



**NEW MEXICO
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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

May 24, 2016

ESHID-601532

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 #3 for Treatment and Land Application of Groundwater at TA-05, Los Alamos National Laboratory, Discharge Permit 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 continued land application of treated groundwater at TA-05. 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 chromium contaminated groundwater from Mortandad and Sandia Canyons during calendar year 2016. Calendar year 2015 discharges of a similar nature were authorized under Workplan #2, which was approved by NMED on October 8, 2015.

The workplan (WP#3) identifies three activities that produce potentially contaminated groundwater requiring treatment and discharge: (1) pumping at extraction well CrEX-1; (2) development, testing, and pumping at extraction well CrEX-3 and injection wells CrIN-1 through CrIN-5; and (3) purging of chromium plume monitoring wells and pumping of piezometers. These activities are conducted as specified in the *Interim Measures Work Plan for Chromium Plume Control*, May 26, 2015, and the *Work Plan for Chromium Plume Center Characterization*, July 28, 2015. NMED Hazardous Waste Bureau approved these plans for implementation in a letter dated October 15, 2015.

Specific monitoring of the extraction, treatment, and distribution systems will be completed to ensure proper procedures are maintained. Operational monitoring of the treatment system will be conducted to ensure proper process control, and regular compliance sampling will be reported in accordance with DP-1793, Conditions 8 and 9.

A copy of the proposed WP#3 was posted on LANL's Electronic Public Reading Room on March 29, 2016. In accordance with DP-1793, Condition 3, proposed WP#3 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#3 shall be performed in accordance with the workplan and are subject to all conditions of DP-1793. WP#3 is approved as submitted, with the following modifications:

1. The Permittees shall revise Enclosure 1, Table 7 to include sampling for perchlorate, and shall respond consistently to the contingencies outlined in Section 8 for all anthropogenic constituents. Perchlorate is identified at 20.6.2.7.WW NMAC as having a risk-based action level (Table A-1 of the *Risk Assessment Guidance for Site Investigations and Remediation*, July 2015) of 13.8 micrograms per liter ($\mu\text{g/l}$). For consistency, the treatment standard for perchlorate shall be less than 90% of that standard, 12.4 $\mu\text{g/l}$.
2. Should a storm event cause continuous flow through the Mortandad Canyon watercourse for greater than 48 hours in the proximity of the treatment areas, the Permittees shall schedule the monthly groundwater-level measurements and associated sampling as described in WP#3, Enclosure 1, Section 3, as soon as is safely and operationally possible, and no more than 15 days from the cessation of flow.
3. 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 total chromium 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 chromium, *i.e.*, non-detect, the sampling and analysis requirements above shall not be effective.

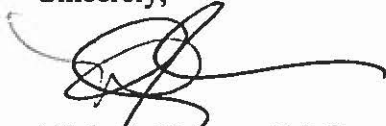
Approval of WP#3 does not relieve the Permittees of the responsibility to comply with any other applicable federal, state, and/or local laws and regulations. This approval also does not relieve the Permittees of liability should operations associated with this workplan result in actual pollution of ground or surface waters.

May 24, 2016

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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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