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SEP 30 1982

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MEMORANDUM FOR: John B. Martin, Director
 Division of Waste Management

FROM: Ross A. Scarano, Chief
 Low-Level Waste Licensing Branch

SUBJECT: SIXTH STATUS REPORT - EDGEMONT OFFSITE CLEANUP
 ACTION PROGRAM (331323)

The NRC has contracted with the Battelle Pacific Northwest Laboratories (PNL) to conduct radiological surveys to determine the extent of usage of uranium mill tailings at offsite properties in the vicinity of Edgemont, South Dakota. Basically, PNL performs comprehensive surveys to evaluate against two independent set of criteria. Specific criteria are applied by HUD to determine if a property can be covered under federal mortgage assistance. Another independent set of criteria are applied to determine the need for remedial action at the property (i.e, the cleanup of residual radioactive materials). The methodology currently being used to propose remedial action is comparison to interim standards promulgated by the U.S. EPA (40CFR192 - "Proposed Cleanup Standards for Inactive Uranium Processing Sites") which became effective June 21, 1980. The EPA has estimated that its final cleanup standards will not be promulgated before early 1983; hence, until such final standards are available, the NRC will designate those properties requiring remedial action based on the interim EPA standards.

As of August 1982, the status of evaluations to determine a need for remedial action are: 649 structures surveyed (excluding long-term radon progeny measurements); 46 structures remaining to be completed; and owners of 17 structures have either declined permission to conduct the free radiological surveys or have not responded. In addition to the properties with structures, 210 properties without structures have been surveyed with 24 remaining to be completed. Owners of 13 of these properties have either refused the survey or failed to respond. These survey results indicate that to date, 197 structures and 23 properties without structures failed one or more of EPA's criteria and require an

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Engineering Assessment (EA), and 89 structures failed the HUD criterion [i.e., they exceed 0.033 WL (i.e., 0.02 Weighted Working Levels)] and 8 empty lots failed the HUD criterion that vacant land shall not exceed an average background gamma radiation level of 14.5 uR/hr. Of the 162 EAs completed to date, 80 properties have been identified as having residual radioactive material and will require remedial action.

The period of performance for PNL's contracted work has been extended through FY84 (September 30, 1984) in order to complete a full year of radon progeny working level (WL) measurements at 190 residences as required by program protocols. Actual monitoring should be completed by December 1983 and EAs necessitated by the WL measurements, survey data compilation, and report writing will remain to be done in 1984. At present PNL is arranging a loan of additional RPISU's (WL monitors) from the EPA so that the WL measurements may be completed in time. Based on results to date, it is estimated that an additional 50 properties may be identified as having residual radioactive material. Because only 3% of the properties requiring an EA because of high radon progeny working levels measured by RPISU monitoring were subsequently found to have residual radioactive material, the estimated 50 additional properties is considered an upper bound estimate. It is estimated that remedial action will be required for 100 to 130 properties and that cleanup cost will be in the range of \$300,000 to \$650,000. During the first quarter of FY83 DOE will be consulted to coordinate with them the designation of properties requiring remedial action.

Complete details of all radiological surveys are summarized in the attached table.

Ross A. Scarano, Chief
Low-Level Waste Licensing Branch

Enclosure: Summary of Findings

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DATE	: 82/09/28	: 82/09/30	: 82/09/30	:	:	:

EDGEMONT CLEANUP ACTION PROGRAM

(Summary of Findings as of August 31, 1982)

I. STRUCTURE SURVEYS

Number of Structures in Town	712
Number of Structures Declining Surveys	13
Number of Structures Not Responding	4
Number of Structures Surveyed to Date	649
Number of Structures Remaining to be Completed	46

1. Grab Working Level

Grab Working Level Greater Than 0.033 WL ^{1,2}	89
Grab Working Level Between 0.01 and 0.033 WL ³	361
Grab Working Level Less Than 0.01 WL	221

2. Gamma Surveys

Gamma Radiation Less Than 34.5 uR/hr	570
Gamma Radiation Greater Than 34.5 uR/hr ¹	79

3. Soil Surveys

Soil Sample Radium-226 Less than 5 pCi/g	527
Soil Sample Radium-226 Greater Than 5 pCi/g ¹	122

II. SURVEYS OF PROPERTIES WITHOUT STRUCTURES

Number of Blocks and Lots in Town	247
Number Declining Surveys	9
Number Not Responding	4
Number Surveyed to Date	210
Number Remaining to be Completed	24

1. Gamma Surveys

Gamma Radiation Less Than 34.5 uR/hr	201
Gamma Radiation Greater Than 34.5 uR/hr ¹	9
Gamma Radiation Greater Than 14.5 uR/hr ²	8

2. Soil Surveys

Soil Sample Radium-226 Less Than 5 pCi/g	197
Soil Sample Radium-226 Greater Than 5 pCi/g ¹	13

III. ENGINEERING ASSESSMENTS (EA)

Number of EAs Required to Date	197
Number of EAs Completed	162
Number of Properties Requiring Remedial Action	80
Number of Properties Not Requiring Remedial Action	82

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1. Requires Engineering Assessment (fails one or more EPA remedial action survey criteria).
 2. Fails HUD criteria.
 3. Requires long-term radon progeny measurements in order to determine if it fails the EPA annual WL criterion.