



## Department of Energy

Albuquerque Operations Office  
P.O. Box 5400  
Albuquerque, New Mexico 87185-5400

U.S. DEPARTMENT OF ENERGY

Mr. Joseph J. Holonich, Chief  
Uranium Recovery Branch  
Office of Nuclear Materials Safety  
And Safeguards Mail Stop T7J9  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Vicinity Property No. RF-493  
North of Highway 6 & 24  
East of Ash Avenue  
Rifle, Colorado

Dear Mr. Holonich:

In accordance with the Uranium Mill Tailings Radiation Control Act of 1978 (Public Law 95-604), the Environmental Protection Agency (EPA) Standards (40 CFR part 192), and the Memorandum of Understanding between the U.S. Department of Energy (DOE) and the U.S. Nuclear Regulatory Commission (NRC) (GM004-85AL26037), two copies of the Vicinity Property Completion Report for the above property are submitted for NRC certification concurrence. Please note that the application of supplemental standards does not appear in the REA. Supplemental standards were applied in the field. Also enclosed to aid in the review are the NRC Review form and a copy of the Vicinity Property Certification Summary and Decision.

Should you have any questions, please contact contact John Evett of my staff at (505) 845-4865.

Sincerely,

Steven C. Hamp  
Uranium Mill Tailings Remedial  
Action Team Leader  
Environmental Restoration Division

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PDR WASTE PDR  
WM-62

### Enclosures

1. RF-493 Completion Report (2 Copies)
2. NRC Review Form for Supplemental Certification of VP RF-493
3. Certification Summary and Decision Form

cc w/o enclosures:  
J. Hams, CDPHE  
J. Evett, ERD  
E. Artiglia, TAC  
R. Johnson, TAC

Enclosure  
To: File Center  
NRC POR

1/1  
NRC  
WM-62

## VICINITY PROPERTY CERTIFICATION REVIEW FOR COMPLIANCE WITH RADIOLOGICAL STANDARDS

CERTIFICATION REQUIREMENT	COMPLIANCE*			COMMENTS (Reference Page in Completion Report)
	Yes	No	N/A	
I. SOIL EXCAVATION				
1. Were soil samples collected/analyzed? (List quantity of surface and subsurface samples.)	✓			- APPROXIMATELY 1600 VERIFICATION SAMPLES AT A VARIETY OF DEPTHS WERE COLLECTED & ANALYZED FOR Ra-226
2. Did grid intervals equal 10 meters or less? (List grid size and quantity sampled.)	✓			- NEED TO CORRECT DISCREPANCY BETWEEN # OF SAMPLES IDENTIFIED IN SECT. 3-1.2 & TABLE 3.1.
3. Were adequate spatial averaging techniques clearly demonstrated?	✓			- ONE HOT GRID REMAINING (G62)
4. Was an outdoor gamma survey conducted? (List results.)	✓			- PAC HP-015 USED.
5. Were alternate measurements performed? (List types of measurements, range, and average of results.)			✓	IN CONJUNCTION W/ SUPPLEMENTAL STANDARDS; TABLE B.72
6. Were all contaminated areas sampled after excavation?	✓			

\* If no or N/A, then an explanation is required.

## VICINITY PROPERTY CERTIFICATION REVIEW FOR COMPLIANCE WITH RADIOLOGICAL STANDARDS (continued)

CERTIFICATION REQUIREMENT	COMPLIANCE*			COMMENTS (Reference Page in Completion Report)
	Yes	No	N/A	
I. SOIL EXCAVATION (continued)				
7. Were soil concentrations of Ra-226, averaged over 100 square meters, less than or equal to: <ul style="list-style-type: none"> <li>• 5 pCi/g plus background (surface)?</li> <li>• 15 pCi/g plus background (subsurface)?</li> </ul>	✓			CHECK G62, WHICH EXCEEDS THE 5.0 pCi/g LIMIT AFTER SUBTRACTING BACKGROUND.
8. If excavation was done around structures or utility conduits to structures, was contamination removed to meet EPA Standards?			✓	NO STRUCTURES OPEN LAND
II. INDOOR GAMMA SURVEY				
1. Were assessment measurements taken in the lowest habitable level of every habitable building?			✓	
2. Were small rooms scanned and large rooms (2000ft <sup>2</sup> ) gridded at intervals of 10 feet or smaller?			✓	
3. Were verification measurements taken at locations of prior maximum readings?			✓	

\* If no or N/A, then an explanation is required.

## VICINITY PROPERTY CERTIFICATION REVIEW FOR COMPLIANCE WITH RADIOLOGICAL STANDARDS (continued)

CERTIFICATION REQUIREMENT	COMPLIANCE*			COMMENTS (Reference Page in Completion Report)
	Yes	No	N/A	
II. INDOOR GAMMA SURVEY (continued)				
4. Were instrument readings converted to indicate microR/hr? (List range of readings.)			✓	
5. After remedial action, was the average value for each room or 2000 ft <sup>2</sup> area less than 20 micro/hr above background?			✓	
6. If any reading exceeded 20 microR/hr above background, was it satisfactorily investigated to ensure no tailings involvement?			✓	
III. INDOOR RDC MEASUREMENTS				
1. If RDC measurements were performed before remedial action, and results were above standards, were they repeated after remedial action was complete?			✓	
2. If RDC measurements were not performed before remedial action, were they taken in every habitable structure after remedial action?			✓	

\* If no or N/A, then an explanation is required.

## VICINITY PROPERTY CERTIFICATION REVIEW FOR COMPLIANCE WITH RADIOLOGICAL STANDARDS (continued)

CERTIFICATION REQUIREMENT	COMPLIANCE*			COMMENTS (Reference Page in Completion Report)
	Yes	No	N/A	
III. INDOOR RDC MEASUREMENTS (continued)				
3. If tailings were excavated within 10 ft of the structure or around utility conduits into the structure, were RDC measurements performed after remedial action?			✓	
4. If grab samples were used for verification, were acceptable procedures used?			✓	
5. Were grab sample results less than 0.01 WL? (List range and average of results.)			✓	
6. If annual average measurements were used for verification, were acceptable procedures followed?			✓	
7. Were annual average RDC results less than EPA WL standards (0.02 WL)? (List range and average of results.)			✓	
8. If annual average RDC results were between 0.02 WL and 0.03 WL, was appropriate justification given?			✓	

\* If no or N/A, then an explanation is required.

## VICINITY PROPERTY CERTIFICATION REVIEW FOR COMPLIANCE WITH RADIOLOGICAL STANDARDS (continued)

CERTIFICATION REQUIREMENT	COMPLIANCE*			COMMENTS (Reference Page in Completion Report)
	Yes	No	N/A	
IV. OTHER VERIFICATION MEASUREMENTS				
1. If adequate verification data are not presented, were additional measurements taken?			✓	
2. Were acceptable procedures used?			✓	
3. Were surface alpha contamination levels less than: <ul style="list-style-type: none"> <li>• 1000 dpm/100 cm<sup>2</sup> for removable alpha activity?</li> <li>• 5000 dpm/100 cm<sup>2</sup> for total alpha activity?</li> </ul>			✓	
4. Were additional measurements performed? (List type and results?)			✓	

\* If no or N/A, then an explanation is required.

## VICINITY PROPERTY CERTIFICATION REVIEW FOR COMPLIANCE WITH RADIOLOGICAL STANDARDS (continued)

CERTIFICATION REQUIREMENT	COMPLIANCE*			COMMENTS (Reference Page in Completion Report)
	Yes	No	N/A	
<b>V. SUPPLEMENTAL STANDARDS</b>				
1. If numerical standards were not met, is this due to the presence of natural radioactivity? What data show this?		✓		PREVIOUS ANALYSES INDICATED UNBLOWN TAILINGS IS THE SOURCE (REA).
2. If all residual radioactive material at the property was not cleaned up, were supplemental standards (40 CFR 192 Subpart C) applied?	✓			
3. Was the application of supplemental standards in accordance with the Plan for implementing EPA Standards?	✓			
4. Did appropriate state and federal agencies concur in this application of Supplemental Standards? (Note: final NRC concurrence of the Completion Report is obtained following the DOE certification decision.)			✓	<input checked="" type="checkbox"/> a. Risk injury to workers/public <input checked="" type="checkbox"/> b. Environmental harm <input checked="" type="checkbox"/> c. High cost relative to long-term benefits <input type="checkbox"/> d. High cost of cleaning up building relative to benefits <input type="checkbox"/> e. No known remedial action <input type="checkbox"/> f. Radionuclides other than Ra-226 exist  <input type="checkbox"/> The application of Supplemental Standards appears in the REA. <input type="checkbox"/> The application of Supplemental Standards does not appear in the REA. Supplemental Standards were applied in the field.  State concurrence dated _____ NRC concurrence dated _____

\* If no or N/A, then an explanation is required.

STILL WAITING FOR  
STATE & NRC CONCURRENCE. IF  
STATE HAS CONCURRED, THEN  
INCLUDE LETTER IN COMPLETION  
REPORT.

## VICINITY PROPERTY CERTIFICATION REVIEW FOR COMPLIANCE WITH RADIOLOGICAL STANDARDS (continued)

CERTIFICATION REQUIREMENT	COMPLIANCE*			COMMENTS (Reference Page in Completion Report)
	Yes	No	N/A	
VI. SITE AUDIT REPORTS			✓	
1. If a site audit was performed at this property, were the results satisfactory?			✓	
2. If the contractor's efforts were evaluated at other properties, were the results satisfactory?			✓	
VII. ADDITIONAL CONSIDERATIONS				A) # VERIFICATION SAMPLES; SECT. 3.1.2 VS. TABLE 3.1 B) HOT GRID G162 C) LOWER LIMIT OF Ra-226 CONC. (B-174)
1. Are there any additional comments or considerations.	✓			
VIII. CERTIFICATION				
1. Is this property recommended for certification as meeting the EPA standards for residual radioactive material?		✓		RESOLVE ISSUES IN VII.1 & OBTAIN STATE & NRC CONCURRENCE.

\* If no or N/A, then an explanation is required.



VP No.: RF-493  
NRC Review Form  
for Supplemental Certification  
of Vicinity Properties

The Department of Energy (DOE) has determined that the remedial action at the following vicinity property (VP) has been completed and thereby complies with supplemental standards invoked by DOE under 40 CFR, Subpart C, specifically Subsections 192.21 and 192.22.

- ☐ NRC concurrence for the Radiological Engineering Assessment (REA) given on: \_\_\_\_\_
- ☒ Supplemental standards were not in the REA, special circumstances required that supplemental standards be involved during remedial action.

Steven C. Hamp  
Steven C. Hamp, DOE Certification Officer

10/28/96  
Date

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Based on the information and certification provided by the DOE, the NRC:

- ☐ concurs that the remedial action at the subject VP has been completed under its authority provided by the Uranium Mill Tailings Radiation Control Act (UMTRCA), Section 104(f)(1) and as described in the Memorandum of Understanding (MOU), Appendix A, Section 3.4.

- ☐ concurs, as above, except for the following conditions:

- 1.
- 2.
- 3.

☐ See attached sheets for any additional provisions.

- ☐ needs additional information to make a concurrence decision. This information consists of:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

☐ See attached sheets for any additional informational needs.

\_\_\_\_\_  
NRC Concurring Official and Title

\_\_\_\_\_  
Date