



June 11, 2021

Arturo Duran
Designated Agency Manager
Environmental Management
U.S. Department of Energy
Los Alamos Field Office
P.O. Box 1663 MS M984
Los Alamos, New Mexico 87544

Re: Final Decision

**Response to Amended Approval Letter for Drilling Work Plan for Chromium Groundwater Project Regional Aquifer Monitoring Well R-71 and Amended Approval Letter for Drilling Work Plan for Chromium Groundwater Project Regional Aquifer Monitoring Well R-72
Los Alamos National Laboratory
EPA ID#NM0890010515
HWB-LANL-20-009 and 20-015**

Dear Mr. Duran,

The New Mexico Environment Department (NMED) received the United States Department of Energy's (DOE) June 4, 2021, response letter (EMID-701466) regarding the purpose and screen lengths for drilling regional aquifer monitoring wells R-71 and R-72. NMED has reviewed DOE's response regarding drilling work plans for R-71 and R-72 and does not concur with DOE's approach for drilling monitoring wells. NMED's November 3, 2020, letters, "*Amended Approval Letter Drilling Work Plan for Regional Well R-72*" and "*Amended Approval Letter Drilling Work Plan for Chromium Groundwater Project Regional Aquifer Monitoring Well R-71*" (amended Approval Letters) provided technical reasons for the amended approval. DOE's response letter is not consistent with Section II.C.3., Appendix F of the 2016 Compliance Order on Consent (CO), which effectively limits monitoring well screen lengths to between 5 and 20 feet. In addition, 90 percent of existing chromium group monitoring wells have screen lengths between 10 and 23 feet. In order to assure comparability of data with data collected from the existing monitoring well network, monitoring wells R-71 and R-72 must have well screens no longer than 20 feet.

The prime purpose of R-71 and R-72 is to continue the evaluation of the nature and extent of hexavalent chromium contamination in the sole-source regional aquifer. DOE's approach to expand the purpose of R-71 and R-72, and all future chromium wells, to provide the ability to pivot to remediation infrastructure as injection and/or extraction wells is not acceptable to NMED. No remediation method has been approved or is currently being implemented in the portion of the plume where R-71 and R-72 will be installed. Nature and extent determination of the hexavalent chromium contamination has not been completed. Hence, it is premature to

attempt to design remediation wells in this location at this time, as it is impossible to determine what zones to target for remediation without first establishing a monitoring well network to define nature and extent.

Regarding the aquifer testing work plan, NMED does not accept DOE's approach to provide NMED with a universal workplan. Conditions at each new well are unique and will require a tailored work plan that accommodates limiting factors to aquifer testing (e.g., well yield, existing observation well network, plan goals, desired information to be obtained...). Instead, NMED recommends that DOE prepare a comprehensive standard operating procedure (SOP) upon which tailored work plans for conducting aquifer tests, step tests and other single-well tests including slug tests can be based. Please note that NMED will provide technical input on the SOP, but NMED does not approve SOPs.

NMED accepts DOE's reasoning for not conducting downhole logging in uncased boreholes due to formation instability within the regional aquifer. With this one exception DOE must follow the directions contained in the Amended Approval Letter provided for drilling R-71 and R-72 on November 3, 2020.

Pursuant to Section XXXVI(b) of the CO, should DOE fail to comply with the terms of this final decision, NMED reserves the right to issue a compliance order under NMSA 1978, Section 74-4-10 seeking injunctive relief or civil penalties, or to file a civil action under Sections 74-4-10 and 74-4-10.1(E) seeking injunctive relief or civil penalties.

If you have any questions regarding this correspondence, please contact Christopher Krambis at (505) 231-5423.

Sincerely,

**Kevin
Pierard**  Digitally signed by
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Kevin M. Pierard, Chief
Hazardous Waste Bureau

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