

April 11, 1997

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

SUBJECT: SUPPLEMENTAL STANDARDS APPLICATION FOR QUIKCRETE CONCRETE PLANT
PROPERTY, GRAND JUNCTION, COLORADO, VICINITY PROPERTY GJ-05107-CS

Dear Mr. Virgona:

The U.S. Nuclear Regulatory Commission staff has reviewed the U.S. Department of Energy's (DOE's) submittal dated February 11, 1997, in which DOE requested approval of the Radiologic and Engineering Assessment (REA) for the QUIKCRETE Concrete Plant property, Grand Junction, Colorado. The REA contains an application for supplemental standards for approximately 156 cubic yards (cy) of residual radioactive materials (RRM), of which approximately 96 cy are potentially commingled with RCRA listed hazardous wastes at a depth of approximately 96 inches.

Based on the information provided by DOE, the NRC staff concurs with DOE's proposed Alternative 2 (partial remediation). Under Alternative 2, DOE proposes to remove the top three feet of RRM and apply supplemental standards (no remediation) for the remainder of the deposit, because the cost of managing the commingled waste is excessive in comparison to any likely health risk. The staff's Technical Evaluation Report for its review of the REA is enclosed.

If you have any questions regarding this letter or its enclosure, please contact Ms. Charlotte Abrams of my staff at (301) 415-5808.

Sincerely,

(Original signed by)

Charles L. Cain, Acting Chief
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated

cc: S. Hamp, DOE Alb
E. Artiglia, TAC Alb

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TECHNICAL EVALUATION REPORT
APPLICATION FOR SUPPLEMENTAL STANDARDS FOR
QUIKCRETE CONCRETE PLANT PROPERTY, GRAND JUNCTION, COLORADO

SITE: QUIKCRETE Concrete Plant Property

LOCATION: Grand Junction, Colorado

PROJECT MANAGER: Charlotte Abrams

TECHNICAL REVIEWER: Elaine Brummett

SUMMARY AND CONCLUSIONS:

By a letter dated February 11, 1997, the Department of Energy (DOE) requested Nuclear Regulatory Commission approval of the Radiologic and Engineering Assessment (REA) for vicinity property GJ-05107-CS at 2462 1/2 Highway 6 and 50 (QUIKCRETE Concrete Property), Grand Junction, Colorado. The REA proposes utilization of supplemental standards for residual radioactive materials (RRM) potentially commingled with RCRA listed hazardous wastes. The area where the RRM is proposed to be left in place is an unpaved access road into the plant site.

During remediation of the property in 1989, DOE laboratory testing of discolored odorous soils indicated the presence of volatile organic compounds that may have derived from solvents used at the paint shop on the property adjacent to the QUIKCRETE Concrete Plant. The State of Colorado determined that this material should be classified as listed hazardous waste; however, a disposal site does not exist that will accept RCRA-listed waste commingled with RRM (mixed waste). In addition, DOE's submittal indicates that treatment of material to remove the hazardous waste is not always successful and that DOE does not have authority to manage the waste under the Uranium Mill Tailings Radiation Control Act.

Based on the information provided and the alternatives considered by DOE, the NRC staff concurs with DOE's proposed alternative 2 (partial remediation). Under Alternative 2, DOE proposes to remove the top three feet of RRM and apply supplemental standards (no remediation) for the remainder of the deposit, because the cost of managing the commingled waste is excessive in comparison to any likely health risk.

TECHNICAL EVALUATION:

The deposit consists of an estimated 156 cubic yards (cy) of RRM 6 to 126 inches in depth, of which approximately 96 cy is commingled waste, starting at a depth of approximately 96 inches. DOE evaluated three alternatives for remediation of the QUIKCRETE property.

Alternative 1 was for no remediation and application of supplemental standards for all materials. The estimated cost for Alternative 1 was nothing and there was no health risk from gamma exposure, but possible future risk from disturbing the surface material.

Enclosure

- Alternative 3 proposed complete remediation at a cost in excess of \$100,000. Under this alternative the health risk at the site would be reduced to U.S. Environmental Protection Agency Standards.

DOE recommended adoption of Alternative 2 which proposed partial remediation by removing the top 3 feet (approximately 60 cy) of non-commingled RRM. The rest of the deposit would remain in place under supplemental standards based on 40 CFR 192.21 (c). The cost of remedial action is unreasonably high relative to the long-term benefits, and the residual radioactive materials do not pose a clear present or future hazard. The associated health risk with this alternative is none from gamma exposure and the estimated cost is approximately \$4,000.

After review of the REA and the alternatives evaluated by DOE, the NRC staff concurs with DOE's recommended Alternative 2, removal of the top 3 feet of RRM and application of supplemental standards (no remediation) for the remainder of the deposit, because the cost of managing the commingled waste is excessive in comparison to any likely health risk.

DOE has agreed to prepare a database with detailed information on areas where supplemental standards were applied. The database will be provided to the State at the termination of the Uranium Mill Tailings Remedial Action program. The NRC staff recommends the inclusion of this property into that database.

Enclosure