

TA03



Environmental Stewardship Division (ENV-DO)  
Water Quality & Hydrology Group (ENV-WQH)  
P.O. Box 1663, Mail Stop K497  
Los Alamos, New Mexico 87545  
(505) 665-1859/FAX: (505) 665-9344

Date: May 10, 2006  
Refer To: ENV-WQH: 06-091

Ms. Kathryn Chamberlain  
Environmental Scientist  
Hazardous Waste Bureau  
New Mexico Environment Department (NMED)  
2905 Rodeo Park Drive East, Bldg. 1  
Santa Fe, NM 87505-6303



**SUBJECT: ADDENDUM TO SUPPLEMENTAL SAMPLING AND ANALYSIS PLAN (SAP) FOR DIESEL CONTAMINATED SOIL NEAR THE TA-3-26 ABOVEGROUND STORAGE TANK (AST)**

Dear Ms. Chamberlain:

Thank you for reviewing the *Supplemental Sampling and Analysis Plan Defining Nature of Contamination Near Fuel Storage Tank TA-3-26* submitted to NMED on March 6, 2006. Enclosed for your review are revised pages addressing NMED-HWB's comments that were discussed with ENV-WQH staff on May 4, 2006. The Laboratory intends to begin additional characterization work as soon as possible.

Please contact Mark Haagenstad at (505) 665-2014 or Mike Saladen at (505) 665-6085 if additional information would be helpful. Please let us know if you would like to meet to discuss this additional work.

Sincerely,

Steven Rae  
Group Leader  
Water Quality & Hydrology Group



SR:MH/lm

Enclosure: a/s

Cy: Bret Lucas, NMED/SWQB, Santa Fe, NM, w/enc.  
Chris Vick, NMED/GWQB, Santa Fe, NM, w/enc.  
John Young, NMED/HWB, Santa Fe, NM, w/o enc.  
Lorena Goerger, NMED/PSTB, Santa Fe, NM, w/o enc.  
Steve Yanicak, NMED/OB, w/o enc., MS J993  
Gene Turner, NNSA/LASO, w/o enc., MS A316  
Kenneth Hargis, ENV-DO, w/o enc., MS J591  
Doug Stavert, ENV-DO, w/o enc., MS J591  
Victoria George, ENV-ES, w/o enc., MS J591  
Tony Grieggs, ENV-SWRC, w/o enc., MS K490  
Tina Sandoval, ENV-WQH, w/o enc., MS K497  
Mike Saladen, ENV-WQH, w/o enc., MS K497  
Mark Haagenstad, ENV-WQH, w/o enc., MS K497  
David Padilla, FM-UI, w/o enc., MS K718  
Jerome Gonzales, FM-UI, w/o enc., MS K718  
James Stanton, SSS-AE-V02, w/o enc., MS A199  
Bruce Baumgartner, SSS-AE-V02, w/o enc., MS A199  
Phil Wardwell, LC-ESH, w/o enc., MS A187  
ENV-WQH File, w/enc., MS K497  
IM-9, w/enc., MS A150

## **1.0 INTRODUCTION**

Eberline Services/KSL-AENV has prepared this supplemental sampling and analysis plan (SAP) to describe sampling and contaminated-material handling activities associated with soil contamination discovered near the above ground storage tank (Tank SM-26) at the TA-3 Power Plant at Los Alamos National Laboratory (LANL). Sampling and analysis is required to further define the nature of contamination at the site in response to comments received from the New Mexico Environment Department (NMED) on the TA-3-26 Diesel Fuel Oil Contamination Assessment and Characterization Report in a letter from John Young of the NMED Hazardous Waste Bureau dated June 17, 2005. Specifically, sample analysis following the protocol for petroleum hydrocarbons from an unknown source has been requested because existing site knowledge was inadequate to confirm the source of the previously detected contamination.

This SAP is organized into three main sections: project description, a work plan and quality control procedures. The work activities for this SAP include:

- Mobilization
- Drilling
- Core Sampling
- Sample Collection and Analysis
- Project Report Preparation
- Material Management

### **1.1 Scope of Work**

The scope of work for this project is to drill five investigative boreholes, adjacent to previous boreholes, in the area around Tank SM-26 to collect soil samples for the parameters required to be analyzed at sites with contamination suspected to be from unknown sources in the NMED Soil Screening Guidelines Revision 3.0, August 2005. Specific activities to accomplish the drilling and core sampling are provided in the Work Plan Section of this document.

The purpose of this SAP is to document the objectives, rationale and procedures for collecting, analyzing, and managing environmental samples taken from this site. The objective of the sampling is to determine if there are VOC, SVOC, metals, or PCB constituents present at locations previously identified as containing TPH contamination. Sampling methods for the investigation are in accordance with the objectives and procedures described in Chapter 1, Soil and Groundwater, Sampling and Disposal of the Guidelines For Corrective Action (New Mexico Environment Department Petroleum Storage Tank Bureau, March 13, 2000). This plan outlines the methods and procedures to collect samples and gather data of sufficient quality and quantity to adequately verify the nature of the contaminants discovered in soil to the north and east of Tank SM-26 at the TA-3 Power Plant. The project will receive appropriate LANL reviews and will be performed

**Table 3-1  
Sample Points and Rationale**

<b>Location</b>	<b>Depths (feet bgs)</b>	<b>Rationale (Analytical values in TPH-DRO [mg/kg])</b>
CZ1	10, 15, 20	CZ1 showed the highest levels of contamination. If contaminants other than fuel oil are involved, this is where they would most likely be seen. Contamination was present at 10 and 15 feet in CZ1 but dropped below the NMED Soil Screening Level (SSL) at 20 feet. Samples at 10 and 15 feet will check for other contaminants and the sample at 20 feet will provide a vertical bound of any of the additional analytes.
CZ2	5, 10, 15	CZ2 had contaminant levels detected but below SSLs at 5 and 10 feet and no significant contamination at 15 feet (1.9 mg/kg). If contaminants other than fuel oil are involved they would most likely be seen at depths of 5 and 10 feet. Samples at all depths will determine if any other contaminants are present and will provide horizontal and vertical bounds of the additional analytes at the southeast edge of contamination.
P2	5, 10, 15	P2 had contaminant levels detected but below SSLs at 10 feet and no significant contamination at 5 feet (2.2 mg/kg) and 15 feet (2.6 mg/kg). If contaminants other than fuel oil are involved they would most likely be seen at a depth of 10 feet. Samples at all depths will determine if any other contaminants are present and should provide horizontal and vertical bounds of the additional analytes at the northwest edge of contamination.
P12	5, 10, 15	P12 had no significant contamination at 5 feet (1.8 mg/kg), 10 feet (1.2 mg/kg), or 15 feet (1.8 mg/kg). Samples at all depths will show if any contamination is present and should provide horizontal and vertical bounds of the additional analytes at the northwest edge of the contamination.
P14	5, 10, 15	P14 had no significant contamination at 5 feet (1.9 mg/kg), 10 feet (1.9 mg/kg), or 15 feet (3.4 mg/kg). Samples at all depths will show if any contamination is present and should provide horizontal and vertical bounds of the additional analytes at the northeast edge of the contamination.

### 3.3 Sample Collection and Analysis

Table 3-2 lists the analysis to be performed on each sample along with the minimum sample size and container type and analytical methods. Additional sample containers or volumes may be required to cover contingencies at the discretion of the SMO and contract laboratory. Sample containers will be provided by the SMO.