

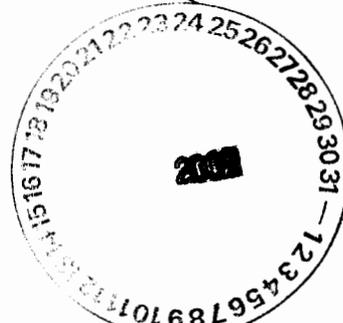
TA-21



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Date: April 19, 2002
Refer to: RRES-WQH: 02-153

Mr. John Young
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87505



SUBJECT: STATEMENT OF WORK FOR REMEDIATION OF THE DIESEL SPILL AT TA-21 STEAM PLANT

Dear Mr. Young:

Transmitted here within is the Statement of Work for the Remediation of the Diesel Spill at Technical Area 21 Steam Plant. We look forward to your comments and in working with you to complete this project.

Sincerely,

Mike Saladen
Water Quality & Hydrology Group

MS:RR/tml

Enclosures: a/s

- Cy: Steve Yanicak, NMED/DOE/OB, Santa Fe, NM, w/enc.
- Joe Vozella, DOE/OLASO, w/enc., MS A316
- Randi Allen, DOE/OLASO, w/enc., MS A316
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- Barbara A. Stine, ADO, w/enc., MS A104
- Beverly A. Ramsey, RRES-DO, w/enc., MS J591
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LOS ALAMOS NATIONAL LABORATORY
STATEMENT OF WORK

Dated 4/2/2002

FOR

Remediation of Diesel Spill at Technical Area 21 Steam Plant

1.0 INTRODUCTION

This statement of work presents the requirements for additional characterization assessment and remediation of a diesel spill at the Technical Area (TA) 21 Steam Plant. The characterization and remediation should incorporate New Mexico Environment Department Underground Storage Tank (UST) regulations as a guideline for this work. This work is to be accomplished by the Subcontractor in a team with LANL. The UST activities include assistance in the characterization of the diesel spill site, preparation of an alternatives analysis for remediation of the site, and remediation of the site.

2.0 SITE BACKGROUND

The last recorded and verified delivery of diesel fuel made to the 21-57 storage tank was in 1996. The tank fuel level was recorded as near full. On May 12, 2000, the JCNNM TA-21 Steam Plant supervisor took a sounding of the fuel level in the tank and measured 48,357 gallons of fuel. On February 15, 2002, Steam Plant personnel took a sounding measurement of the tank and found that the tank contained approximately 3-inches of fuel (approximately 258 gallons). The result of the pressure tests on the transmission lines were that the supply line was taking up to 80 pounds per square inch gauge pressure (psig) and the pressure dropped to zero within one minute, indicating that the line integrity had been compromised. Pressure test results for the return line were inconclusive because the line was not properly isolated. However, an additional pressure test performed on February 21, 2002, showed that the return line integrity had also been compromised when the line could not be pressurized above 40 psig and at 40 psig, the pressure immediately fell to zero. On Friday, February 15, 2002, JCNNM Utilities personnel inspected the above ground sections of the fuel transmission lines and the diesel tank and found no evidence of leakage. On February 15, 2002, the plant supervisor secured operations and made notifications to LANL Facilities and Waste Operations-Utilities and Infrastructure (FWO-UI) facility management and to the Emergency Management Office. On February 19, 2002, FWO-UI and JCNNM began a field investigation to determine if the diesel fuel had leaked from the underground transmission lines or if the contents of the tank had been pumped and transferred to another location.

On Tuesday, February 19, 2002, an underground hydrocarbon leak detector probe was used along the length of the transmission lines and no hydrocarbon vapors were detected. That same day, an extensive search of accountability records associated with the diesel oil inventory discrepancy was initiated and the results are still pending. On

Wednesday and Thursday, February 20 & 21, 2002, 10 potholes were excavated along the length of the transmission lines. A sheen and diesel odor was noted in one of the potholes and a diesel odor was noted in another pothole. All other potholes showed no evidence of diesel contamination. Composite samples were taken from the two suspect potholes and the laboratory analysis for total petroleum hydrocarbons (TPH) showed 120 parts per million (ppm) and 280 ppm. On February 19, 2002, ESH-18 conducted a field investigation to determine if watercourses in the vicinity of the site had been impacted by the apparent release. No visible evidence of petroleum contamination was observed.

On February 21, 2002, ESH-18 made a verbal notification to the NMED, EPA, and to the National Response Center of an unexplained discrepancy in the volume of diesel fuel in a storage tank at TA-21.

On February 22 & 23, 2002, soil was removed to expose all underground diesel fuel lines and mechanical devices associated with the fuel lines. The excavation was completed to enable personnel to inspect the condition of the lines, to visually inspect for contamination (soil staining), and to collect composite samples from areas of concern. The inspection resulted in the discovery of 7 small holes along a short section of the supply and return lines. However, some of the holes found may have been resultant from the pressure testing. Visual inspection of the soil showed evidence of soil staining. Fourteen composite samples were collected and analyses showed 8 samples with varying levels of TPH (diesel range organics) contamination (26,000 ppm, 19,000 ppm, 1100 ppm, 730 ppm, 250 ppm, 210 ppm, 78 ppm, and 29 ppm).

On February 22, 2002, additional line pressure testing was performed on the supply line in an effort to isolate the length of line that failed pressure testing. Test results indicated that an approximate 30-foot section of the supply line had extensive corrosion and as mentioned above, several holes were discovered. On February 23, 2002, water samples were collected by ESH-18 from regional production wells. Preliminary results did not indicate contamination from this activity.

On February 26, 2002, the FWO-UI facility manager concluded that a potential discharge of up to 48,000 gallons of diesel fuel might have occurred from storage tank 21-57 between the dates of May 2000 to January 2002. The source of the potential discharge is from a below ground 1 1/2-inch mild steel 80-foot long supply transmission line connected to a 50,000 gallon above ground diesel fuel storage tank that is connected to the TA -21 Steam Plant. The supply transmission line was kept valved open where the line was under static oil pressure. The diesel fuel is used as a secondary fuel source in boiler operations and is used infrequently for steam production.

On February 27, 2002, a Sampling and Mitigation Plan was finalized by JCNNM and approved by LANL. The plan was submitted to the NMED on February 27, 2002 for review and concurrence. Highlights of the plan include: 1) excavation of the suspected contaminated area to determine its extent, 2) extensive sampling and analysis which includes samples taken from deep bore hole drilling, and 3) remediation efforts.

As of March 7, 2002, a total of 35 samples have been taken from a 5 x 80 foot area where diesel fuel contamination is suspected. Fifteen samples show diesel range organics above 100 ppm. Five of the fifteen samples show contamination levels greater than 10,000 ppm and these 5 samples have been isolated to a 40 square foot area. In order to continue characterization of the suspected contamination area, an outside geotechnical drilling contractor has been retained to perform sample drilling. The contractor has completed drilling an angular borehole beneath the floor of the Steam Plant to determine if contamination is present beneath the building. An April 2, 2002 update on characterization is summarized in Attachment A. Figures showing underground utilities and provisional sampling results are attached in Attachment B. Preliminary borehole logs are attached in Attachment C. All data in the SOW should be considered provisional data until validated by ESH-18.

3.0 APPLICABLE TECHNICAL DOCUMENTS

Relevant documents concerning this site include:

- (1) 20 NMAC 5 Underground Storage Tank Regulations
- (2) 20 NMAC 6.2.1203 Water Quality Control Commission Regulations
- (3) Occurrence Report, dated 2/27/2002
- (4) GEL faxed data reports
- (5) Enviro-Drill Core Logs
- (6) JCNNM Data Report

4.0 GENERAL REQUIREMENTS

In completion of all subtasks under this subcontract the Subcontractor shall:

- Strictly adhere to all applicable ER Project, Laboratory and DOE requirements (e.g. ES&H, Integrated Safety Management, etc., that are prescribed by Laboratory Performance Requirements and Laboratory Implementation Requirements);
- Perform all work under Laboratory policies, procedures and requirements (e.g., Laboratory Implementation Requirements, Laboratory Implementation Guidance) or have a Quality Assurance Program that meets the requirements of DOE Order 414.1A, Quality Assurance, and has been reviewed and approved by the ER Project's Quality Program Office prior to the commencement of work. The Subcontractor shall develop and/or adopt ER quality procedures (QPs) and standard operating procedures (SOPs) as necessary prior to commencing work.
- Submit copies of records regardless of physical form generated in connection with work performed under this Subcontract to the ER Project Records Processing Facility (RPF) in accordance with applicable ER Project procedures. A copy of these documents must also be submitted to the UTR at the time such documents are submitted to the RPF. A copy of the transmittal cover letter shall be sent to the ER Procurement Representative.

- Provide an electronic (disk) version of all final plans and reports using Microsoft Office software.
- Ensure that personnel meet the stated qualification requirements.
- Notify the University Technical Representative (UTR) of any issues that require communications with NMED, DOE or other external groups and coordinate all interactions through the UTR.

All document deliverables will:

- Be delivered to the requester in electronic format using Microsoft Word 97 software (if diskettes or other portable media are used, they must be compatible with IBM-PC machines);
- Provide tables and text in Microsoft Office Applications unless another format is specifically approved by the requestor, and that approval must be documented (exceptions to this policy are: line drawings and maps should be submitted as Adobe Illustrator files and photographs as Adobe Photoshop files);
- Be grammatically correct;
- Be internally consistent;
- Be coherent-the deliverable document will possess a logical flow from section to section or from background information through results to the conclusions drawn;
- Be readable-the deliverable document must be written and formatted in a manner that allows the requester or other reader to easily extract relevant or important information and follow the evidence of the document" argument through to its conclusion; and
- Be comprehensive-the deliverable document will include all relevant information and data necessary to make it a stand-alone, complete document; extensive references (the SOW should provide the subcontractor with document-specific parameters) to existing documents is unacceptable unless approved by the requester, and that approval must be documented.

5.0 TASK SPECIFIC REQUIREMENTS

Task 1: Data Analysis

The Subcontractor shall review the existing characterization data and determine if any additional data is required for determining the nature and extent of diesel contamination and for remediation. The subcontractor shall meet with FWO, ESH-18 and regulatory

compliance personnel and the UTR and determine the additional data required to be obtained by ESH-18 to support design of a soil treatment system.

Task 2: Corrective Action Plan Development

The Subcontractor shall assess the characterization data, review site geology, hydrogeology and subsurface conditions (Attachment 2), and prepare a 5-page white paper that proposes the most cost effective remedy for remediating the diesel spill based on results of the Risk-Based Evaluation of Petroleum Releases described in the NMED UST Bureau Guidelines for Corrective Action under Section 1208.D of 20NMAC 5.12. The Subcontractor shall estimate the volume of discharge based on the site characterization.

The Subcontractor shall make every effort to not restrict operating requirements of the steam plant during winter months. The Subcontractor shall specify whether or not steam is required for soil remediation. Upon approval of the white paper recommendations by the UTR, the subcontractor shall prepare a corrective action plan for submittal to NMED that describes the design, installation and operation of the soil treatment system.

Assumptions: ESH-18 personnel will make all notifications and submit all corrective action plans to NMED. ESH-18 personnel will provide provisional data (and Level 4 validated data within 70 days) for the characterization phase of the work. Steam will be available from the steam plant, if required for soil cleanup.

Task 3: Field Activities –

Upon concurrence of the plan by NMED and authorization to proceed by the UTR, the Subcontractor shall design, install and operate the soil treatment system. NMED permits must be obtained prior to commencing fieldwork.

Pre-Field Activities

The Subcontractor shall:

- In accordance with the LANL ER Project Health and Safety Plan, revision 2, prepare a site specific health and safety plan (SSHASP) for the diesel spill with task hazard analyses for all tasks to be conducted in the field
- Resolve comments from LANL health and safety reviewers
- In accordance with the approved plan, conduct all activities required to support the readiness review including:
 - completion of all items on the readiness review checklist including conducting the review of personnel training records, obtaining required permits,
 - prepare the waste characterization strategy form (WCSF), and
 - preparation of a network diagram for the fieldwork showing how the work is planned to proceed

Mobilization and Field Activities

The Subcontractor shall:

- Mobilize equipment and prepare the site (including any necessary stormwater controls/BMPs)
- Provide labor, material and equipment to remediate the diesel spill.
- Prepare the evaluation reports required under Section 1208.D for the UTR.
- Upon completion of remediation activities, the subcontractor shall remove equipment from the site and restore the site.
- Manage all environmental media and wastes in accordance with all applicable regulations and DOE/LANL/ER implementing requirements, including but not limited to: RCRA/HSWA, 20NMAC4.1, 20NMAC9.1; CWA, 20NMAC6.2; TSCA; CAA.
- Collect and submit waste characterization samples for laboratory analysis within 3 of days of generation
- Coordinate with the Waste Management Coordinator for waste management and transportation of New Mexico Special Waste to the Rio Rancho Landfill
- Ensure that all returned samples, whether for site or waste characterization, are properly managed, characterized, and disposed.
- Cooperate with LANL and ER Project waste management personnel to ensure timely correction and documentation of all deficiencies related to waste management and non-compliance.
- Keep the project coordinator or team leader for this task informed of any waste management issues or problems.
- Ensure site control, including support areas, to prevent unauthorized entry by workers or the public, using fences or other appropriate measures.

Assumptions: Confirmation samples will go through the ER Project Sample Management Office (SMO). The SMO will provide validated data to the Subcontractor.

Task 4 Reports

The subcontractor shall prepare a report describing the treatment of contaminated soil for submittal to NMED in accordance with Section 1208.D requirements. The Subcontractor shall participate in a peer review of the report, prepare responses to comments and incorporate and deliver a hardcopy and electronic copy of the final report to the UTR.

6.0 DELIVERABLES

The Subcontractor shall provide:

- A white paper report for remediation of the diesel plume within 30 days of issuance of notice to proceed,
- A plan for submittal to NMED that describes (1) the nature and extent of contamination and results of the risk-based evaluation (a Tier One, Tier Two or Tier

Three Report as specified in the UST regulations) and (2) design, installation and operation of the soil treatment system.

- Approved SSAHSP, SWPPP, FTA, ESHID and WCSF. Two copies of each of these documents shall be delivered to the UTR prior to the readiness review,
- All reports required under Section 1208 D of NMAC 5 and 20.6.2 NMAC,
- An updated project work schedule that outlines completion dates for significant milestones associated with the project. The schedule will include all tasks described in this SOW. The schedule shall be delivered to the UTR within 15 calendar days after award of this subtask,
- Monthly Accrual Reports to the Budget Analyst per the schedule (provided to the Subcontractor in the beginning of the fiscal year - contact the Budget Analyst for specific dates) that detail the costs accrued under this subtask, including a detailed breakout of the personnel hourly costs charged against each task and a monthly summary of activities performed against each task,
- Handwritten and electronic field logbooks and a field summary report shall be delivered to the UTR within 60 days of completion of field activities, and
- Draft and final copies of the final report describing the treatment of contaminated soil.

7.0 GOVERNMENT FURNISHED PROPERTY

FWO will work with the Subcontractor to provide steam, water, electricity and use of the locker room. The Subcontractor shall provide an estimate of maximum steam demand.

8.0 SPECIAL CONSIDERATIONS

None.

9.0 PERIOD OF PERFORMANCE

April 15, 2002 – September 30, 2002