



BILL RICHARDSON
GOVERNOR

State of New Mexico **TA03**
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us



RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 17, 2005

David Gregory, Federal Project Director
Los Alamos Site Office
Department of Energy
528 35th Street, Mail Stop A316
Los Alamos, NM 87544

G. Pete Nanos, Director
Los Alamos National Laboratory
P.O. Box 1663, Mail Stop A100
Los Alamos, NM 87545

RE: COMMENTS REGARDING THE SAMPLING AND ANALYSIS PLAN (SAP) FOR ADDITIONAL CHARACTERIZATION OF PETROLEUM PRODUCT CONTAMINATION NEAR FORMER TA-16-7, THE TA-3-26 DIESEL FUEL OIL CONTAMINATION ASSESSMENT AND CHARACTERIZATION, AND THE RESPONSE TO NEW MEXICO ENVIRONMENT DEPARTMENT'S (NMED) LETTER CONCERNING THE CHARACTERIZATION REPORT FOR THE TECHNICAL AREA (TA) 21-57 ABOVEGROUND STORAGE TANK DIESEL FUEL OIL RELEASE SITE, LOS ALAMOS NATIONAL LABORATORY, EPA ID #NM0890010515

Messrs. Gregory and Nanos:

The New Mexico Environment Department (NMED) is in receipt of the Department of Energy and the Regents of the University of California (Collectively the "Permittees"), *Sampling and Analysis Plan (SAP) for Additional Characterization of Petroleum Product Contamination Near Former TA-16-7*, dated April 22, 2005, the *TA-3-26 Diesel Fuel Oil Contamination Assessment and Characterization* document, dated April 26, 2004, and the *Response to New Mexico Environment Department's (NMED) Letter Concerning the Characterization Report for the Technical Area (TA) 21-57 Aboveground Storage Tank Diesel Fuel Oil Release Site*, dated April 13, 2005, referenced by Project Numbers: LA-UR-05-3017, LA-UR-04-2932, and ENV-WQH: 05-072, respectively. NMED has reviewed these documents and has the following comments. Any comments requiring a response from the Permittees must be submitted to NMED within



5780

sixty (60) days of receipt of this letter.

I. Sampling and Analysis Plan (SAP) for Additional Characterization of Petroleum Product Contamination Near Former TA-16-7:

1) Section 1.4 – Data Review, Page 5:

Paragraph 1

Permittees' Statement: "If the inorganic compounds were representative of a release, the most likely source appears to be metal chips generated from the waterline disconnection activities. These activities involved cutting and subsequent repair of the waterline within the excavation."

NMED Comment: The Permittees must provide rationale to support the conclusion that the most likely source of inorganics in soil samples is metal chips from the waterline disconnection activities.

Paragraph 2

Permittees' Statement: "The only known sites of historical diesel fuel usage in the vicinity of the excavation are AOCs C-16-030 and C-16-031." "Based on a review of the historical structures and operations in this area, no discernable unit could be identified as a source of the contamination."

NMED Comment: The Permittees state later in this section (page 6) that there were other historical uses of petroleum products in the vicinity of TA-16-7, specifically operation of building 16-7 (steam plant) itself. As discussed in a conference call with the Permittees on May 3, 2005, there are discrepancies between the SAP and other historical documents, such as the 1990 SWMU Reports (LAUR 90-3400) and the July 1995 RFI Work Plan for OU 1082, regarding potential historical sources of contamination and historical structures. The Permittees must consider 16-033(a), 16-033(c) and building 16-7 as potential sources of contamination and propose additional sampling to exclude these sites as possible contaminant sources.

2) Section 2.3 – Sample Collection and Analysis, page 9, paragraph 2:

Permittees' Statement: "All analytical samples will be analyzed for diesel range total petroleum hydrocarbons (TPH-DRO) by method 8015M and Target Analyte Metals (TAL) by method 3050A."

NMED Comment: The Permittees state in Section 1.4 that "[b]ased on a review of the

historical structures and operations in this area, no discernable unit could be identified as a source of the contamination.” Therefore, in accordance with the NMED TPH Screening Guidelines, dated February 28, 2003 sites with petroleum products from unknown sources must be tested for VOCs, SVOCs, metals, and PCBs to determine if other potentially toxic constituents are present. NMED considers the initial SAP as a SWMU Assessment Report (SAR) in accordance with Section V.C of the March 1, 2005 Consent Order (Order). NMED has determined that there is need for further investigations at this site. Based on this determination, the Permittees must submit a supplemental Investigation Work Plan (IWP) in accordance with Section V.C of the Order. The supplemental IWP must propose additional sampling and analysis to address sampling required by the NMED TPH Screening Guidelines and the Order.

II. TA-3-26 Diesel Fuel Oil Contamination Assessment and Characterization

General Comment:

1) The Permittees must describe all SWMUs, AOCs, and any other potential source of contamination within the vicinity of Tank 26. The Permittees suggest in Section 7.2 that the release was historical; therefore, a more detailed discussion of potential sources of contamination, current or historical, is warranted. For example, the Sampling and Analysis Plan (SAP), dated July 15, 2003 explains that there is an AOC (03-036(j)) in the area of the tank, but it doesn't discuss why it's not associated with Tank 26, its viability as a potential source, its historic uses and/or periods of operation. The Permittees must also provide a map, which displays the locations of SWMUs, AOCs, other storage tanks, etc. in respect to Tank 26.

Specific Comments:

1) Figure 2 - Placement of Boreholes Around Tank SM-26, page 7:

NMED Comment: Section 6.0 states that the heaviest contamination was located in the vicinity of CZ-1 and CZ-2. According to Figure 2, borehole CZ-2 was clean. The Permittees must explain why two step-out perimeter boreholes were advanced if contamination was not observed in boring CZ-2. The advancement of borings CZ-1 and CZ-2 suggests to NMED that contamination was found.

2) Section 6.4 - Sample Analysis, page 9:

Permittees' Statement: “All samples were analyzed for TPH-diesel range organics (DRO) by method 8015A/B. The first and last analytical sample with a field analytical result above 100 ppm from each borehole was analyzed for TPH-DRO and the target analytes using

methods 8260/8310.”

NMED Comment: The Permittees state in Section 7.2 that “the source of the contamination was not readily apparent when the contamination was discovered” and that “it was suspected that the contamination was an historical release.” Therefore, in accordance with the NMED TPH Screening Guidelines, dated February 28, 2003 sites with petroleum products from unknown sources must be tested for VOCs, SVOCs, metals, and PCBs to determine if other potentially toxic constituents are present. NMED considers the initial Assessment and Characterization Report as a SWMU Assessment Report (SAR) in accordance with Section V.C of the March 1, 2005 Consent Order (Order). NMED has determined that there is need for further investigation at this site. Based on this determination, the Permittees must submit a Supplemental Investigation Work Plan (IWP) in accordance with Section V.C of the Order. The Supplemental IWP must propose additional sampling and analysis to address sampling required by the NMED TPH Screening Guidelines and the Order.

3) Section 6.5 - Core Sampling Under Tank, page 10:

Permittees' Statement: “The samples were tested using a PetroFLAG test kit for TPH. A sample collection log with the test results is provided in Appendix 4. No TPH above background levels was detected in the samples from beneath the tank.”

NMED Comment: The Permittees must explain why the core samples were not sent to an off-site laboratory for confirmatory analysis and why another core sampling location (four were proposed, only three completed) was not chosen when the electrical conduit was discovered in the space between the tank and the retaining wall on the east side of the tank. Additionally, the Permittees must clarify what they mean by “background levels for TPH”, given that there is no background value for TPH.

4) Section 6.7 - Air Quality Assessment, page 10:

Permittees' Statement: “The pump house was monitored for volatile organic compounds (VOCs) using a photoionization detector to determine if any vapors were accumulating in the building. Due to residual diesel fuel from previous maintenance activities, de-minimis losses from pumping, and organic lubricants used in the mechanical equipment in the building, vapors from the release would not be discernable from the “background” vapors inherent in the pump house.”

NMED Comment: The Permittees must explain in more detail how they conducted their air quality assessment in the pump house and which specific VOCs were found. Based on the information provided regarding activities performed within the pump house, there should not be any VOCs present in ambient air. Furthermore, there is no “background” value for VOCs.

5) Section 8.0 - Conclusions, page 11:

Permittees' Statement: "The contamination zone is above any fractures in the subsurface and there is no contaminant transport in fractures."

NMED Comment: The fact that the contamination is above all fractures in the subsurface is the concern. There may not be any current evidence of transport via fractures, however the possibility does exist. NMED agrees that the Permittees have defined the vertical and horizontal extent of contamination, but the Permittees have not identified the source of contamination. The Permittees must discuss their course of action regarding an attempt at identifying the source and remediation of the site.

II. Response to NMED's Letter Concerning the Characterization Report for the Technical Area (TA) 21-57 Aboveground Storage Tank Diesel Fuel Oil Release Site

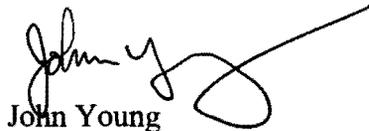
1) NMED Comment: The Permittees must clarify what NMED bureau gave them a "No Further Action" (NFA) designation for the *TA-21-57 Aboveground Storage Tank Diesel Release, Tier 1 Evaluation* and provide copies of the documentation granting the NFA. Based on conversations with the Petroleum Storage Tank (PST) Bureau, an NFA was not obtained for TA-21-57. NMED concurs that vertical and horizontal extent has been defined at this site; however, the Permittees must understand that there is 1) a possibility of contaminant migration and vapor intrusion and 2) 141,000 mg/kg (> 14%) of DRO was detected at 85 feet in boring VH-1. Based on the fact that future land use is unknown and there is residual diesel contamination at depth, NMED believes the Permittees must devise a method for tracking this site. NMED requires that the Permittees designate this site as an Area of Concern (AOC) and add it to their permit.

2) NMED Comment: The Permittees did not respond to specific comment #1 from NMED's February 16, 2005 response letter. NMED requires that the Permittees add DRO to the analytical suite at wells in the vicinity of the 21-57 AST. DRO sampling of nearby wells will aid in confirming that the contamination has not migrated laterally or vertically. This sampling must be addressed in the Interim Facility Groundwater Monitoring Plan.

Messrs. Gregory and Nano
June 17, 2005
Page 6

Should you have any questions, please contact Kathryn Chamberlain at (505) 428-2546.

Sincerely,

A handwritten signature in black ink, appearing to read "John Young", with a long, sweeping horizontal line extending to the right.

John Young
Geologist
Hazardous Waste Bureau

JY:kc

cc: K. Chamberlain, NMED HWB
S. Yanicak, NMED DOE OB, MS J993
L. King, EPA 6PD-N
K. Hargis, LANL RRES/DO, MS M591
N. Quintana, LANL E/ER, MS M992
D. McInroy, LANL E/ER, MS M992
file: Reading and LANL General '05