



COLORADO
Department of Public
Health & Environment

June 5, 2025

Department of Natural Resources
Division of Reclamation, Mining and Safety
Ben E. Hammar
ben.hammar@state.co.us

RE: Objection and Petition for Hearing: Church Pit - File No. M-1979-045, The Lakewood Brick and Tile Company, Amendment (AM-2) Request for an Amendment

Dear Ben Hammar,

Pursuant to Section 34-32.5-114, C.R.S., the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (the Division) objects to, and requests a hearing on, the application to modify the reclamation plan for permit number M-1979-045 dated April 25, 2025 (the Application) for the Church Pit.

The mining operation is on federal property that the Department of Energy previously acquired to make components for nuclear weapons. Those operations, and the contamination caused by those operations, resulted in the property being regulated as a hazardous waste facility and designated as a Superfund site. The Department of Energy's cleanup efforts resulted in a "Central Operable Unit" or "COU," where the weapons production operations occurred and a "Peripheral Operable Unit" or "POU" that serves as a buffer zone area. The Division is responsible for regulating the COU and the mining operation is located on the POU (see Attachment 1 - Boundaries of the Peripheral and Central Operable Units - CAD/ROD).

The Church pit is located west and upgradient from the COU. It is located within the POU buffer area. The Application proposes joining the Church Pit operated by the Lakewood Brick and Tile Company and the Rocky Flats Pit operated by BURNCO Colorado, LLC to reclaim the excavation area as a water storage reservoir rather than as rangeland. Based on historical sites studies, the Division believes that creating a surface water reservoir for developed water storage upgradient of the COU would substantially increase groundwater recharge to the Upper Hydrostratigraphic Unit (UHSU) in several drainage areas across the site. This could create several problems.

First, the "Original Landfill," or "OLF" is an unlined, historic landfill located along the hillside directly downgradient from the proposed surface water reservoir. The OLF received general plant wastes and unknown nonradioactive hazardous chemical wastes during production at the site.

From 2013 to 2015, substantial groundwater recharge volumes caused by increased precipitation resulted in subsidence and failure of components of the OLF (see attached Contact Records 2013-02, 2013-03, 2014-09, 2015-03, 2015-06, 2016-03, 2016-04, 2017-01, 2018-01, 2018-02, 2019-02, and associated notifications). In summary, increased groundwater flow resulted in subsidence, cracking, and failure of engineered features at the OLF. DOE successfully characterized hydrological conditions of the area, which ultimately confirmed that the uppermost stratigraphic units in the UHSU, where the OLF is constructed, are poorly cohesive and susceptible to failure in the presence of increased groundwater. Additionally, the uppermost member of the Lower Hydrostratigraphic Unit (LHSU) that underlies the OLF is comprised of a thick sequence of shale, which serves as a preferential failure plane for rotational failure (see Attachment 2 - Geological Cross-Section and Stratigraphic Column - Rocky Flats RI/FS/CRA). DOE then performed interim stabilization measures to dewater the area prior to implementing permanent measures to stabilize the OLF. DOE stabilized the OLF by anchoring the landfill into the bedrock with 263 reinforced concrete anchors and adding dewatering features. DOE's efforts have been effective, however, increased groundwater recharge from the proposed water storage

activities presents a risk to destabilize this area and cause the engineered components to fail (see Attachment 3 - Annual Report of Site Surveillance and Maintenance Activities (CY2024) - Potentiometric Surface Maps).

Second, increased groundwater recharge and groundwater flow could liberate contaminants that remain within the site and could worsen the migration of contaminant plumes that have been delineated within the COU. As demonstrated in the Rocky Flats Legacy Management Agreement - Composite Plume Map (Attachment 4), the mining operations are upgradient from several known groundwater plumes at the COU. Increasing groundwater recharge and groundwater flow from the proposed water storage reservoirs could increase mass flux and mass discharge of the contaminant plumes, resulting in impacts to surface water.

Furthermore, components of the remedy established in the Corrective Action Decision/Record of Decision and the Rocky Flats Legacy Management Agreement to monitor the contaminant plumes at the site are based upon our understanding of the nature, extent, and fate and transport characteristics of the contaminant plumes under current hydrological conditions. Increased groundwater recharge may alter hydrological conditions to an extent that the monitoring network established by the remedy is ineffective to monitor the condition of the plumes.

The Application materials state that the mining operation is “west of the Rocky Flats National Wildlife Refuge” but fail to disclose the downgradient DOE facility. The Application fails to acknowledge or address any potential impacts to the adjacent landfill, the adjacent groundwater contamination plumes, or the environmental remediation efforts. The Application proposes to line the reservoir with the “intent” to minimize disturbances to the prevailing hydrologic balance to the surrounding area. The Division does not believe that simply lining the proposed water storage reservoirs will alleviate these concerns. All liners will eventually leak, and DOE staff have indicated that groundwater changes at the mining areas cause groundwater changes within the COU. Recharging the groundwater directly upgradient from a closed landfill and residual radioactive and nonradioactive contamination within the COU would jeopardize a remedy designed to protect human health and the environment.

EPA Region 8 was consulted and concurred with the contents of this letter. Please contact me via email at brian.walker@state.co.us with any questions that you may have regarding this correspondence.

Sincerely,

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