



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

September 16, 1999

Mr. George Rael, Director  
U.S. Department of Energy  
Albuquerque Operations Office  
ERD/UMTRA  
P.O. Box 5400  
Albuquerque, NM 87185-5400

SUBJECT: REVIEW OF COMPLETION REPORT FOR NATURITA, COLORADO, VICINITY  
PROPERTY NT-068S

Dear Mr. Rael:

By letter dated August 3, 1999, the U.S. Department of Energy (DOE) provided the Naturita, Colorado, Vicinity Property NT-068S Completion Report (VP CR) to the U.S. Nuclear Regulatory Commission (NRC) for review. The NRC staff's review of the Naturita VP CR is enclosed.

Concurrence by NRC on this VP CR is required because special circumstances resulted in supplemental standards being invoked during remedial action. The NRC staff concludes that the information provided by DOE in the NT-068S VP CR provides reasonable assurance that supplemental standards for soil cleanup have been properly applied. Therefore, the NRC staff concurs that supplemental standards were used appropriately and the remedial action of the vicinity property were completed in accordance with the Environmental Protection Agency standards. The signed *NRC Review Form for Supplemental Certification of Vicinity Properties*, showing NRC concurrence also is enclosed.

If you have any questions concerning this subject, please contact the NRC Project Manager, Robert Carlson, at (301) 415-8165.

Sincerely,

A handwritten signature in cursive script that reads "John J. Surmeier".

John J. Surmeier, Chief  
Uranium Recovery and Low-Level  
Waste Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Enclosures: As stated

cc: L. Woodworth, DOE Alb  
F. Bosiljevac, DOE Alb  
J. Artiglia, TAC Alb  
K. Johnson, TAC Alb

WM-66

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Sincerely,  
 Original Signed By  
 John J. Surmeier, Chief  
 Uranium Recovery and Low-Level  
 Waste Branch  
 Division of Waste Management  
 Office of Nuclear Material Safety  
 and Safeguards

Enclosures: As stated

cc: L. Woodworth, DOE Alb  
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## U. S. NUCLEAR REGULATORY COMMISSION STAFF REVIEW OF THE COMPLETION REPORT FOR NATURITA VICINITY PROPERTY NT-068S

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the 1999 version of the Vicinity Property Completion Report (VP CR) for the Naturita Vicinity Property (VP) NT-068S, which was transmitted by Department of Energy (DOE) by letter dated August 3, 1999.

The Naturita VP CR describes the remedial actions (radiological cleanup) and verification activities performed at VP NT-068S. This property lies within Montrose County, Colorado, and includes two tracts of land; the north and south parcels.

The north parcel abuts the north boundary of the Naturita Processing Site and is traversed by a high pressure gas line, including a meter station shed. This tract is bordered on the east by the San Miguel River and the west by State Highway 141. The south parcel abuts the south side of the Naturita Processing Site and is bound on the west by State Highway 141. The San Miguel River crosses the south parcel on the east side. Both tracts could be typified as flat, open ground, except on the west side where they slope up to the State Highway 141 right-of-way.

Remedial action was performed on VP NT-068S with the exception of the easement of the high pressure gas line area along the west bank of the San Miguel River, and the areas along the right-of-way of State Highway 141, where supplemental standards were applied.

For the section involving the easement of the high pressure gas line, remediation of this area would entail partial excavation by machine and hand excavation down to and around the pipeline itself. Additionally, backfill around the pipeline would have to be hand placed. Throughout this process, the gas line would need to be active as it is the only source of natural gas for the town of Nucla. Performing remedial action near the pressurized gas line is considered dangerous and poses prohibitively high risk to the workers, as well as the public.

For the section involving land along the west bank of the San Miguel River, remediation of this area would destroy riparian habitat and require a temporary diversion structure to be placed in the river.

For the section involving land along the State highway 141 right-of-way, remediation involves traversing steep and rocky slopes which would cause difficulties with equipment accessibility and worker safety. Additionally, the disturbance of these areas may cause excessive erosion problems in the area.

Therefore, the complete remediation would pose a clear and present risk of injury to workers, cause environmental harm, and the cost of remedial action would far outweigh the benefit received from the removal of the windblown contaminated materials. Appendix B of the Naturita VP CR, "Recommendation for Application of Supplemental Standard," serves as DOE's documentation of its application of supplemental standards for the remaining areas of contamination and their current radiological conditions.

The NRC staff review of VP CR NT-068S has been limited to areas related to the use of supplemental standards. The radiological conditions within the supplemental standards areas are summarized as follows:

- a. Dose equivalent range at ground level over the contaminated area(s) - 8 to 50  $\mu\text{R/hr}$
- b. Average dose equivalent at ground level over the contaminated area(s) - 19  $\mu\text{R/hr}$
- c. Maximum recorded Ra-226 concentration in contaminated area(s) - 428.26 pCi/g
- d. Average Ra-226 concentration for contaminated soils - 56.4 pCi/g

Background for the Naturita locale is an exposure rate of 13  $\mu\text{R/hr}$  and 1.5 pCi/g for Ra-226. The data presented in VP CR NT-068S include background.

The Naturita VP CR provided a complete health risk analysis of the long-term exposure of 100 mrem per year, and short-term unusual exposure of 500 mrem per year. Additionally, VP CR NT-068S demonstrated that a person from the public would have to be in the subject area(s) for extremely lengthy periods of time in order to receive the types of exposures listed above.

The Naturita VP CR also provides a thorough cost analysis for the remedial action, which indicates that the benefit to be received from full removal of the low-level contaminated material is prohibitive. Therefore, application of the Environmental Protection Agency (EPA) 40 CFR 192.21(a), (b), and (c) criteria are applicable.

#### **NRC STAFF CONCLUSION:**

The NRC staff concludes that the information provided by DOE and its contractor in the VP CR NT-068S and other associated documents provides reasonable assurance that remedial action of this VP, and the use of supplemental standards, were appropriate in accordance with EPA standards.

#### **REFERENCES:**

DOE (U.S. Department of Energy) Letter to John J. Surmeier, Chief, Uranium Recovery Branch, Division of Waste Management, Nuclear Materials Safety and Safeguards, U.S. Nuclear Regulatory Commission, dated August 3, 1999, with enclosed copies of the Naturita, Colorado, UMTRA project site VP NT-068S completion report. U.S. Department of Energy, Albuquerque Operations Office, Environmental Restoration Division, Uranium Mill Tailings Remedial Action Team, Albuquerque, New Mexico.

