009	CS-1	BS (Area 4)	13	320
4/22/2009	CS-5	BS (Area 1)	3	34
3/18/2009	CS-6	BS (Area 1)	3	ND(10)
4/22/2009	CS-7	BS (Area 1)	3	400
3/18/2009	CS-9	BS (Area 1)	3	ND(10)
4/22/2009	CS-10	BS (Area 1)	3	24
4/22/2009	CS-11	BS (Area 1)	3	380
4/22/2009	CS-12	BS (Area 1)	3	490
4/23/2009	CS-13	BS (Area 1)	3	ND(10)
4/21/2009	CS-14	BS (Area 3); SS (Area 4)	7	130(J)
4/22/2009	CS-16	BS (Area 4)	13	ND(10)
10/1/2009	CS-29	BS (Area 2)	5	ND(10)
10/1/2009	CS-30	BS (Area 2)	5	ND(10)
10/1/2009	CS-31	BS (Area 2)	5	150
10/2/2009	A-1	BS (Area 4)	13	ND(10)
10/2/2009	A-2	BS (Area 4)	13	ND(10)
10/2/2009	A-3	BS (Area 4)	13	ND(10)

Excavation B-9				
Date	Sample ID	Base Sample/ Sidewall Sample (Area)	Depth (ft bgs)	Laboratory Result (mg/kg)
5/23/2007	B-9NEW-Center	BS (B9 Excavation)	5	150
5/21/2007	B-9SE	SS (B9 Excavation)	3	210
5/21/2007	B-9SW	SS (Excavation)	3	210
5/21/2007	B-9NE	SS (Excavation)	3	200
5/21/2007	B-9NW	SS (Excavation)	3	130

Notes:

- DRO = Diesel Range Organics
- ND(10)(UJ): Nondetect (limit)(Data Validation Qualifier)
- BS = Base Sample
- SS = Sidewall Sample
- J = Estimated concentration
- UJ = Estimated reporting limit
- ft bgs = feet below ground surface

**TO VIEW THE MAP AND/OR
MAPS WITH THIS DOCUMENT,
PLEASE CALL THE
HAZARDOUS WASTE BUREAU
AT 505-476-6000 TO MAKE AN
APPOINTMENT**



BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us



RON CURRY
Secretary

SARAH COTTRELL
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 12, 2010

Mr. Ed Riege
Environmental Manager
Western Refining, Southwest Inc., Gallup Refinery
Route 3, Box 7
Gallup, New Mexico 87301

**RE: NOTICE OF DISAPPROVAL
RAILROAD RACK LAGOON OVERFLOW DITCH AND FAN-OUT AREA,
SWMU No. 8 SUBSURFACE INVESTIGATION FINAL REPORT
WESTERN REFINING COMPANY SOUTHWEST, INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-10-002**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) reviewed the *Railroad Rack Lagoon Overflow Ditch and Fan-Out Area, SWMU No. 8, Subsurface Investigation Final Report* (Report), dated January 2010, submitted on behalf of Western Refining Company Southwest Inc., Gallup Refinery (Permittee) and hereby issues this Notice of Disapproval (NOD) with the following comments.

Comment 1

NMED's December 11, 2009 *Approval with Modifications*, required the Permittee to define the vertical and horizontal extent of contamination at the overflow and fan-out area. From the Report, it is not clear that the Permittee completed the task to define the vertical extent of contamination. Table 1 (DRO Analytical Data Summary) lists results that are above the Total Petroleum Hydrocarbon (TPH) Diesel Range Organics (DRO) cleanup level of 890 mg/kg. Figure 5 (Railroad Rack Lagoon Overflow Ditch B-8 Excavation Areas and DRO Results)

Ed Riege
Gallup Refinery
May 12, 2010
Page 2

presents sample results and areas that were excavated, but it does not appear that confirmation samples were collected at the bottom of the excavation. The excavation bottom samples were required by NMED's March 14, 2009 letter *Approval with Direction* which stated "[i]f the excavation does not exceed three feet below ground surface (bgs), the Permittee may collect confirmation samples from the bottom of the excavations only. If the excavation exceeds three feet bgs, then confirmation samples must be collected from all sidewalls of the excavations in addition to from the base of the excavations." The Permittee did not follow this directive, for example, in Area 3, which was excavated to seven feet; confirmation samples were not collected from the base of this excavation. In Area 4, which was excavated to 13 feet, the Permittee collected six samples around the perimeter of the excavation at a depth of 13 feet and only three samples were collected from the base of the excavation. At one point (A (B8-NEW-SE)) there is an increase in DRO concentration with depth and apparently no sample collected to demonstrate that the DRO-contaminated soil was removed.

In order to determine whether or not the removal of all soils containing concentrations of DRO above 890 mg/kg from the fan-out area was completed, the Permittee needed to collect samples from the base and sidewalls of the excavation. Therefore, confirmation samples must be collected at the excavation bottom and from the sidewalls using a systematic sampling pattern and samples must also be collected from areas of visible staining, elevated moisture levels, and contaminated zones identified by field-screening and beneath areas with detected residual contamination. Until the Permittee defines the extent of the contamination, NMED cannot determine if further remediation is necessary. The Permittee must conduct additional confirmation sampling and, if necessary, conduct additional excavation activities if the confirmation samples contain DRO concentrations greater than the acceptable cleanup level. In the revised Report, the Permittee must submit a figure depicting the locations of the final confirmation sample locations, depths the samples were taken, and the analytical results. The Permittee must submit proposed confirmation sample locations for NMED approval no less than 30 days before confirmation sampling activities begin.

Comment 2

In Section 3.2 (Excavation Activities), page 3-2, paragraph 3, the Permittee states "[c]onfirmation sample locations were strategically located to supplement the existing DRO data." The Permittee must include more detail regarding the confirmation sampling (i.e., provide the rationale for the "strategic" location of the confirmation samples). The Permittee must revise the Report to include specific details regarding the confirmation sampling locations and the logic behind the selection of the sampling locations.

Comment 3

In Section 3.2 (Excavation Activities), page 3-2, paragraph 3, the Permittee states "[d]ue to

Ed Riege
Gallup Refinery
May 12, 2010
Page 3

confirmation sample DRO exceedences, the size of the excavation, as proposed in the 2008 Excavation Work Plan, was increased ... Excavation activities continued through October 2009 due to additional confirmation sample exceedences and visually impacted soil." The Permittee must revise the Report to include additional detail regarding the excavation. For example, the Permittee must state, or include a figure with, the locations where the exceedences were found (e.g., sample location, depth, cardinal direction), discuss the amount of soil removed during each of the excavations, and describe confirmation sampling.

Comment 4

In Section 3.2 (Excavation Activities), page 3-2 and 3-3, the Permittee states "Test Pit B-8 confirmation sample locations and results are illustrated in Figure 5. Area 1 was excavated to depth of 3 feet below ground surface (ft bgs), and excavation activities in this area were overseen by Trihydro. Area 2 was excavated to a depth of 5 ft bgs by Gallup personnel. Area 3 and 4 excavations were overseen by a combination of Trihydro and Gallup personnel and extended to 7 and 13 ft bgs." The Permittee must revise the Report to discuss the basis for excavation to the various depths (e.g., the confirmation sample detections that indicated the need for additional soil removal). The Permittee must revise Figure 5 or provide an additional figure to show the final confirmation sample locations, see Comment 1.

Comment 5

In Section 4.3.1.1 (Delineation Sample Locations), page 4-2, paragraph 2, the Permittee states "[t]he sampling locations in these three delineation sampling events (May, August, and December 2007) were determined based on exceedences identified during the preceding sampling events. These locations are illustrated on Figures 5 and 6." The Permittee must list these sampling locations by name in the text, so that the locations can be identified in the figures. Additionally, Figure 5 appears to illustrate the locations of multiple sampling events beyond the three delineation events mentioned above. The Permittee must revise the Report to refer to specific sampling locations, instead of referring to the locations generally.

Comment 6

In Section 4.3.2.1 (Confirmation Sample Locations), page 4-4, paragraph 1, the Permittee states "[a] total of ten sidewall and base confirmation sample locations were proposed in the 2008 Excavation Work Plan. Three additional locations were added at the suggestion of NMED in the December 11, 2008 Approval with Direction letter provided as Appendix F. These 13 locations were strategically located in areas where DRO delineation data was limited in an attempt to fill potential data gaps. Of the 13 approved confirmation sampling locations, 3 exceeded the DRO cleanup standard prompting expansion of the excavation." The Permittee must revise the Report to be specific regarding the sample location names (e.g., instead of stating "of the 13 approved

Ed Riege
Gallup Refinery
May 12, 2010
Page 4

sampling locations, 3 exceeded," list the specific location designations).

Comment 7

In Section 4.4 (Investigation Derived Waste), page 4-5, the Permittee states "[e]xcavated soils and soil cuttings produced during the sampling events have been transported to Gallup's Land Farm as permitted by OCD." The Permittee must revise the Report to describe the estimated volume of soil cuttings and excavated soil that were disposed of at the Land Farm.

Comment 8

In Section 6.1 (Test Pit B-9), the Permittee states "samples collected from each corner of the excavation at depths of 3 ft bgs and the center of the excavation at a depth of 5 ft bgs showed DRO concentrations below the clean up standard." The sample points are illustrated in Figure 6 (Railroad Rack Lagoon Overflow Ditch B-9 Final Excavation Area and Sample Results); the Permittee excavated the ditch to 5 feet, but in the figure it is not apparent that the 3 ft samples are sidewall samples. The Permittee must revise the Report and Figures to differentiate between sidewall and bottom confirmation samples (e.g., use different symbols or colors on the figures, provide additional figures or in a table cross-referenced in the figure key).

Comment 9

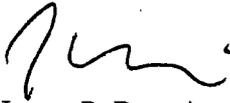
In Section 6.2 (Test Pit B-8), the Permittee states "[a]s illustrated on Figure 5, between delineation and confirmation sampling activities, a total of 67 soil samples showing DRO concentrations below the cleanup standard have been excavated from the vicinity of Test Pit B-8. A summary of the analytical data is provided as Table 1." Figure 5 and Table 1 appear to show either residual contamination, or that the Permittee did not collect confirmation samples from the base of the excavation. See Comment 1 regarding Figure 5, Table 1 and additional confirmation sampling requirements.

Ed Riege
Gallup Refinery
May 12, 2010
Page 5

The Permittee must address all comments contained in this NOD and submit a revised Work Plan to NMED and OCD on or before July 20, 2010. The revised Report must be accompanied by a response letter that details where all revisions have been made, cross-referencing NMED's numbered comments. In addition, the Permittees must submit a redline-strikeout version that includes all changes and edits to the Report (electronic copy) with the response to this NOD.

If you have questions regarding this NOD please contact Kristen Van Horn of my staff at 505-476-6046.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

cc: J. Kieling, NMED HWB
D. Cobrain NMED HWB
H. Monzeglio NMED HWB
K. Van Horn NMED HWB
C. Chavez, OCD
R. Gaurav, Gallup
File: Reading File and WRG 2010 File
HWB-WRG-10-002



BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.nmenv.state.nm.us



RON CURRY
Secretary

SARAH COTTRELL
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

July 28, 2010

Mr. Ed Riege
Environmental Manager
Western Refining, Southwest Inc., Gallup Refinery
Route 3, Box 7
Gallup, New Mexico 87301

**RE: DIRECTION FOR ADDITIONAL
SOIL CONFIRMATION SAMPLE COLLECTION AND
APPROVAL OF EXTENSION REQUEST
RAILROAD RACK LAGOON OVERFLOW DITCH AND FAN-OUT AREA,
SWMU No. 8 SUBSURFACE INVESTIGATION FINAL REPORT
WESTERN REFINING COMPANY SOUTHWEST, INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-WRG-10-002**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) received Western Refining Company Southwest Inc., Gallup Refinery's (Permittee) letter entitled *NMED's "Notice of Disapproval Railroad Rack Lagoon Overflow Ditch and Fan-out Area, SWMU No. 8 Subsurface Investigation Final Report"* (Response Letter) dated June 23, 2010. NMED still requires that the Permittee collect additional confirmation samples within the excavation.

NMED's December 11, 2009 *Approval with Modifications* required the Permittee to define the vertical and horizontal extent of contamination at the overflow and fan-out area. The *Railroad Rack Lagoon Overflow Ditch and Fan-out Area, SWMU No. 8 Subsurface Investigation Final Report* (Report), dated January 2010, does not document that the extent has, in fact, been defined. In the Response Letter, the Permittee provided a new figure (Figure 7) and table (Table 2) that focuses on the confirmation samples collected; these should be included in the revised

Ed Riege
Gallup Refinery
July 28, 2010
Page 2

Report. However, the confirmation samples clearly do not cover the entire excavation. The Permittee's explanation regarding confirmation sample collection in the Response Letter does not address NMED's concerns regarding the spacing of confirmation samples. As a result there is insufficient information for NMED to determine that the site has been cleaned up to the 890 mg/kg diesel range organics (DRO) soil screening level listed in NMED's Total Petroleum Hydrocarbon (TPH) Screening Guidelines. In order to determine whether or not the removal of all soils containing concentrations of DRO above 890 mg/kg from the fan-out area was completed, the Permittee must collect samples from the base and sidewalls of the entire excavation. The Permittee must conduct additional confirmation sampling and, if necessary, conduct additional soil removal activities if the confirmation samples contain DRO concentrations greater than the acceptable cleanup level.

NMED has amended Figure 7 to illustrate confirmation sample locations where the Permittee must collect confirmation samples. The Permittee must collect soil samples at the locations shown on Figure 7 as well as at any locations where field screening (visual, olfactory) indicates evidence of contamination. The additional confirmation sampling is limited in scope and only covers areas where confirmation samples have not been collected. The samples must be submitted to a laboratory for DRO analysis by EPA method 8015.

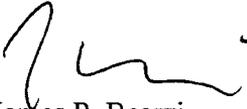
NMED received the Permittee's July 19, 2010 letter entitled *NMED's Notice of Disapproval Railroad Rack Lagoon Overflow Ditch and Fan-Out Area, SWMU No. 8 Subsurface Investigation Final Report (Extension Request)* by email. The letter requests an extension for the submittal of the Report. NMED approves the extension request with the following modifications. The Permittee must collect the additional confirmation samples and address all comments contained in NMED's May 12, 2010 *Notice of Disapproval* and submit a revised Report to NMED on or before September 30, 2010.

The revised Report must be accompanied by a response letter that details where all revisions have been made, cross-referencing NMED's numbered comments. In addition, the Permittees must submit a redline-strikeout version that includes all changes and edits to the Report (electronic copy) with the response to this NOD.

Ed Riege
Gallup Refinery
July 28, 2010
Page 3

If you have questions regarding this NOD please contact Kristen Van Horn of my staff at 505-476-6046.

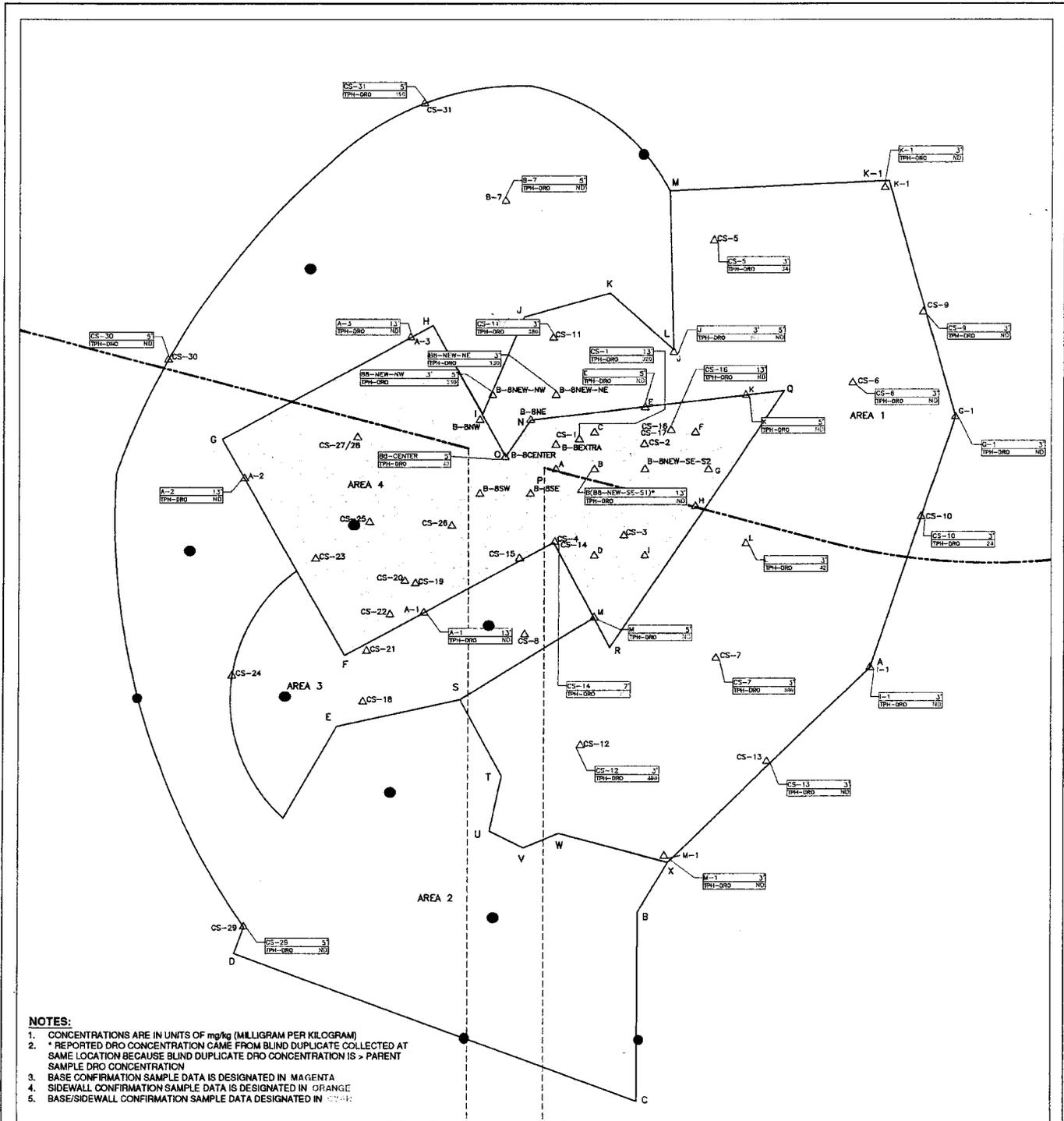
Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

cc: J. Kieling NMED HWB
D. Cobrain NMED HWB
H. Monzeglio NMED HWB
K. Van Horn NMED HWB
C. Chavez, OCD
R. Gaurav, Gallup

File: Reading File and WRG 2010 File
HWB-WRG-10-002



EXPLANATION

AREA 1	EXCAVATED TO 3 FEET
AREA 2	EXCAVATED TO 5 FEET
AREA 3	EXCAVATED TO 7 FEET
AREA 4	EXCAVATED TO 13 FEET
—	ACTUAL EXCAVATION BOUNDARY
- - - -	OUTFLOW DITCH

—	FAN-OUT AREA
—	RAILROAD RACK LAGOON
ND	NON DETECT
*	A(B8-NEW-SE) = MAY EVENT(AUGUST EVENT)
*	B(B8-NEW-SE-S1) = MAY EVENT(AUGUST EVENT)
△ M-1	SAMPLE LOCATION AND DESIGNATION

●	CONFIRMATION SAMPLES
●	SIDEWALL SAMPLE
●	BASE EXCAVATION SAMPLE



0 5 10'

CONSTITUENT TABLE EXPLANATION

SAMPLE ID	M-1	3'	SAMPLE DEPTH
TOTAL PETROLEUM HYDROCARBONS	ND	ND	CONCENTRATION
AS DIESEL RANGE ORGANICS			

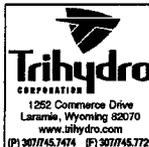
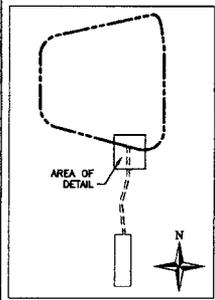


FIGURE 7
RAILROAD RACK LAGOON OVERFLOW DITCH
B-8 FINAL BASE AND SIDEWALL CONFIRMATION
SAMPLE DRO RESULTS
WESTERN REFINING
GALLUP REFINERY
GALLUP, NEW MEXICO

Drawn By: REP Checked By: GP Scale: AS SHOWN Date: 6/2/2010 File: 697-SOIL-BS-201005