Buckman Direct Diversion
341 Caja del Rio Santa Fe, NM 87506

March 6, 2025

Mr. Stephen Hoffman
LANL SWEIS Document Manager, DOE/NNSA
3747 W. Jemez Road
Los Alamos, New Mexico 87544

VIA USPS and EMAIL TO: LANLSWEIS@nnsa.doe.gov

RE: LOS ALAMOS NATIONAL LABORATORY DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS) FOR CONTINUED OPERATION OF LOS ALAMOS NATIONAL LABORATORY

COMMENTS FROM BUCKMAN DIRECT DIVERSION BOARD

Dear Mr. Hoffman:

Background

The Buckman Direct Diversion Board (the Board) is the governing body for the Buckman Direct Diversion (BDD), a single diversion point on the Rio Grande that the City of Santa Fe, Santa Fe County, and their limited partner, Las Campanas, share to divert their San Juan-Chama and native Rio Grande water rights. Diverted water is treated and introduced into the regional water system.

The BDD intake is on the Rio Grande approximately 3 miles downstream of Otowi Bridge. The BDD is in a unique position by deriving drinking water from the Rio Grande downstream of the Los Alamos National Laboratory ("LANL") and delivering it safely and effectively to its regional customers, many of which are LANL employees and contractors. Waters from the Pajarito Plateau that flow to Los Alamos Canyon and its tributaries enter the Rio Grande at their confluence approximately three miles upstream of the BDD intake structure and are of particular concern to the Board. The Board is therefore understandably concerned about water quality and quantity in the Rio Grande and water quality in Los Alamos Canyon and its tributaries.

The SWEIS broadly addresses the hexavalent chromium plume, PFAS contamination and water rights. The Board considers the hexavalent chromium plume, PFAS, and all activities associated with these contaminants, to be of significant environmental impact and concern. LANL needs to more aggressively pursue remediation of these contaminants and other contaminants in ground water, surface water, and soil. The Board provides the following specific comments.

Comments

The draft Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory (SWEIS) addresses three (3) alternatives: 1) No Action Alternative, 2) Modernized Operations Alternative; and 3) Expanded Operations Alternative. The Board's primary concerns are contaminants originating from Los Alamos and Pueblo Canyons and their tributaries and groundwater discharge to the Rio Grande upstream of the BDD intake. The SWEIS, however, does not specifically address Los Alamos and Pueblo Canyons but presents a

wide range of issues that LANL is proposing to address. The Board's comments on the Draft SWEIS apply to all three alternatives and are presented topically below. The Board's comments are primarily focused on the Hexavalent Chromium plume (water quality and water rights), PFAS contamination, groundwater discharge to the Rio Grande, and fire suppression.

HEXAVALENT CHROMIUM PLUME

The U.S. Department of Energy (DOE) Office of Environmental Management Los Alamos Field Office (DOE-EM-LA) is responsible for oversight of the prime contractors implementing the investigation and cleanup of the Chromium Plume, including interim measures (IM) that were taken to mitigate plume migration until a final remedy is implemented. In March 2023 during IM operations, increases in chromium concentrations in two monitoring wells, as well as the discovery of contamination deeper than planned (but not unexpected given well construction deficiencies) resulted in NMED issuing an order to stop injection until DOE-EM-LA could ensure that chromium was not migrating beyond hydraulic control at concentrations above the 50 ppb standard. The BDD considers the Chromium Plume to be a significant negative environmental impact to ground water resources and potentially, surface water quality and must be remediated.

To address the deficiencies in the IM plan, and to come up with realistic remediation techniques, NMED and DOE-EM-LA agreed to form an Independent Review Team (IRT) to review data, perform analyses and make recommendations for future plume control, containment and remediation (REFERNCE). The IRT report was published in December 2024 and recommends *the single most important recommendation of the IRT is to restart the IM*—using a portion of the original system—while other studies and field investigations move forward. BDD agrees that the plume needs to be controlled as soon as possible, and the SWEIS' Proposed Action would increase groundwater extraction and injection rates from 150,000,000 gallons per year (gpy; 460 acre-ft/yr) to a maximum rate of 550,000,000 gpy (1687 acre-ft/year).

Remediation of the Hexavalent Chromium Plume is inextricably intertwined with water rights owned by Los Alamos County and the US Department of Energy (DOE). The DRAFT Environmental Assessment (EA) propose pumping 679 acre-ft/year. For Options 1 and 2, however, LANL proposes to divert 550,000,000 gallons per year (1688 ac-ft/yr). This volume significantly exceeds the New Mexico Office of the State Engineer (OSE) pending and protested emergency application for a diversion of 679 ac-ft/yr. Both Options 1 and 2 require a new application to the OSE that must be publicly noticed for a diversion of 1688 ac-ft/yr and any Rio Grande surface water depletions resulting from the Chromium Plume remediation must be offset with wastewater treatment plant return flows, DOE surface water rights or releases of Los Alamos County's San Juan Chama contract water.

The Board encourages LANL to restart the IM program incorporating recommendations from the IRT. The remediation process should concurrently pump and treat contaminated ground water and drill additional monitoring/plume characterization wells to assess the currently undefined horizontal and vertical extent of the Chromium plume.

PFAS CONTAMINATION

LANL monitors ground water, surface water and springs for per- and polyfluoroalkyl substances (PFAS) related compounds. Figure 1 below (Search Data - Intellus New Mexico Environmental Data) shows detectable PFAS in 30 ground water and surface water/spring monitoring locations. Alluvial Well PAO-5N and intermediate wells POI-4 and R-3i in Pueblo Canyon have results above the NMED tap water screening level of 70 nanograms per liter for (PFAS). In 2021, results were 107.61, 89.7, and 75.8 nanograms per liter, respectively. In 2020, concentrations were slightly higher, at 179.4, 107.6, and 84.7 nanograms per liter, respectively. Alluvial Well LAUZ-1 in Los Alamos Canyon showed a result of 520 nanograms per liter in 2021. LAUZ-1 was not sampled in 2020. In 2022, alluvial wells PAO-5n and LAUZ-1 and intermediate wells POI-4 and R-3i in Pueblo Canyon showed results above the NMED tap water screening level of 70 nanograms per liter for PFAS; the results were 195.9, 339.6, 136.7, and 86.4 nanograms per liter, respectively. As a new emerging contaminant, this was the third sampling event for PFAS. LANL proposes to continue to monitor for PFAS at these locations (LANL 2024b). These monitoring points are upstream/upgradient from the BDD intake structure on the Rio Grande.

Alluvial monitoring wells with detectable PFAS concentrations are in direct hydrologic connection to Rio Grande surface flows. Proposed continued monitoring without plume control does not adequately address the potential environmental impacts of PFAS on BDD source-water quality and Rio Grande flows. The SWEIS should include concrete proposals for additional immediate characterization and remediation of the PFAS plume.

WILDFIRE

The BDD intake on the Rio Grande is especially vulnerable to the effects of post-fire floods and debris flows that will cause BDD to cease diversions from the Rio Grande during these catastrophic events. The Board encourages LANL to aggressively plan and implement programs to reduce fire risk and have emergency contingency plans to control catastrophic flooding and debris flows similar to the catastrophic flooding and debris flows Las Vegas, New Mexico is currently experiencing in the aftermath of the Hermit's Peak/Calf Canyon fire. The Board supports the Expanded Operations Alternative which includes changes in operations, revised wildland fire risk reduction treatments and management of feral cattle.

We appreciate the opportunity to provide these comments and look forward to your response.

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Commissioner Justin Greene	Councilor Carol Romero-Wirth
Santa Fe County Commission District 1	Santa Fe City Council District 2
BDD Board Chairperson	BDD Board Vice Chairperson

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Commissioner Hank Hughes
Santa Fe County Commission District 5
BDD Board Member

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Councilor Jamie Cassutt
City of Santa Fe Council District 4
BDD Board Member

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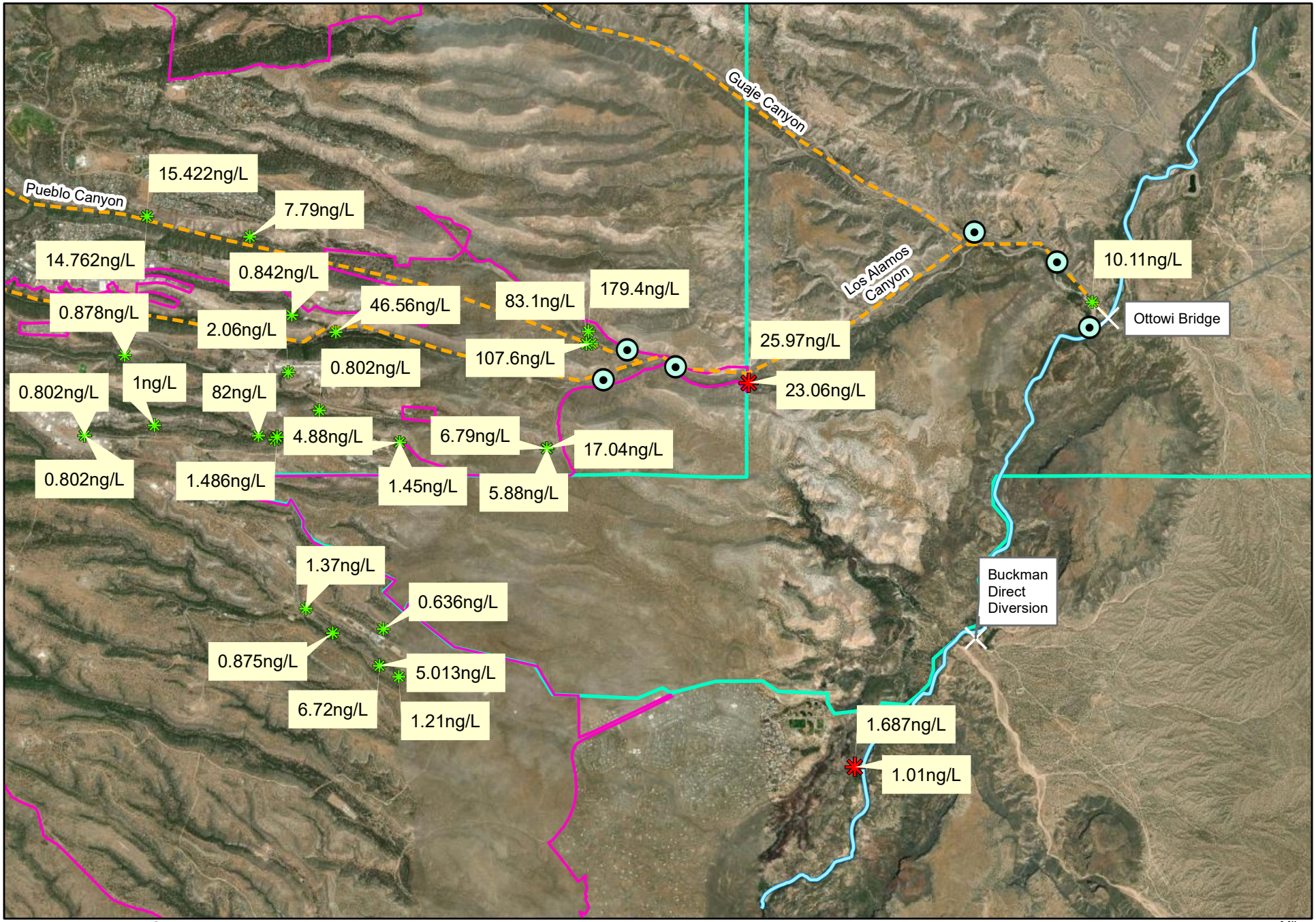
Rolf Schmid-Peterson
Citizen Member
BDD Board Member



PFAs Detections from LANL sampling in GW and Springs

Early Notification System
Rio Grande
LANL Boundary
Pueblo de San Ildefonso Boundary
PFAS Detection in Springs/Surface Water
PFAS Detection in Groundwater

0 0.75 1.5 3 4.5 Miles

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Glorieta Geoscience
A Division of GZA

Source: Search data - Intellus New Mexico Environmental Data. (n.d.). https://www.intellusnm.com/reporting/search-data.cfm#advancedOptions