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Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 11, 2008

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

**RE: 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**

Dear Mr. Riege:

The New Mexico Environment Department (NMED) has reviewed Western Refining Southwest, Inc. Gallup Refinery's (the Permittee) *Railroad Rack Overflow Ditch and Fan-out Area Soil Investigation Work Plan* (Work Plan), dated September 17, 2008. This Work Plan was submitted in response to NMED's July 22, 2008 *Notice of Disapproval Railroad Rack Lagoon Fan-out Area Excavation Work Plan*. NMED hereby issues this Approval with Direction. The Permittee must adhere to all requirements established within this letter.

**Comment 1**

In Section 2.1.2 (Vertical Delineation), page 2-2, the Permittee states "[e]xisting 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."

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One borehole to a depth of 23 feet below ground surface is not representative of the entire area to be excavated (as shown in Figure 6) and cannot be used delineate the vertical extent of DRO contamination. Note, approximately four feet from borehole B8(B8-NEW-SE-S1) is borehole A(B8-NEW-SE) with a detected DRO concentration of 19,000 mg/kg at nine feet bgs. According to Figures 4 and 6, at borehole A(B8-NEW-SE), samples have not been collected below a depth of nine feet to determine the approximate maximum depth of contamination. Therefore, the Permittee has not fully delineated the vertical extent of DRO contamination. During the excavation, the Permittee must ensure the vertical and horizontal extent of contamination has been delineated. See Comments 2 and 3.

### **Comment 2**

In Section 2.1.3 (Sample Results), page 2-3, the Permittee states that “[s]amples 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 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.”

Based on Figure 4, the Permittee has not defined the vertical extent of DRO contamination associated with test pit B-8 at locations B8-NE and A(B8-NEW-SE), which contain DRO concentrations of 1,300 mg/kg at three feet (ft) bgs and 19,000 mg/kg at nine ft bgs, respectively. These detections are above the NMED TPH guideline of 890 mg/kg. The Permittee must ensure that during the excavation, the contaminated soil associated with these locations is removed. The Permittee must also collect a representative number of confirmation samples to demonstrate that residual DRO contamination is below 890 mg/kg. Based on field events, confirmation samples must be collected from the bottom and side-walls of the excavation. See Comment 3.

### **Comment 3**

The Permittee discusses confirmation sample collection in Section 4.3. The Permittee proposes to collect 10 confirmation samples which are identified in Figure 6. The Permittee states on page 4-2, that “[t]he 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.....[a] summary of the proposed soil confirmation sampling is presented in Table 1.”

NMED does not agree with the proposed confirmation sampling. The Permittee is asking NMED to approve a specific number of confirmation samples when field conditions may prove

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otherwise. Additional confirmation bottom and side-wall samples may be necessary to demonstrate compliance. NMED has the following comments related to the remedial activities:

- a. There are data gaps in the delineation of the vertical and horizontal extent of DRO contamination. For example, in reference to Figure 6, sample points K, H, I, and M were sampled at depths of three and five feet. These locations have DRO detections above the cleanup standard at three feet and detections below the cleanup standards at five feet. The Permittee has not demonstrated that between three and five feet, the DRO concentrations in the soil are below the cleanup standard of 890 mg/kg or whether additional soil must be removed between these depths. In addition, there is approximately 20 feet between locations J, K, G, H, I, and M and K-1, G-1, I-1, and M-1. With the exception of location L, there are no sampling locations or analytical data to demonstrate if DRO is present in soil at concentrations greater than the cleanup level within this 20 foot gap. (See items b-e)
- b. The area to be excavated to 13 feet may require additional bottom and side-wall confirmation samples than what was proposed in the Work Plan in order to demonstrate that residual soil DRO concentrations are below the clean up standard. This shall be determined by the Permittee based on field observations.
- c. Sample locations E, K, H, I, and M are all near the limits of the excavation between depths of three and five feet (as shown in Figure 6). Contamination is present at concentrations that exceed the cleanup standard at three feet at all of these locations. It is not clear if soils will be excavated to five feet or three feet at these locations. The Permittee must ensure that all of the contaminated soil is removed and that a representative number of confirmation samples are collected from the bottom and side-walls of the excavation to demonstrate successful removal.
- d. The Permittee must collect additional confirmation samples from the following locations: between CS-8 and M-1, between I-1 and M-1, and between 8-8NEW-NW and J. Confirmation samples must be collected from the bottom of the excavation. Side-wall confirmation samples must also be collected pending observations based on field screening. Side-wall samples must be collected to demonstrate that all soil containing DRO contamination at levels greater than the cleanup standard has been removed. NMED has provided an attached Figure (6) that identifies the additional locations for confirmation sample collection (locations are marked in red with a circled X). The Permittee may need to collect additional confirmation samples based on field observations.

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- e. The Permittee must use field screening methods to determine if additional excavation and confirmation sampling are necessary. Depending on field observations, it may be necessary to collect additional side-wall samples in addition to bottom samples (e.g., if contamination is found where it was not expected, excavation side-wall and bottom confirmation samples must be collected to demonstrate that contaminated soils have been removed).

**Comment 4**

In Section 4.2 (Excavation), page 4-1, the Permittee states “[u]pon 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.”

The Permittee must demonstrate that the native material used as backfill has not been contaminated from refinery operations.

**Comment 5**

In Section 6.1 (Photographs), page 6-1, the Permittee states “[p]hotographs 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.”

If the Permittee provides photographic documentation in the investigation report, the photographs must include the direction from which the photograph was taken (e.g., facing east).

**Comment 6**

The Permittee provides the following notation under “Explanation” in Figures 4 and 6 that states “\* A(B8-NEW-SE) = MAY EVENT(AUGUST EVENT)” and “\* B(B8-NEW-SE-S1) = MAY EVENT(AUGUST EVENT).”

If these notations are depicted on the figures in the final report, the Permittee must explain their meaning.

**Comment 7**

In accordance with NMED’s July 22, 2008 Notice of Disapproval, the Permittee was supposed to submit an electronic copy of the Revised Excavation Plan with all edits and modifications shown in redline-strikeout format.

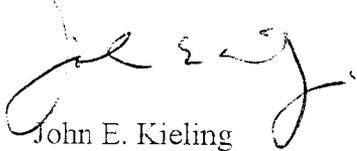
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A redline –strikeout copy of the Revised Excavation Plan was not provided. In the future the Permittee must ensure that all requested information is submitted, or provide a reason for not including the requested information.

The Permittee must adhere to all requirements established within the Approval with Direction. The Work Plan must be implemented no later than April 1, 2009 and the Remedy Completion Report must be submitted to NMED no later than July 1, 2009. The Permittee must notify NMED one week prior to the start of field activities. No response to this letter is necessary.

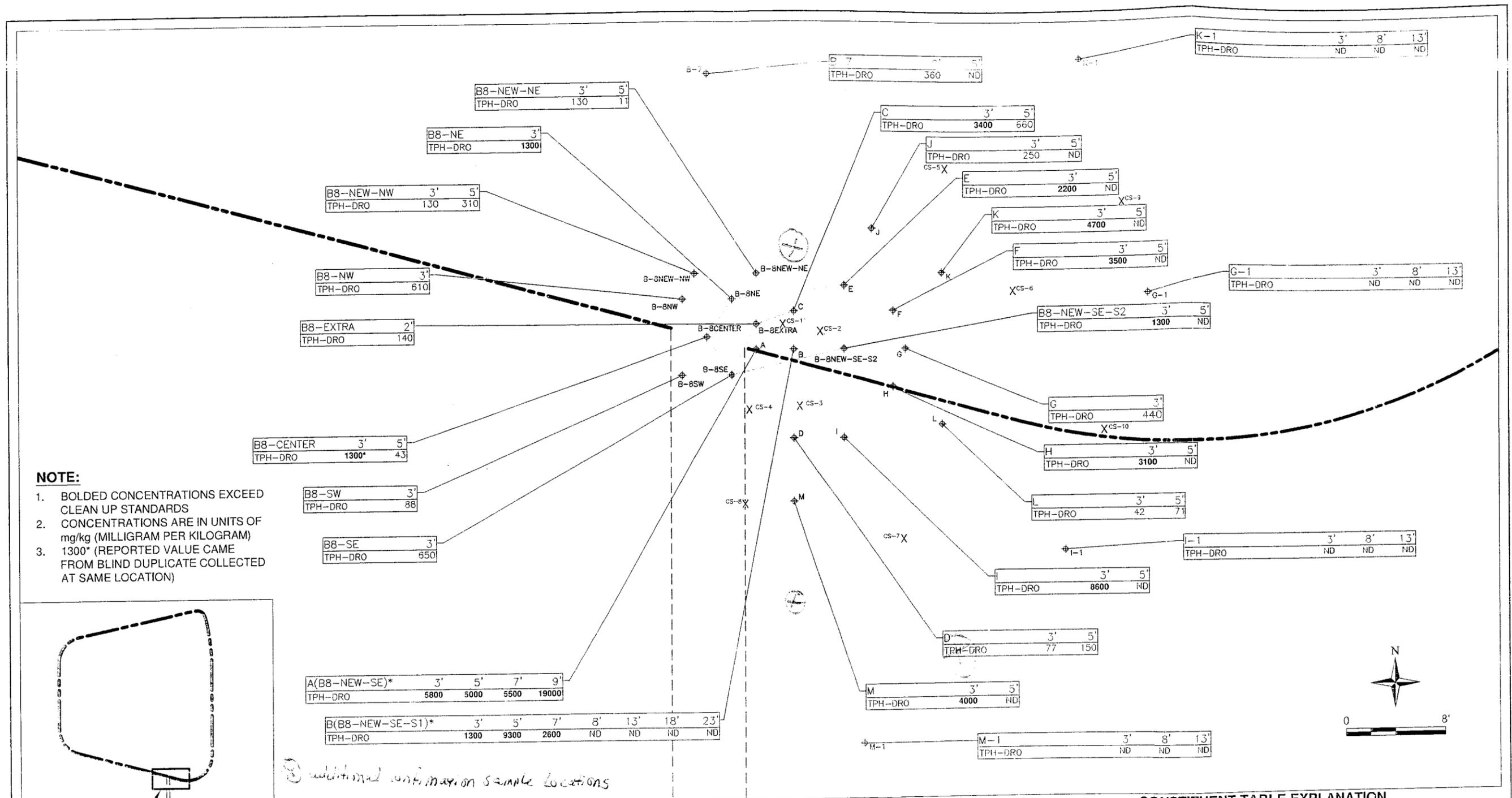
If you have any questions regarding this letter please contact Hope Monzeglio of my staff at (505) 476-6045.

Sincerely,



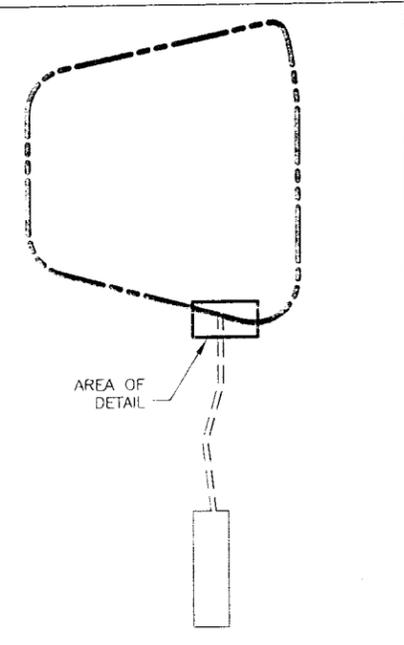
John E. Kieling  
Program Manager  
Permits Management Program  
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB  
H. Monzeglio, NMED HWB  
W. Price, OCD  
G. Ragen, GRCC  
File: GRCC 2008 and Reading  
HWB-GRCC-07-002



**NOTE:**

1. BOLDDED CONCENTRATIONS EXCEED CLEAN UP STANDARDS
2. CONCENTRATIONS ARE IN UNITS OF mg/kg (MILLIGRAM PER KILOGRAM)
3. 1300\* (REPORTED VALUE CAME FROM BLIND DUPLICATE COLLECTED AT SAME LOCATION)



**KEY MAP** 0 200'

*Additional confirmation sample locations*

EXPLANATION		SOIL SAMPLE LOCATION AND DESIGNATION
---	OUTFLOW DITCH	ΦM-1
---	FAN-OUT AREA	ND
---	RAILROAD RACK LAGOON	*
---	PREVIOUSLY EXCAVATED AREA	XCS-7
---	EXCAVATE TO 3 FEET	
---	EXCAVATE TO 5 FEET	
---	EXCAVATE TO 13 FEET	

CONSTITUENT TABLE EXPLANATION					
WELL DESIGNATION	→ M-1	3'	8'	13'	← SAMPLE DEPTH
TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS	→ TPH-DRO	ND	ND	ND	← CONCENTRATION SHOWN HERE IN MAXIMUM VALUE

**FIGURE 6**  
**RAILROAD RACK LAGOON OVERFLOW DITCH, FAN-OUT AREA SOIL SAMPLE LOCATIONS, AND RESULTS AND CONFIRMATION SAMPLE LOCATIONS**  
**WESTERN REFINING, LLC**  
**GALLUP REFINERY**  
**GALLUP, NEW MEXICO**