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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

May 27, 2016

John P. McCann
Acting Division Leader
Environmental Protection & Compliance Division
Los Alamos National Security, LLC
PO Box 1663, K490
Los Alamos, New Mexico 87545

David S. Rhodes
Supervisor, Soil & Groundwater Remediation
Environmental Management
Los Alamos Field Office
U.S. Department of Energy
3747 West Jemez Road
Los Alamos, New Mexico 87544

RE: Approval with Modification of Workplan #4 for Treatment and Land Application of Groundwater – TAs 09 and 16, Los Alamos National Laboratory, Discharge Permit DP-1793

Dear Messrs. McCann and Rhodes,

On March 23, 2016, the New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) received a workplan from DOE/LANS (the Permittees) for the land application of treated groundwater at Technical Areas (TA) 09 and 16. The workplan is required by Condition 3 of Discharge Permit 1793 (DP-1793) for activities regulated under the permit, and addresses the extraction, treatment, and land application of high explosives (HE) contaminated groundwater at the referenced TAs.

The workplan (WP #4) proposes the discharge of treated groundwater from three aquifer tests designed to investigate the occurrence and potential remedial alternative for HE contamination in the deep-perched groundwater aquifer associated with the former 260 Outfall at TA-16. In addition to the discharge of aquifer test waters, WP #4 proposes to discharge treated groundwaters generated during well development of Well CdV-9-1(i). These activities will be conducted as specified in the *Work Plan of Intermediate Groundwater System Characterization at Consolidated unit 16-021(c)-99.* NMED's Hazardous Waste Bureau approved this plan in a letter dated October 13, 2015.

The primary contaminant of concern associated with the subject groundwater, and the only contaminant expected to be above regulatory or permit standards, is hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX). Also present in the investigation area groundwater are low concentrations of multiple HE compounds and organic compounds, all measured to be significantly below associated maximum contaminant levels.

All groundwater subject to this workplan will be treated with granulated activated carbon (GAC) prior to being discharged to specific land application areas as permitted under DP-1793. Monitoring shall ensure that treated groundwater contaminate concentrations do not exceed 90% of the 20.6.2.3103 NMAC numeric standards or do not exceed 90% of the numeric standards established for tap water in Table A-1 of NMED's *Risk Assessment Guidance for Site Investigation and Remediation* for 20.6.2.7.WW NMAC toxic pollutants, *e.g.*, RDX.

The subject groundwater wells are located in the Canon de Valle watershed within T119N/R06E/S29, S30, S31, S32 and T119N/R05E/S36. The depth to the regional aquifer beneath the proposed land application sites is approximately 1200 feet below ground surface. The direction of groundwater flow beneath the site is generally to the southeast.

A copy of the proposed WP#4 was posted on LANL's Electronic Public Reading Room on March 29, 2016. In accordance with DP-1793 Condition 3, proposed WP#4 was subject to public comment for a period of 30 days. Comments received have been considered in the preparation of this response.

Groundwater discharges associated with WP #4 shall be performed in accordance with the Workplan and are subject to all conditions of DP-1793. Workplan #4 is approved as submitted with the following modifications:

1. The Permittees shall revise the land application zone map (Enclosure 3) removing all areas exceeding the 5% slope limit.
2. Six months prior to the end of the term of the discharge permit (July 27, 2020) and at the termination of discharge and final closure under the requirements of DP-1793, the Permittees shall measure the concentration of RDX and all other contaminants of concern in soils from a representative location in each land application zone. Analyses of these soil samples shall be performed by an off-site, independent, NELAP-accredited analytical laboratory. The Permittees shall submit an associated workplan for NMED approval at least 60 days prior to the date of the required soil sampling.

Within 60 days of cessation of the discharge authorized under this workplan, the Permittees shall submit a Discharge Report in accordance with DP-1793, Condition 8. If during the current term of DP-1793 all treatment system compliance sampling measures are below the method detection limit for RDX, the sampling and analysis requirements above shall not be effective.

Approval of WP#4 does not relieve the Permittees of the responsibility to comply with any other applicable federal, state, and/or local laws and regulations. This approval also does not relieve the Permittees of liability should operations associated with this workplan result in actual pollution of ground or surface waters.

If you have any questions, please contact Steve Pullen at (505) 827-2962. Thank you for your cooperation.

Sincerely,

Michelle Hunter, Chief
Ground Water Quality Bureau

MH:SP

cc (e-version):
James Hogan, NMED/SWQB
John Kieling, NMED/HWB
Steven Yanicak, NMED/DOEOB
Steven Huddleson, NMED/GWQB
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