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**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

May 2, 2011

Thomas A. Ladd, Director  
Environment and Safety Directorate  
U.S. Army White Sands Missile Range  
White Sands Missile Range, New Mexico 88002-5000

**RE: NOTICE OF DISAPPROVAL  
SUBSURFACE SOIL INVESTIGATION WORK PLAN  
SWMU 137, PAINT SHOP SUMP (WSMR-56)  
WHITE SANDS MISSILE RANGE  
EPA ID # NM 2750211235  
HWB-WSMR-11-002**

Dear Mr. Ladd:

The New Mexico Environment Department (NMED) has received the U.S. Army White Sands Missile Range (Permittee) *Subsurface Soil Investigation Work Plan SWMU 137, Paint Shop Sump (WSMR-56)* (Work Plan) dated December 2010. NMED has reviewed the Work Plan and hereby issues this Notice of Disapproval (NOD). The Permittee must address the following comments before NMED can consider the Work Plan further.

**Comment 1**

Several passages in the Work Plan mention achieving "Response Complete." Provide the meaning of "Response Complete."

**Comment 2**

Section 1.3.1 (Site Description and History), page 1-2 states, "the Paint Shop Sump, is located at the north end of Building 1742...Operations at this site began in 1968, but it is no longer used as

Thomas A. Ladd  
May 2, 2011  
Page 2 of 11

a paint shop. C. Martin Company, Inc. currently occupies Building 1742 as Base Operations Support Services.”

- a. Provide photo documentation to show that the paint sump is located outside of Building 1742.
- b. Provide additional information regarding the current use of the building, if C. Martin Company, Inc. has used or is currently using the sump, and whether or not the potential exists for materials to enter the sump.
- c. Table 4-1 (Solid Waste Management Units (SWMUs) & Areas of Concern (AOCs) Requiring Corrective Action) of the December 2009 White Sands Missile Range Hazardous Facility Permit (Permit) lists two other SWMUs associated with Building 1742: SWMU 135 (Paint Shop Accumulation Area) and SWMU 136 (Paint Shop Spray Booth).
  1. Explain why these units are not addressed in the Work Plan for SWMU 137.
  2. Provide additional information about SWMUs 135 and 136, including when operations ceased, uses while in operation, release history, and previous investigations, if any.
  3. Include both SWMUs and drain line(s) on the revised figure of Building 1742 (see Comment 3a), and state whether or not the lines discharged to the sump from the SWMUs.
  4. Provide photo documentation of SWMUs 135 and 136 (e.g., front and side views, the drains, view in relation to the sump, and floors to show the amount of sloping toward the sump, or lack thereof).
- d. State when painting operations ceased in Building 1742, and when the sump and drainpipe line, the spray booth, and the accumulation area ceased being used.
- e. Provide the material composition of the drainpipe (e.g., iron or tile) and indicate if the drainpipe and any drain line(s) leading to the sump were plugged after operations ceased. If the drainpipe is out of service, provide documentation of any plans to remove the drainpipe. If there are none, state so.
- f. Provide descriptions for the buildings around Building 1742. Indicate if any of the drain lines from the surrounding buildings are connected to the drainpipe or sewer drain line. Add these features to Figure 3-1, as appropriate.

**Comment 3**

Section 1.3.1 (Site Description and History), pages 1-2 and 1-7 states, “[w]astewater generated from the paint spray booth located inside Building 1742 was discharged to a concrete sump (approximately 3 by 3 by 4 feet). Sludge, paint, and other debris were separated by gravity. The sludge was removed periodically and disposed of as hazardous waste. The wastewater was piped to the Sewage Treatment Plant (STP).”

- a. Provide an additional detailed figure of Building 1742 and Building 1743 that depicts all drain lines connected to the sump, sewer, or both (*see* Comment 2.f.).
  1. Indicate if the spray booth and accumulation area had drains that connected to the sump, and if so provide the dimensions of the drains and direction of flow for drains. If not, explain how paint and debris were transported to the sump.
  2. Indicate if there is a drain at the bottom of the sump. Provide a construction drawing including dimensions; of the sump and all drainpipes and drain lines leading to and from the sump.
  3. Provide photo documentation of the sump (e.g., sump with metal cover, inside the sump, close up of the drainpipe and drain line(s)).
  4. Provide photo documentation of the spray booth (e.g., front view, side views, close up views of any drains and drain line(s), if applicable, indicate whether the floor is sloped in the vicinity of the spray booth) (*see also* Comment 2c, Item 4).
  5. Provide photo documentation of the accumulation areas (e.g., front view, side views, close up views of the drains and drain line(s), if applicable, and indicate the direction of flow from the accumulation area(s) to the sump) (*see also* Comment 2c, Item 4).
- b. Explain how the wastewater from the sump was transferred (i.e., gravity flow or pump) to the sewer.
- c. Define “sludge” and “other debris.”
- d. Provide the frequency of sludge removal during historic operations (e.g., daily, weekly, monthly, quarterly, semi-annually, or annually) and process for removal. Indicate if there is a high level float in the sump or if removal was based on visual inspection.

**Comment 4**

Section 1.3.1 (Site Description and History), page 1-7 states, “[a] metal cover over the sump is flush with the surrounding asphalt grade, which comprises the ground surface adjacent to Building 1742. Currently, the sump contains trash, leaves, and some sediment that have accumulated through a hole in the metal cover. Paint sludge was not observed underneath the layer of debris. There is no history of a release from this unit.”

- a. Confirm that the area around the sump was always covered with asphalt.
- b. Confirm that the sump was typically covered with the metal cover during historic operations. Indicate the size of the hole in the metal cover and if and how storm water or other debris could have flowed to the sump.
- c. Indicate the direction of flow to the sump (i.e., flow through drain lines or surface flow, *see* Comment 3a, Item 2).
- d. Describe other liquids in addition to paint that was discharged or flowed to the sump.
- e. Provide the level of accumulation of debris currently in the sump and indicate if the sump has been cleaned since the paint shop operations were discontinued.

**Comment 5**

Section 1.3.3.2 (Site-Specific Hydrogeology), page 1-12, paragraph 4 discusses the drawdown that occurred as a result of pumping water from the potable wells in the Main Post. Data is from 1945 to 1982; provide current information, if available, regarding drawdown due to pumping and any potential influences of onsite subsurface conditions. If such information is not available, state so.

**Comment 6**

Section 1.3.3.2 (Site-Specific Hydrogeology), page 1-12, paragraph 5 refers to a Phase II RFI document but does not provide a citation for it. Provide the citation to the Phase II RFI document in the revised Work Plan.

**Comment 7**

Section 1.4.2 (Phase I RCRA Facility Investigation), page 1-16, bullet 3 states that during the previous investigation the Permittee “[collected] a composite surface water sample from the sump.” Remove “surface water” and replace with “wastewater.” Also define “composite” as it applies to the collection of a water sample.

**Comment 8**

Section 1.4.2 (Phase I RCRA Facility Investigation), page 1-16, bullet 1 states that a “low-point” soil vapor survey was conducted during the Phase I investigation. These data were not provided in the Work Plan. All data collected from the previous investigations must be summarized in the revised Work Plan.

**Comment 9**

Section 1.4.2 (Phase I RCRA Facility Investigation), page 1-19, paragraph 2 states that “[n]one of the results for the samples exceeded the 1992 NMED soil screening levels (SSLs).” NMED soil screening levels did not exist in 1992; remove the reference from the revised Work Plan, or clarify and provide the referenced document.

**Comment 10**

Section 1.4.2 (Phase I RCRA Facility Investigation), page 1-19, paragraph 4 states, “[i]n April 2000, the EPA issued a letter stating that the Class III Modification approval for the No Further Action recommendation became effective for SWMU 137 (WSMR-56) in December 1995.” NMED has reviewed the cited letter from EPA to WSMR dated April 28, 2000. The letter states, “the Statement of Basis – Final Decision issued by EPA removed all twenty-four (24) SWMUs from WSMRs [Hazardous and Solid Waste Amendments (HSWA)] Permit. This action does not preclude NMED from initiating Class III Permit Modification procedures to reinstate the twenty-four (24) SWMUs back into WSMR’s HSWA permit should cause exist to do so.”

- a. NMED has reviewed the EPA Statement of Basis – Final Decision and determined that the sump was still in use in 1995 based on the description provided in Appendix III of the *Discussion of SWMU’s Requiring No Further Investigation Under the Class III Permit Modification Process*. “The unit is used as a drain or receptacle for wastewater discharging from the paint shop spray booth. The sump is intact. No releases were detected outside of the sump. Sludges and surface water from the sump exceed regulatory limits and should be disposed of as a hazardous waste.” It also appears that the sump contained hazardous waste during the previous investigation and it is not clear if the contents were removed after the investigation. Although there is no record of release, the Permittee must demonstrate that no release from the sump or associated drain line occurred after the investigation was conducted.
- b. Although EPA removed SWMU 137 as part of the 24 SWMUs from WSMRs HWSA Permit, SWMU 137 is listed in Permit Appendix 4, Table 4-1 which lists the SWMUs and AOCs requiring corrective action.

**Comment 11**

Section 2.4 (Applicable Regulations and Standards) summarizes the regulatory criteria that must be used to evaluate the investigation results. Revise Section 2.4 to correspond with the cleanup levels specified in Permit Attachment 3.

**Comment 12**

Section 3.2 (Technical Approach), page 3-1 proposes to “collect soil samples from five boring locations adjacent to the SWMU 137 (WSMR-56) paint shop sump and drainpipe.”

- a. Soil sample analysis must include target analyte list (TAL) metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), diesel range organics (DRO), and gasoline range organics (GRO).
- b. Determine the location of the drainpipe and drill the five borings directly adjacent to the drainpipe to ensure that these sample locations are representative.
- c. Figure 3-1 shows a proposed boring location west of the main sewer line. Move this proposed boring location east of the main sewer line as close as possible to the intersection of the building drain line and the main sewer line. See attached redlined Figure 3-1.
- d. Collect a sample of sludge, if present, from the drainpipe leading from the sump to the sewer line and from any other drain lines connected to the sump. Analyze the samples for VOCs, SVOCs, DRO, GRO, TAL metals, and polychlorinated biphenyls (PCBs).
- e. Collect a soil sample from directly beneath the base of the sump floor. If field screening detects contamination by field screening, advance the soil boring until the extent of contamination has been defined. Analyze the soil sample(s) for TAL metals, VOCs, SVOCs, DRO, GRO, and PCBs. See attached redlined Figure 3-1.
- f. If the sludge sample and sump soil samples detect PCBs, analyze all soil samples for PCBs.

**Comment 13**

Section 3.3 (Summary of Intended Use of Previous Investigation Data), page 3-1 to 3-2, states, “[t]he primary use of the previous investigation data from SWMU 137 (WSMR-56) is to confirm that no releases of COCs to the site occurred from the sump or drainpipe. A comparison was performed of the Phase I RFI soil and sludge sampling results reported by IT Corporation (1992b) with the current NMED risk-based residential SSLs (NMED 2009b). The results show

Thomas A. Ladd  
May 2, 2011  
Page 7 of 11

that no COCs, except lead in the sludge sample, exceed the residential SSLs (Table 3-1).” NMED has reviewed IT Corporation’s Phase I RFI document to determine the completeness of the previous investigation. There is not enough information (e.g., laboratory data and soil survey data results), provided to show that no releases of COCs to the site occurred from the sump or drainpipe. In addition, paint shop operations continued after the investigation was conducted. Provide the additional information to support the statement above (*see* Comment 8).

#### **Comment 14**

Section 3.3 (Summary of Intended Use of Previous Investigation Data), page 3-2, paragraph 1 states, “[b]ecause the Phase I RFI reported the periodic removal of the sump sludge and a 2010 site visit reported no material in the sump, the comparison will be used as justification for not collecting additional samples associated with the sump, which has not been used for any purpose since the previous investigation in 1991.” Provide clarification that the sump has not been used since the investigation in 1991. The statement conflicts with Section 1.3.1 (Site Description and History) which states that “[currently] the sump contains trash, leaves, and some sediment that has accumulated through a hole in the metal cover.” Samples must be collected from the debris in and below the sump to verify that a release did not occur (*see* Comment 12).

#### **Comment 15**

Section 3.4 (Borehole Location Selection Criteria), page 3-2, paragraph 1 states that “[a]n attempt was made to locate the direction and extent of the drainpipe using a Schonstedt metal detector. However, evidence of the true extent of the pipe underneath the parking lot asphalt was ultimately inconclusive.” Verify the material composition of the pipe. If the pipe is not composed of a detectable material, conduct a video inspection to determine the true extent of the drainpipe. Also include a video inspection of the sewer line to verify that other buildings do not tie in to the sewer drain line.

#### **Comment 16**

Section 3.6 (Geographic Information System [GIS] Submittals) describes collection of geospatial information to manage project-relation spatial data. Describe what will be mapped using GIS and how it contributes to the investigation.

#### **Comment 17**

Section 4.1.3 (Quality Control Samples and Frequency), page 4-4 states, “[a]dditional soil and groundwater samples will be collected at a frequency of 10% for laboratory duplicates.” In Section 4.1.1.3 (Soil Boring Abandonment) the Permittee states, “five soil borings will not be completed as groundwater or vapor monitoring wells.” Section 17.1.4 (Groundwater Samples) states, “[g]roundwater samples will not be collected as part of the WSMR-56 investigation.” It is

Thomas A. Ladd  
May 2, 2011  
Page 8 of 11

not clear whether the Permittee intends to collect groundwater samples as part of the investigation. Indicate whether or not groundwater samples will or will not be collected during the investigation in the revised Work Plan.

**Comment 18**

Section 4.1.7 (Management of Investigation-Derived Waste [IDW]), pages 4-6 to 4-7, describe the management and disposal of IDW. All IDW documentation (e.g., amount of waste [solid and liquid] generated, manifests, and laboratory results) must be included in an appendix to the investigation report as required by Appendix 7 of the Permit.

**Comment 19**

Section 4.1.9 (Record Keeping) lists the field documentation the Permittee will be developing throughout the duration of the investigation. Add photo documentation (and video inspections, if conducted).

**Comment 20**

Remove Appendices A, B, and D from the Work Plan. Review Appendix 5 and Appendix 7, Section 2 of the Permit for a description of the kinds of information required in Work Plans and submit the required information in the revised Work Plan.

**Comment 21**

Appendix C (Background Data from Previous Investigations) contains boring logs and excerpts from the previous investigations. The excerpts included in Appendix C do not provide enough information to verify the completeness of the previous investigations. Provide additional information, including the laboratory data and soil vapor study data, in the revised Work Plan (see Comment 8 and 13).

**Comment 22**

In the revised Work Plan (and future documents), do not include figures and tables within the text of the document. Provide figures and tables behind the text (see Permit Appendix 7).

**Comment 23**

Table 3-1 (Phase I RFI Sludge and Soil Sampling Analytical Results (1991) Comparison with Current NMED Residential Soil Screening Levels) summarizes the 1991 Phase I RFI results and compares them to the NMED Residential SSLs.

- a. The citation for the SSLs are from the August 2009 NMED Technical Background Document. The most updated version of the SSLs table is dated December 2009. Compare the Phase I RFI data results with the December 2009 Table A-1 SSLs. If a SSL is not available for a specific analyte, follow the protocol provided in Appendix 3 of the Permit (*see* Comment 11). Update the comparison in the revised Work Plan.
- b. The SSLs on the table are incorrect. For example, the residential SSL for barium is listed as 156,000.00 mg/kg. The correct SSL for barium is 1.56 E+04 mg/kg. Check the other listed constituents of concern and correct any discrepancies in the revised Work Plan.

#### **Comment 24**

The following comments pertain to Figure 1-2 (SWMU 137 (WSMR-56) Site-Specific Location Map):

- a. Revise the figure to change the symbol of dark purple dashed line to “—x—” to depict the fence. The current symbol can be confused with the drain line symbol.
- b. Revise Figure 1-2 to show all of Building 1742 and label all SWMUs and AOCs within the revised view. Define and label all of the buildings within the figure, indicate all the connections to the sewer line and sump drainpipe from all the buildings, and show all utilities.
- c. Include the diameter of the drainpipe and the sewer line in the legend.
- d. Do not include photos on the figures. Photos must clearly show the site and provide the date the photo was taken. Label items on the photo (e.g., sump, drainpipe, and drain). Provide photos in a separate appendix, with the following views: “top view (with and without metal cover, before and after removing debris), “western view,” and “southern view.” Indicate the direction of flow from SWMUs 135 and 136 relative to the sump for the photos depicting the sump location.
- e. Indicate the direction of flow to the STP.

#### **Comment 25**

The following comments pertain to Figure 1-4 (Monitoring Well Locations in WSMR Main Post Area):

- a. Define and label all of the buildings on the figure.
- b. Provide the building number for the building north of MW-10.

- c. Identify and label all of the SWMUs and AOCs.
- d. Depict and label all of the utilities. Depict all floor drains and all connections to the sewer and sump drainpipe lines. Indicate the direction of flow for all of the drain lines.

**Comment 26**

The following comments pertain to Figure 1-5 (SWMU 137 (WSMR-56) Previous Investigation Sampling Locations):

- a. Define and label Building 1743.
- b. Identify and label all of the SWMUs and AOCs.
- c. Depict and label all of the utilities. Depict all floor drains and all connections to the sewer and sump drain lines. Indicate the direction of flow for all drain lines.
- d. The figure must be to scale.

**Comment 27**

The following comments pertain to Figure 3-1 (SWMU 137 (WSMR-56) Schematic of Proposed Sampling Locations):

- a. Define and label Building 1743.
- b. Identify and label all of the SWMUs and AOCs.
- c. Depict and label all of the utilities. Depict all floor drains and all connections to the sewer and sump drain lines. Indicate the direction of flow for all drain lines.
- d. Label all proposed sampling locations. Increase the figure size to include all of the information on the figure, if needed.
- e. The figure must be to scale.
- f. Include additional boreholes that must be sampled at the same depth and frequency as those in Section 4.1.1 (Soil Boring Advancement). See attached redlined Figure 3-1:
  - 1. Additional boreholes must be drilled east of the sewer drain line and 5 feet north of the sump. A soil sample must be collected from approximately 1 foot below

Thomas A. Ladd  
May 2, 2011  
Page 11 of 11

the drainpipe, and a second sample must be collected at the total depth of the borehole (10 feet bgs).

2. An additional borehole must be drilled through the middle of the sump. Investigation activities must be conducted in accordance with the methods included in Appendix 5 of the Permit (*see* also Comment 12c).
  
- g. Refer to construction drawings to determine the actual location of the drainpipe. Include the dimensions of the drainpipe (e.g., the diameter of the drainpipe and its depth below ground surface).

The Permittee must address all comments contained in this NOD and submit a revised Work Plan no later than July 1, 2011. The revised Work Plan must include 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 Work Plan must be submitted that identifies where all changes have been made to the Work Plan in red-line strikeout format.

If you have 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  
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