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Hazardous Waste Bureau

Los Alamos
NATIONAL LABORATORY

Environmental Protection Division
Environmental Compliance Programs (ENV-CP)
PO Box 1663, K490
Los Alamos, New Mexico 87545
505-667-0666

Date: JUL 11 2013
Symbol: ENV-DO-13-0067
LAUR: 13-25131

Ms. Susan von Gonten
Petroleum Storage Tank Bureau
New Mexico Environment Department
2905 Rodeo Park Drive, Building 1
Santa Fe, NM 87505

Dear Ms. von Gonten:

SUBJECT: ADDITIONAL INFORMATION ON THE PROPOSED BIOREMEDIATION OF CONTAMINATED SOIL AT THE RADIOLOGICAL LABORATORY/UTILITY/OFFICE BUILDING (RLUOB) ABOVEGROUND STORAGE TANK DIESEL RELEASE SITE #4670

In an email dated July 5, 2013, the New Mexico Environment Department (NMED) requested additional information on the Los Alamos National Security, LLC (LANS) July 2, 2013 work plan for application of a bioremediation material at the Radiological Laboratory/Utility/Office Building (RLUOB) Aboveground Storage Tank (AST) Diesel Release Site, #4670. The following provides responses to the NMED staff request for additional information:

- ***A site map to scale showing the location of where the Micro-Blaze will be applied.***
  A site map drawn to scale is enclosed (Figure 1).

- ***Details of the proposed application by hand spraying, including the dilution and volume of Micro-Blaze, the criteria for selecting the application sites, and the approximate surface area of application.***
  The details of the proposed application, including the dilution and volume of Micro-Blaze®, are provided in the enclosed work plan. The product will be applied to the entire bottom of the excavation floor and sidewalls adjacent to the tank. This approach will include application on the visibly stained areas (Figure 2) as well as the non-stained areas. The approximate surface area of application is 327 ft^2.

- ***A site map depicting proposed soil sampling locations post application and prior to backfilling***
  The post application sample locations will at the three previous sampling locations where the highest Total Petroleum Hydrocarbon-Diesel Range Organics (TPH-DRO) concentrations were

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detected and reported to NMED. The enclosed site map shows the proposed sampling locations (Figure 1).

- ***A detailed explanation of how the soil samples will be collected and what analyses will be performed.***
  The samples will be collected following EPA methods using a sampling scoop, shovel and/or hand auger from the upper 6 inches of the excavation surface. Samples will be analyzed for Total Petroleum Hydrocarbon-Gasoline Range Organics (TPH-GRO), TPH-DRO, semi-volatile organics, and benzene, toluene, xylene, ethyl benzene (BTEX). The enclosed work plan provides further information on the sampling method and the chemical analyses.

- ***The purpose of this corrective action.***
  The earthen structural support at the west end of aboveground storage tank concrete pad and under the numerous utility lines has been reduced due to the open excavation pit. With the summer rains, LANS is concerned the tank, tank pad, tank fuel lines and/or utility lines may be destabilized from potential erosion caused by precipitation runoff into the excavation. Therefore, backfilling the excavation would reduce this risk of destabilization while NMED continues to evaluate LANS's April 2013 preliminary assessment report. In addition, the application of the Micro-Blaze® will provide initial bioremediation of the residual contamination and likely enhance any naturally occurring attenuation of the residual contamination on a longer term basis.

As stated in LANS's July 2, 2013 work plan, we would like to begin the bioremediation product application during the week of July 15, 2013. If you have any questions, please contact Mr. Albert Dye of the Environmental Compliance Programs (ENV-CP) at dyea@lanl.gov or at (505) 667-4715.

Sincerely,

A R Grieggs

Anthony R. Grieggs
Group Leader
Environmental Compliance Programs, (ENV-CP)
Los Alamos National Security, LLC

ARG:AD/ms

Enclosure: USEPA, Oil Program Center, Technical Product Bulletin #B-41

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ENCLOSURE 1

RLUOB Work Plan for Bioremediation

ENV-DO-13-0067

LAUR-13-25131

Date: JUL 1 1 2013

Addendum to the Work Plan For The Removal Of Soils Contaminated With Diesel Fuel Released From RLUOB Aboveground Storage Tank 55-560 560 (LAUR-13-20652) For Bioremediation Of Contaminated Soil At The Radiological Laboratory/Utility/Office Building (RLUOB) Aboveground Storage Tank Diesel Release Site #4670

To provide in-situ remediation of the residual diesel-contaminated soil resulting from the release of diesel fuel from AST 55-560, a commercial bioremediation product (Micro-Blaze® Emergency Liquid Spill Control) will be applied with a hand sprayer to the surfaces of the lower excavation (portion of the excavation with a approximate depth of 7.5ft) at a rate recommended by the product manufacturer on a daily basis (weekdays) for period of two weeks. The approximate surface area of application is 327 ft^2. As recommended by the manufacturer, a 6% Micro-Blaze® solution (6 parts Micro-Blaze ®, 94 parts water) will be applied a rate of one gallon of Micro-Blaze® concentrate per 10 gallons of contaminated soil. Based upon the calculations used to estimate the volume of diesel removed with the soil previously excavated (ENV-DO-13-0007, LAUR-13-24047), approximately nine gallons of Micro-Blaze concentrate will be used during the application period. LANS plans to begin the application on July 15, 2013. Additional information on the product may be obtained from the US Environmental Protection Agency Emergency Management web site:
http://www.epa.gov/osweroe1/content/ncp/products/microbla.htm.

Following application of the Micro-Blaze Emergency Liquid Spill Control, three verification samples will be collected from the surface of the excavation at previously sampled locations (Sample Locations #1, #3 and #6) from a depth of 0" to 6" following EPA methods. Sample splits will be shared, if requested, with the NMED-PSTB. The NMED-PSTB will be notified at least four days prior to the expected date of sample collection. By selecting the previously analyzed locations with the highest Total Petroleum Hydrocarbon (TPH) concentrations, the efficacy of the bioremediation product application may be estimated. Samples will be submitted for benzene, toluene, xylene, ethyl benzene (BTEX), semi-volatile organics, TPH Gasoline Range Organics (TPH-GRO), and TPH Diesel Range Organics (TPH-DRO) analysis and samples will be submitted for analysis on a 5-day turn-around time.

The analytical results of the sampling will be provided to the NMED.

Following the sample collection, the excavation site will be backfilled with clean fill material. Areas around the skid pump transition sump and above the fuel lines may remain open to facilitate possible operational repairs/modifications to the AST pipelines and sump.

Spill cleanup activities will be conducted in accordance with applicable LANL, NMED-PSTB, OSHA, EPA and DOE requirements.

Figure 1: Area of Micro-Blaze Application

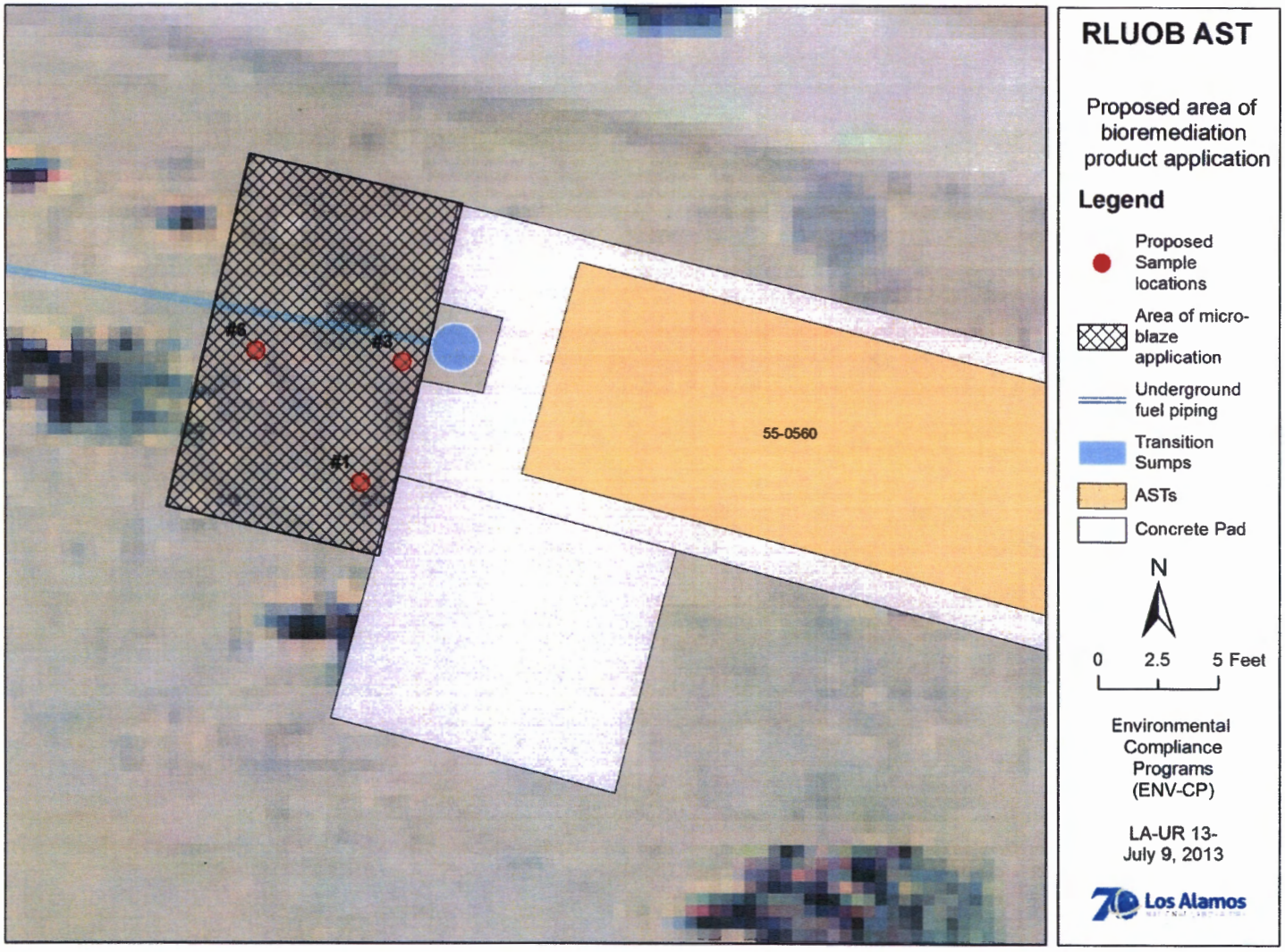

Figure 2: Photograph of excavated area