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DAVE MARTIN  
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**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

January 24, 2011

Mr. Randy Schmaltz  
Environmental Manager  
Western Refining, Southwest, Inc.  
Bloomfield Refinery  
P.O. Box 159  
Bloomfield, New Mexico 87413

**RE: NOTICE OF DISAPPROVAL  
INVESTIGATION REPORT GROUP 3  
WESTERN REFINING SOUTHWEST INC., BLOOMFIELD REFINERY  
EPA ID# NMD089416416  
HWB-WRB-10-001**

Dear Mr. Schmaltz:

The New Mexico Environment Department (NMED) has received Western Refining Southwest, Inc., Bloomfield Refinery (the Respondents) *Investigation Report Group 3 (SWMU No. 4 Transportation Terminal Sump, SWMU No. 5 Heat Exchanger Bundle Cleaning Area, AOC No. 22 Product Loading Rack and Crude Receiving Loading Racks, AOC No. 23 Southeast Holding Ponds, AOC No. 24 Tank Areas 41 and 43, AOC No. 25 Auxiliary Warehouse and 90-day Storage Area, and AOC NO. 26 Tank Area 44 and 45)* (Report) dated December 2009. NMED has reviewed the Report and hereby issues this Notice of Disapproval (NOD) with the following comments.

**Comment 1**

In Section 3.3 (Soil Boring Installation, Field Screening, and Soil Sample Collection), under SWMU No. 4, page 10, the Respondents state, “[o]ne soil boring (SWMU 4-1) was drilled in a location west of Bullet 23 within the vicinity of the former transportation sump.” It is not clear

from the statement if “Bullet 23” is referring to bullet tank 23. Soil boring location SWMU 4-1 is provided in Figure 6 (SWMU No. 4 Sample Location Map); however, the location of “Bullet 23” was not included. Revise the Report to identify the structure of “Bullet 23” and show it on Figure 6.

### **Comment 2**

The Respondents discuss monitoring well development and groundwater sampling in various sections throughout the Report, including Section 3.4 (Monitoring Well Installation, Completion, and Development), Section 3.6 (Ground Water Sampling and Vadose Zone Vapor Sampling), Section 4.5 (Monitor Well Development), Section 6.4 (Ground Water Sampling) and Appendix F (Field Methods). Each Section must be referenced to know what monitoring well development and groundwater sampling activities occurred during the investigation. Revise the Report to include one section, and subsections as appropriate, that addresses all monitoring well development and groundwater sampling activities (e.g. sampling methods and procedures), or include all details in an Appendix (e.g., Appendix F) and reference the Section or Appendix throughout the Report, where appropriate.

### **Comment 3**

In Section 3.6 (Ground Water Sampling and Vadose Zone Vapor Sampling), pages 14 and 15, the Respondents list the analytes and analytical methods conducted for the groundwater samples. The *Investigation Work Plan Group 3, dated June 2008* (Work Plan) required the analysis of manganese as part of the general chemistry parameters. Manganese was not listed in Section 3.6 but was analyzed. Further, the analytical information provided in Section 3.6 does not correspond with the groundwater information provided in Section 6.6 (Groundwater Chemical Analytical Results) (e.g., Section 6.6 includes the analyses of manganese; however, manganese was the only general chemistry parameter not addressed in Section 3.6). Revise the Report to clarify these discrepancies and provide the correct information. The Respondents may choose to cross-reference a section containing the appropriate information, rather than listing the information twice.

### **Comment 4**

In Section 3.6 (Ground Water Sampling and Vadose Zone Vapor Sampling), page 15, bullet 9, the Respondents list analysis for “[d]issolved metals (iron, calcium, magnesium, potassium, and sodium) by USEPA method 6010B.” In Section 5.8 (Chemical Analyses), page 14 (Work Plan), the Respondents state, “[i]n addition, groundwater samples will also be analyzed for the following general chemistry parameters” and then lists bicarbonate, chloride, sulfate, calcium, magnesium, sodium, potassium, manganese, nitrate/nitrite, and ferric/ferrous iron. The Respondents do not include a reference to dissolved metals in the Work Plan, nor indicate that

the general chemistry parameters would be collected as dissolved. This also does not correspond with the analytical information provided in Section 6.6 (Ground Water Chemical Analytical Results) of the Report. Revise the Report to clarify this discrepancy. If water samples were collected for dissolved metals analysis in addition to sample collection for total metals analysis, the Report must address the sampling methods associated with collecting dissolved samples (e.g., 0.45 micronfilter use).

**Comment 5**

In Section 3.6 (Ground Water Sampling and Vadose Zone Vapor Sampling), page 15, the Respondents state, “[t]he depth to groundwater and depth-to-SPH were measured to the nearest 0.01 ft and recorded relative to the surveyed well casing rim.” The Respondents do not identify the instrument used to collect the depth to water and depth to separate phase hydrocarbon (SPH) measurements. Revise the Report to provide the instrument(s) used to collect these measurements, and revise this section to address how the monitoring wells were purged and the amount purged. Alternatively, reference Appendix F (*see* also Comment 2).

**Comment 6**

The Respondents discuss quality assurance/quality control measures in Section 3.8 and address the collection of equipment blanks, field duplicates, and field blanks. The Respondents do not discuss the use of trip blanks. Revise the Report to discuss trip blanks, if used. If trip blanks were not used, provide a discussion of why the trip blanks were not included with the sample shipments to and from the laboratory.

**Comment 7**

In Section 3.10 (Collection and Management of Investigation Derived Waste), page 17, the Respondents state, “[a] total of three composite samples were collected from drums containing soil with known constituent concentrations above NMED residential screening levels. A composite sample was collected to characterize soil for waste disposal from AOC No. 24, AOC No. 26, AOC No. 22, and SWMU No. 4....Each composite soil sample was analyzed for the following: [Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)] and [Methyl tertiary butyl ether (MTBE)] by EPA Method 8021B; Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8310; TCLP RCRA 8 Metals by EPA Method 6010B; and Ignitability, Corrosivity, and Reactivity.” Revise the Report to explain how the composite samples were collected so that VOC loss was minimized (e.g., soils were mixed in a steel bowl and placed into a four ounce glass jar; soil samples were placed directly into a four ounce jar and compacted for zero headspace). Homogenized samples analyzed for BTEX are inappropriate because of the potential loss of volatiles. All future samples analyzed for VOCs must be collected as discrete samples unless the composite sampling method is approved by NMED.

**Comment 8**

In Section 4.3 (Subsurface Conditions), page 21, the Respondents describe the underground piping associated with AOC No. 22, AOC No. 24, and AOC No. 26. In accordance with the Order, Section X.C.13 Item 2, utilities must be shown on the site plan/figures. Provide and label all utilities on all figures; New Mexico One Call, Inc. color coding may be used.

**Comment 9**

In Section 4.4 (Soil Boring Installation, Monitoring Well Construction, and Boring Abandonment) and Section 6.1 (Soil Sampling), the Respondents provide an adequate detailed discussion of the activities associated with soil sampling. Descriptions of the methods used for groundwater sampling are not as detailed. Revise Section 4 (Field Investigation Results) of the Report to provide more information regarding type and purpose of field investigation activities performed, field screening measurements, and sampling results for groundwater, and expand Section 6.4 (Ground Water Sampling) to include more information that explains the methods used for sample logging, and field screening, and field screening results (*see* also Comment 2).

**Comment 10**

In Section 4.4 (Soil Boring Installation, Monitoring Well Construction, and Boring Abandonment), the Respondents describe the methods and details of soil boring installation, monitoring well construction, and soil boring abandonment activities. However, the Respondents do not use the same format when describing the investigation details for each SWMU or AOC. Examples included:

- a. The Respondents address the number of surface samples and soil borings installed at SWMU No. 5, AOC No. 22, AOC No. 24, AOC No. 25, AOC No. 26, but this information was not included for SWMU No. 4.
- b. The Respondents discuss impacts being detected or not detected based on field screening results and visual or olfactory observations for some SWMUs and AOCs, while other descriptions do not include this information. For example, AOC No. 22, page 24, the Respondents state, “[t]here was no indications of impacts based on the field screening results nor was there any visual or olfactory evidence of impacts from the surface to a depth of 10 feet bgl [below ground level].” This information was not included for AOC 24-5 and AOC 24-6; the Respondents state, on page 28 that “[o]n April 8, 2009 the drilling rig was set up on location AOC 24-5 [and AOC 24-6]. Sample collection was accomplished using the HSA drilling method and split spoon samplers. The sampling terminated at 10 feet bgl. The borehole was grouted to the surface on April 9, 2009.”

Revise this Section of the Report to provide consistent information when describing investigation details for each SWMU and AOC.

**Comment 11**

In Section 4.4 (Soil Boring Installation, Monitoring Well Construction, and Boring Abandonment), under AOC 22-13, the Respondents state, “[g]round water sample AOC 22-13-GW was collected using a disposable bailer. The ground water in the augers was not purged [prior] to sampling since saturation had been encountered less than 24 hours earlier and would be representative of the formation’s ground water.” AOC 22-13 was not designated for a well installation, but because of the field screening measurements and visual observation, the Respondents decided to collect a groundwater sample. However, AOC 22-12/TW-01 was completed as a temporary well; the Respondents do not discuss well purging or if a sample was collected after the well was purged. The Respondents state, “[o]n April 14, 2009 the temporary well was gauged and the depth to ground water was measured at 37.95 feet bgl. The total depth of the well was gauged as 42.51 feet bgl. Ground water sample AOC 22-12-GW was collected using a disposable bailer. It was decided to not plug and abandon the boring but rather to complete the boring as a temporary well TW-01.” Revise the Report to indicate if the temporary well was purged prior to sampling (*see* also Comment 2).

**Comment 12**

Section 4.4 (Soil Boring Installation, Monitoring Well Construction, and Boring Abandonment), pages 29 and 30, discusses the drilling of MW-65 and states, “[d]uring the installation of the well the bentonite formed a “bridge” between the ODEX casing and the well casing. When the ODEX casing was being removed from the borehole the well casing moved, which caused the proposed well settings to be adjusted. The ODEX casing and well casing were removed from the borehole and the field activities ceased for the day. On April 17, 2009 the borehole for AOC 26-8/MW-65 was re-entered and reamed out to a depth of 44.5 feet bgl using the HSA drilling method...The rig was sent back to this location on April 20, 2009 to collect and screen the soils from 2 feet to 10 feet bgl. The borehole was grouted to the land surface.” It is not clear from the description if a second borehole was drilled to collect soil samples from two to ten feet and then abandoned. Revise the Report to clarify if a second borehole was drilled specifically to collect samples on April 20, 2009.

**Comment 13**

In Section 5 (Regulatory Criteria), page 34, the Respondents state, “[t]he screening levels in Table 9 are based on residential land use. Since the investigation data for SWMU No. 4, SWMU No. 5, AOC No. 23, and AOC No. 25 indicate there is no threat to ground water in these areas, the applicable screening levels do not include the soil-to-groundwater leachate pathway.” Revise

this section to explain how it was determined that there is no threat to groundwater at SWMU No. 4, SWMU No. 5, AOC No. 23, and AOC No. 25.

#### **Comment 14**

In Section 5 (Regulatory Criteria), page 34, the Respondents state, “[t]he total petroleum hydrocarbon (TPH) screening levels are taken from NMED’s October 2006 TPH Screening Guidelines [NM TPH SSL]... Where information is available to identify particular product types, the screening level is selected accordingly from either Table 2a or 2b of NMED guidance. If two products have been handled in the same area (e.g., both diesel and gasoline at the product loading rack), then the most conservative (lowest) screening level of the two products is used.” It is not clear how the Respondents will apply the lowest screening level of two products (gasoline and diesel) when there is no numeric standard for one of them (gasoline). Revise the Report to clarify this discrepancy.

#### **Comment 15**

In Section 5 (Regulatory Criteria), page 34, the Respondents state, “[t]he total petroleum hydrocarbon (TPH) screening levels are taken from NMED’s October 2006 TPH Screening Guidelines... [w]here information is available to identify particular product types, the screening level is selected accordingly from either Table 2a or 2b of NMED guidance... [s]creening values from Table 2b are used only in situations where impacts to shallow soils do not pose a threat to underlying groundwater and there is limited potential for exposure to impacted soil (e.g., elevated concentrations occur mostly at depth and not at the land surface).”

- a. In accordance with the NM TPH SSLs, the values from Table 2b should only be applied to situations where “depth to groundwater is less than 15 feet from the ground surface and within 30 feet of an occupied structure.” According to the boring logs, groundwater was encountered from approximately 36 to 55 feet bgs. Values from Table 2b are therefore not appropriate. Revise the Tables to reflect the use of only Table 2a.
- b. Revise the Report to describe the specific site conditions for applying Table 2a.

#### **Comment 16**

In Section 5 (Regulatory Criteria), pages 34 and 35, the Respondents state, “[s]imilarly, there were detections of constituents in ground water samples that do not have screening levels. This includes the four constituents listed above for soil and magnesium, phenanthrene, bicarbonate, calcium, potassium and sodium. None of these constituents are classified as a carcinogen.” The first sentence references detections in groundwater while the second sentence addresses

constituents in soil. Revise the Report to correct this discrepancy, or otherwise clarify the meaning.

**Comment 17**

In Section 6.1.3 (AOC No. 22 – Product Loading Racks and Crude Receiving Loading Racks) and Section 6.1.7 (AOC No. 26 – Tank Area 44 and 45), pages 44, 50 and 51, the Respondents describe cumulative risk evaluations for AOC No. 22 and 26. The Respondents indicate the cumulative effects of certain constituents (e.g. cobalt, manganese) are not a concern because they are non-carcinogenic. It is inappropriate to make cumulative risk conclusions solely on whether the constituent is a carcinogen or a non-carcinogen. The Respondents must refer to Section 5 of the *Technical Background Document for Development of Soil Screening Levels (Revision 5.0 dated August 2009)* to determine cumulative risk. The Respondents must evaluate the data using a conservative approach by applying the maximum concentrations across the entire data set. All calculations and results from the assessments must be included in the revised Report.

**Comment 18**

In Section 6.1.3 (AOC No. 22 – Product Loading Racks and Crude Receiving Loading Racks), page 45, the Respondents state, “[f]ive of the constituents are listed as potential carcinogens based on the NMED and EPA sources referenced in Section 5.0. This could result in a cumulative carcinogenic risk level of 5.0 E-5.” The Respondents must provide all calculations, results, and other supporting information from the risk assessments in the revised Report.

**Comment 19**

In Section 6.1.4 (AOC No. 23 – Southeast Holding Ponds) and Section 6.1.6 (AOC No. 25 – Auxiliary Warehouse and 90-Day Storage Area), the Respondents references the DAF of 20. Table 9 applies the DAF of 1. Revise the Report to clarify this discrepancy.

**Comment 20**

In Section 6.1.5, (AOC No. 24 – Tank Areas 41 and 43), under AOC 24-6, page 47, the Respondents state, “[a]ll the analytical results for the samples collected at AOC 24-6 were less than the non-residential screening levels with the exception of DRO in sample AOC 24-6 (1.5-2.0’).” According to Table 11 the DRO concentration for AOC 24-6 is 1,400 mg/kg, which is less than the industrial screening level for DRO of 2.00E+03 mg/kg, as indicated in Table 11. Revise the Report to correct this discrepancy.

**Comment 21**

In Section 6.1.7 (AOC No. 26 – Tank Area 44 and 45), under AOC 26-9/MW-66, page 50, the Respondents state, “[t]here are numerous organic constituents, including volatile and semi-volatile organics that have concentrations above the non-residential screening levels in soil sample AOC 26-9 (36-38’). The concentration detected in AOC 26-9 at 36-38’ are believed to be associated with ground water impacts in the area and not a soil source in the immediate area.” Explain why the detections are believed to result from groundwater impacts and not a soil source, and discuss the suspected source of groundwater contamination that is affecting soils at 36-38 ft bgs. Revise the Report accordingly.

**Comment 22**

In Section 6.1.7, (AOC No. 26 – Tank Areas 44 and 45) under AOC 26-9/MW-66, and Section 7 (Conclusions and Recommendations) under AOC No. 22 – Product Loading Racks and Crude Receiving Loading Racks, pages 51, 59, and 60, the Respondents state, “[t]he screening level included in Table 10 for cobalt assumes a DAF of 1 for the soil-to-ground water pathway; however, cobalt is not detected in concentrations above the screening level in any of the ground water samples collected during the site investigation effort. Cobalt does not appear to present a threat to ground water and the soil-to-ground water pathway should not be considered to be complete at AOC No. [22 and 26].” Cobalt can be found in the catalyst used to remove sulfur from crude oil and its presence could be a result of refinery operations and not representative of a background concentration. Provide evidence for the assertion that cobalt is not a threat to groundwater. Concomitantly, re-evaluate the applicability of the DAF of 1 and consider calculating a site-specific DAF to determine if cobalt is a threat to groundwater. If a site-specific DAF is calculated, all calculations and results must be included in the revised Report.

**Comment 23**

In Section 7, (Conclusions and Recommendations) under AOC No. 22 and AOC No. 24, pages 60 and 61, the Respondents state that certain constituents (e.g., lead, arsenic, and manganese) “may not be an indication of actual impacted ground water but rather possible sampling artifacts resulting from the use of a bailer to purge the wells and collect ground water samples.” The Respondents do not provide a description of the potential effects of the use of a bailer. In any event, such a conclusion cannot be made until the background study has been completed. No revision is necessary.



**Comment 24**

In Section 7 (Conclusions and Recommendations), pages 58 through 62, the Respondents recommend additional assessment for SWMU No. 4, and SWMU No. 5, and additional investigation for AOC No. 22 and AOC No. 26.

- a. Provide the current and future status (operational/active, interim, and inactive) of all the SWMUs and AOCs in the Group 3 Investigation Report. Indicate if the SWMUs/AOCs are operational and how long will they remain active. Indicate if the structures in the SWMUs/AOCs will be completely removed once they are no longer in operation.
- b. The Respondents recommend “[a]dditional assessment...to delineate the lateral extent of the impacts in soils near [SWMU 4-1].” Revise the Report to provide more information regarding the sump, including but not limited to dimensions of the sump, history of releases, if sampling was completed over the entire cross-section of the old sump area prior to backfilling, and if the Respondents intend on removing soil from the former sump area.
- c. The Respondents recommend “[a]dditional assessment...at SWMU No. 5 to delineate the lateral impact to surface soils based on the reported concentrations of mercury.” Revise the Report to include more information describing how cleaning activities were conducted for the heat exchangers and provide information regarding historical uses of the bundle cleaning pad (e.g., documentation of overflows from the concrete pad to the ground surface, and historical management of waste not associated with bundle cleaning).
- d. The Respondents recommend “[a]dditional investigation ...for the impacted soils within AOC No. 22 for the area near borings AOC 22-4, and AOC 22-13. Some additional delineation of ground water impacts may also be useful and should be completed in consideration of any additional investigation to be completed at other nearby SWMUs/AOCs.” Revise the Report to provide more information about the underground piping in relation to groundwater contamination. Indicate if all lines are still active/abandoned, and if any lengths have been replaced because of damage. Also provide information about historical releases that occurred near this area and list possible contaminants of concern.
- e. The Respondents recommend “[a]dditional soil sampling near AOC 26-5...to confirm the limited presence of MTBE that was detected in the 1.5-2.0’ sample interval. Additional monitoring wells may be considered to better define the up-gradient extent of ground water impacts.” The Respondents must provide more information about the tanks, including but not limited to history of releases, condition of containment structures, valves, fittings, piping, and if tanks 44 and 45 are currently in use.

**Comment 25**

In Section 7 (Conclusions and Recommendations), under AOC No. 23, page 61, the Respondents state, “[t]he analyses for the soil samples did not detect the presence of any constituents at concentrations above the residential screening levels and most of the organic results were non-detect, with the exception of a few constituents that were qualified ... due to laboratory contaminants (e.g., methylene chloride and acetone)...The ground water samples collected from MW-62 identified only manganese at concentrations above the screening levels (Table 16). The presence of only manganese above screening levels and no detections of petroleum constituents in water samples collected from MW-62 indicates that the manganese could be representative of background conditions rather than impacts from site operations; however, no background value has been established for manganese at this time...Corrective Action Complete without Controls is recommended for AOC No. 23.”

- a. Provide additional information for AOC No. 23 to include the current and future status of the AOC. Indicate if the AOC is operational/inactive, if the AOC structures will be completely removed once it becomes inactive, and discuss any history of releases.
- b. Provide additional information to demonstrate that all groundwater and soil detections are below the Residential SSLs in order for AOC No. 23 to be considered for Corrective Action Complete. The Respondents must be able to demonstrate manganese is not a concern, and will not be a concern in the future, through a risk assessment or demonstrate that the detected concentration is within the range of background concentrations.

**Comment 26**

In Section 7, (Conclusions and Recommendations) under AOC No. 24 – Tank Areas 41 and 43, page 61-62, the Respondents state, “[o]ther inorganic constituents detected above screening levels include chloride, nitrate, and sulfate. Chloride and sulfate are naturally occurring constituents with wide-spread occurrence in ground water in the San Juan River Basin (Stone, W.J. and others, 1983). The absences of any refinery-related constituents (i.e. petroleum hydrocarbons) in the ground water sample collect[ed] from MW-64 indicates that the inorganic constituents might not be related to site operations.” Chloride, sulfate, and high total dissolved solids are commonly found at high concentrations in refinery-produced water and at petroleum-contaminated sites. No response required.

**Comment 27**

In Section 7, (Conclusions and Recommendations) under AOC No. 24 – Tank Areas 41 and 43, page 61-62, the Respondents state, “[a]n assessment to evaluate the risk posed by the limited occurrence of TPH at location AOC 24-6 is recommended instead of any additional assessment

and/or remediation.” Discuss how the risk will be evaluated without conducting additional investigation activities and revise the Report accordingly.

#### **Comment 28**

In Section 7 (Conclusions and Recommendations), under AOC No. 25, page 62, the Respondents state, “[t]here were not detections of any constituents at concentrations above the residential screening levels in the soil samples. There were also no constituents detected in the ground water samples above the screening levels, with the single exception of manganese, which was only slightly over the screening level. There was not a sufficient volume of ground water present in MW-60 to collect a ground water sample during the second sampling event conducted in July 2009. Corrective Action Complete without Controls is recommended for AOC No. 25.”

- a. Provide additional information to include the current and future status of AOC No. 25. Indicate if AOC No. 25 is operational/inactive, discuss if the AOC No. 25 structures will be completely removed once it becomes inactive, and discuss the history of releases.
- b. There is insufficient historical data for MW-60 to demonstrate that manganese or other constituents are not a concern. All groundwater and soil detections must be below the Residential SSLs in order for Corrective Action Complete to be considered. The Respondents must be able to demonstrate manganese is not a concern, and will not be a concern in the future, through a risk assessment or demonstrate that the detected concentration is within the range of background concentrations.

#### **Comment 29**

In Section 7 (Conclusions and Recommendations), under SWMU No. 4 Transportation Terminal Sump, page 58, the Respondents state, “[a]n additional assessment is recommended to delineate the lateral extent of the impacts in soils near AOC 4-1.” The text of the Report references the Transportation Terminal Sump as SWMU No. 4 and Figure 6 (*SWMU No. 4 Sample Locations Map*) which identifies SWMU 4-1/MW-59 as a boring/monitoring well. There is no reference to an AOC 4-1. Revise the Report to correct this discrepancy.

#### **Comment 30**

Table 6 (Residential Soil Screening Levels) contains some apparent typographical errors. The residential values presented in the Table for arsenic and ethylbenzene are 3.59E+00 and 6.96E+01, respectively. The residential values listed in the New Mexico Soil Screening Levels (NMSSLs) for these constituents are 3.90E+00 and 6.97E+01, respectively. These errors were also carried over into the other tables within the Report. Revise all tables within the Report to correct these discrepancies.

**Comment 31**

The Respondents titled Table 9 as *Group 3 Soil Analytical Results Summary – AOC 23 and AOC 25*, which implies the table only presents data collected from AOCs 23 and 25. The table also includes data for SWMU No. 4 and SWMU No. 5. The Respondents titled Table 11 as *Group 3 Soil Analytical Results Summary – SWMUs No. 4 and 5, AOC 22 (Crude Receiving Rack) and AOC 24*, which implies the data provided in the table is only from these sites. The table does not include data from SWMUs 4 and 5. Ensure table titles correctly reference the data presented.

**Comment 32**

The Respondents apply non-residential screening levels in Tables 10 and 11. It is not clear how the Respondents determined which of the seven standards indicated in the footnotes were applied (e.g., Table 10 applied the DAF 1 to acetone for all depths; for bromobenzene the EPA Protection of Groundwater Risk-based SSL was applied for all depths). The data were applied to a mix of screening levels. To alleviate confusion and apply a more systematic approach, revise the tables and text of the Report to apply the data to the most conservative non-residential scenario (e.g., construction worker or industrial) and the residential scenario. Upon determining the most conservative scenario, explain why the selected screening level was chosen. Revise the Report accordingly.

**Comment 33**

In Table 11, column “AOC 22-16 (36-38)” has a superscript “1.” This superscript is not defined in the footnotes on page 10 of 15 of Table 11. Revise the Report to define the superscript.

**Comment 34**

In Table 16, columns “MW-61, 05/13/2009,” “MW-61, 07/16/2009,” and “MW-62, 05/13/2009” the Respondents did not highlight the sample results above the screening level for manganese. Revise Table 16 accordingly.

**Comment 35**

NMED has the following comments on figures:

- a. Report all sample results, including non-detects, in the figures. If a sample was not collected or the well is dry, this must be noted and indicated on the legend and the figure. For example, Figure 6 (SWMU No. 6 Sample Locations Map) reports the sample results for benzene and DRO for all the sampling locations, but Figure 14 (AOC No. 23 Sample Location Map) does not present any results for the sampling location at AOC No. 23.

- b. Expand the scale of Figures 17 through 20 to include all Group 3 SWMUs and AOCs (i.e. include AOC No. 23) and report all sample results for all new, temporary, and current monitoring wells. If a sample was not collected or the well is dry, indicate this in the legend and note it as such on the figures.
- c. Define all symbols on all figures (e.g., cross hatch shading on Figures 8 through 15).

**Comment 36**

On Figures 2, 5, 8 through 13, and 16 through 20, there are several tanks that are not identified.

- a. Identify the unlabeled tanks west of Tank 44 in Figures 2, 5, 8 through 13 and 16 through 20.
- b. Identify the unlabeled tanks south of SWMU No. 4 and west of Tank 41 in Figures 2, 5, and 17 through 20.
- c. Identify the unlabeled tank north of B-12 thru B-21 in Figures 2, 5, and 17 through 20.
- d. Provide an additional figure that identifies all Group 3 SWMU and AOC locations similar to Figure 17 to include AOC No. 23 and the diesel AST southwest of AOC No. 25.
- e. Verify that tank 34 holds water and not product (e.g., label contents on the map or provide color symbolizing tank contents).
- f. All tank details addressed in items a through e above must be summarized in a table and included in the revised Report. The table must contain the following headings: Tank ID, status (Active/Inactive), contents (e.g., gas, water, crude), location (e.g., southwest of AOC No. 25), and comments (e.g., release history, if known).

**Comment 37**

Provide more information for the crude sampling rack east of AOC No. 22, the L.P.G. loading area north of SWMU No. 4, the diesel AST southwest of AOC No. 25, and the gasoline pumps west of AOC No. 25 to determine whether they are operational/inactive. Include a discussion of any historical releases, description of the activities conducted at the SWMUs/AOCs, and indicate if these SWMUs/AOCs should be included in the Phase II investigation.

R. Schmaltz  
January 24, 2011  
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**Comment 38**

Revise Appendix F to include sections that describe field methods pertaining to the soil investigation and groundwater monitoring activities. The groundwater monitoring section must be expanded to describe how the monitoring wells were sampled (e.g., at each monitoring well the depth to water and depth to product measurements were collected using an oil/water interface probe, monitoring wells were purged and sampled using a dedicated bailer, samples were collected in pre-cleaned laboratory prepared containers). Include description of purging methods and how purge volumes were calculated, and all field equipment used while collecting soil and groundwater samples (*see* also Comment 2).

The Respondents must address all comments contained in this NOD and submit a revised Report to NMED on or before May 1, 2011. The revised Report must be submitted with a response letter that details where all revisions have been made, cross-referencing NMED's numbered comments. In addition, an electronic version of the revised Report must be submitted that identifies where all changes were made in red-line strikeout format.

If you have any questions regarding this letter, please contact Leona Tsinnajinnie of my staff at (505) 476-6057.

Sincerely,



James P. Bearzi  
Chief  
Hazardous Waste Bureau

cc: J. Kieling, NMED HWB  
D. Cobrain, NMED HWB  
H. Monzeglio, NMED HWB  
L. Tsinnajinnie, NMED HWB  
C. Chavez, OCD  
A. Hains, Western

File: HWB-WRB-10-001 and Reading 2010