UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DEC 2 4 1993

Joseph E. Virgona, Project Manager
U.S. Department of Energy
Grand Junction Projects Office
Post Office Box 2567
Grand Junction, Colorado 81502-2567

Dear Mr. Virgona:

The U.S. Nuclear Regulatory Commission staff has completed review of the Radiological and Engineering Assessment for the Cameo Power Plant, Vicinity Property GJ-15609-CS, submitted with your letter dated November 30, 1993. Based on our review, NRC staff concludes that the U. S. Department of Energy's (DOE) application of supplemental standards [as allowed in 40 CFR 192.22(a)] for two areas of tailings-contaminated concrete is appropriate. However, other areas with contaminated concrete were treated differently, and this needs to be addressed before NRC can concur in the application of supplemental standards for this property.

The two contaminated concrete structures proposed for supplemental standards, the partially buried mine portal, and the roof of the hydrogen storage shed, have average levels of gamma radiation that are less than twice background. Since DOE has determined that there are no plans to reopen the mine or enclose the shed, the radiological health risk from these areas at this remote site is insignificant. Application of supplemental standards is justified because remedial action of these areas would pose a risk of injury to the workers and the estimated cost would be unreasonably high relative to the long-term health benefits [Section 192.21(a)(c)]. Also, remediation of the shed would result in an estimated cost for a building which is unreasonably high relative to benefits [Section 192.21(d)].

Six other areas on this property (E, F, J, K, BS, and BU) are constructed of tailings-contaminated concrete. These structures were area-averaged for Ra-226 concentration and excluded from remedial action because the resulting average values did not exceed the Ra-226 standard in Section 192.12(a). This cleanup standard refers only to the Ra-226 concentration in land averaged over layers of soil. Therefore, NRC staff considers that averaging contaminated concrete structures with the surrounding clean soil is not appropriate application of the radium-in-soil standard.

The concrete that was area-averaged includes support pads for power line towers (Areas E and F), a dust collector (Area J), and storage tanks (Area K). These pads probably would meet the supplemental standard criteria in Section 192.21 (a)(c). The footings of the warehouse (Areas BS and BU) presumably could qualify under Section 192.21(d). Additional remediation of the warehouse, to comply with Section 192.22(a), could be accomplished by the installation of a sub-floor vent system when the contaminated floor is removed. DOE has installed such a system in similar situations.



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DOE needs to explain how averaging structural concrete with the surrounding soil complies with the intent of the U.S. Environmental Protection Agency standards in Section 192.12(a), or otherwise address the remedial action of these structures under the primary or supplemental standards. If you have any questions, please contact the Project Manager, Elaine Brummett at (301) 504-2533.

Sincerely,

ORIGINAL SIGNED BY

Joseph J. Holonich, Acting Chief
Uranium Recovery Branch
Division of Low-Level Waste Management
and Decommissioning
Office of Nuclear Material Safety
and Safeguards

cc: J. Deckler, CDH Den
W. Woodworth, DOE Alb

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