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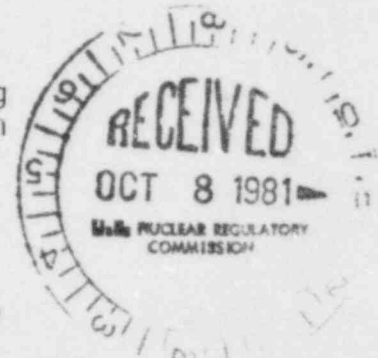
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WMUR:WM-40

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

FROM: Ross A. Scarano, Chief
Uranium Recovery Licensing Branch
Division of Waste Management

SUBJECT: THIRD STATUS REPORT - EDMONT CLEANUP



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 off-site properties in the vicinity of Edgemont, South Dakota. PNL operates a mobile laboratory which facilitates the collection and analysis of grab radon progeny samples (i.e., the Working Level measurement). Also, extensive gamma radiation surveys and soil sampling and analysis are being conducted at each property. PNL has also been tasked to complete engineering assessments as warranted and to propose the extent of needed remedial action (i.e., the cleanup of residual radioactive materials). One methodology for proposing remedial action will be comparison to interim standards promulgated by the U.S. EPA (40 CFR 192 - "Proposed Cleanup Standards for Inactive Uranium Processing Sites").

Enclosure 1 summarizes the results of the PNL radiological surveys through August, 1981. In sum, 78 structures and 10 vacant lots fail to meet the interim EPA standards due to gamma radiation levels greater than 20µR/hr above background or radium-226 in soil content greater than 5pCi/g. Also, at least 216 structures require long-term radon progeny sampling because they failed the EPA grab sample Working Level criterion.

Additionally, the U. S. Department of Housing and Urban Development (HUD) has required that grab Working Level sampling be conducted in any structure and gamma surveys of vacant lots be performed in Edgemont before federal financial assistance will be approved. At the request of HUD and the State, the NRC has instructed PNL to conduct these surveys. All of the requested HUD radiological surveys for structures have been completed in Edgemont. Results to date indicate that 68 structures fail the HUD criterion of having less than 0.033 WL (i.e., 0.02 Weighted Working Levels) and 7 lots fail the HUD criterion that vacant land have an average background gamma radiation level of less than 14.5µR/hr.

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The PNL work is progressing well. Radiological surveys have been completed at 473 structures and gamma radiation surveys have been completed at 571 vacant residential lots out of the 1136 lots for which survey requests have been received. PNL is continuing to conduct these gamma surveys; but because of the emphasis of completing all required engineering assessments as soon as possible, PNL will not be able to complete all requested land surveys until the spring of 1982.

In addition to the 18 full-engineering assessment (EA) reports already completed by the ARIX, Inc., in 1980, PNL has completed 28 EA reports. Of the 46 EA completed to date, a total of 26 properties have been identified which have residual radioactivity in excess of the interim EPA standards (1 a., 40 CFR 192).

In order to investigate the possibility of eliminating the need for the long-term RPISU type of sampling to determine the annual average Working Level, PNL has prepared a protocol for a "mini-EA". This has been tested at eight (8) properties and no residual radioactivity has been found. Additionally, due to the difficulties in obtaining adequate calibration data, the cross calibration study to compare the Working Level results of the Track Etch Device with the RPISU sampling has been terminated.

As long as weather conditions permit, PNL will continue to keep a field team of scientists in Edgemont to complete the remaining radiological surveys and engineering assessments. An additional pressurized ionization chamber and borehole gamma logging system will be purchased by PNL in order to expedite the completion of these surveys; however, it is anticipated that all required field work will not be completed until the fall of 1982.

Original Signed by:

R. A. Scarano

Ross A. Scarano, Chief

Uranium Recovery Licensing Branch

Encl: as stated

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