UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SEP 12 1979

Docket No. 40-1341

MEMORANDUM FOR: Ross A. Scarano, Chief
Uranium Recovery Licensing Branch

THRU: H. J. Miller, Section Leader
New Facilities Section
Uranium Recovery Licensing Branch

FROM: E. A. Trager
New Facilities Section
Uranium Recovery Licensing Branch

SUBJECT: MEETING MINUTES -- TVA'S EDGEMONT URANIUM MILL DECOMMISSIONING

Purpose

To meet with the TVA and appropriate federal, state, and local government personnel to inspect and agree upon candidate alternative disposal sites for the Edgemont uranium mill tailings. Also, to discuss the offsite remedial action program for Edgemont.

Attendees

State of South Dakota

Vonni Kallemeyn (Department of Water and Natural Resources)
Bill Harris (Conservation Commission)
Hugh N. Hills (Conservation Commission)
Anselem Rumpla (State Planning Bureau)
Randy Fredrikson (Senator George McGovern Staff)
John Krueger (Edgemont City Planner)

Tennessee Valley Authority

Ralph Shell (Regulatory Staff)
Tom Donovan (NRMB)
Dale V. Wilhelm (Office of Natural Resources)
David Gengozian
Ellen Otto
Ray Moore
W. Walter LaRoche
William Mark Belvin
Clinton Smythe
Gary Cummings (Silver King Mines)
Roger Caywood (Silver King Mines)

U. S. Environmental Protection Agency

John Geidt (Region VIII)

NRC, Uranium Recovery Licensing Branch

H. J. Miller
E. A. Trager
B. W. Staub (NRC Consultant - ORNL)
Perry Rahn (NRC Consultant - South Dakota School of Mines)
Gonzalo Castro (NRC Consultant - Geotechnical Engineers, Inc.)

Discussion

Mr. H. J. Miller convened the meeting and recalled that the primary purpose of the meeting was to provide an opportunity for involved federal, state, and local government representatives to select, on a preliminary basis, the group of candidate sites which would be best suited for the storage of the inactive Edgemont uranium mill tailings. He emphasized that, although the NRC is in full agreement that the tailings should be removed to and reclaimed at a more remote location, it is not clear from information presented in the TVA Environmental Report (ER) that a better site for tailings storage than that proposed might not be available. He stated that a second purpose of the meeting would be to address the need for a remedial action program to cleanup offsite tailings locations resulting from windblown tailings and from mill tailings removed for use by individuals.

Mr. R. H. Shell began the presentation by TVA of the process by which alternative tailings disposal sites had been screened and evaluated. The TVA presentation included a description and a graphical display of the sites which had been initially considered and performance criteria and other technical considerations. For example, although approximately 2.3 million tons of tailings were generated at the Edgemont Mill, there may be a total of from 5 to 8 million tons of contaminated material which must be disposed, of including stabilization material, dikes/embankments, and contaminated materials beneath the tailings ponds.

State and local personnel made a presentation of current and projected land use and population growth patterns.

A group of potential sites were then selected and inspected by the meeting participants. Sites inspected included depleted open pit mines to the northwest of the mill, TVA's preferred site and sites further to the south. After further discussion of the sites there was general, preliminary agreement among the meeting participants that no site is available which is clearly superior to TVA's proposed site with respect to the criteria of (1) long-term stability of the tailings impoundment system, (2) remoteness from people, (3) impacts to groundwater, and (4) impacts due to transportation of tailings. Miller

expressed caution that this will be confirmed pending receipt from TVA of additional information on the proposal and on certain other alternatives which appear to be feasible. TVA agreed to provide this information and information on technical details of the proposal as indicated in the enclosed notes.

Miller stated that the NRC will make every effort to issue a draft Environmental Statement (DES) within six months of acceptance of the TVA ER. He further stated that the TVA ER would be accepted and a public scoping meeting scheduled as soon as possible, but that the environmental review depended significantly on TVA's ability to quickly provide the more critical, outstanding information.

The second major item addressed at the meeting was the offsite remedial action program. Miller stated the sense of urgency which the NRC has in this matter and NRC intentions to participate in the off-site remedial action program that is found to be necessary. The objective at this point is to determine which properties, if any, are contaminated with tailings and the procedures by which such properties could be cleaned up. Enclosed are notes on agreements reached by the state, the EPA, the TVA, and the NRC concerning the remedial action program.

E. A. Trager

E. A. Trager
New Facilities Section
Uranium Recovery Licensing Branch
Division of Waste Management

Enclosure: As stated

Enclosure

August 29, 1979, Edgemont Uranium Mill

Decommissioning Meeting Notes

SITE SELECTION

Information needed for NRC to complete preparation of the draft environmental statement:

Time Frame*	Information Needed for Site Determination
two weeks	- aerial photos of Sections south/southeast of Edgemont and Site No. 8
one month	- follow-up brief on ground characterization of one or several potential disposal sites in this section including the following: - land survey to characterize topography, drainage patterns, etc. - characterize surface geology--walk through of sites to identify and locate overcroppings present.
one week	- copies (17) of FBDU site selection study performed for TVA.
one to one and one-half months	- broad impact, cost and feasibility information for three prime candidate sites: 1. TVA preferred site 2. open pits (Site No. 8) 3. E-SE-S location (information which would be representative of several sites in this sector) This should include information on several of the viable transportation options at each site, e.g., pipe line slurry, trucking (including off road), or combination of these for sites 1 and 3.

*TVA will respond within about 2 weeks with a position on whether these dates/time frames can be met.

Time Frame	Information Needed for Site Determination

This information should include details such as:

- number of trips
- length of travel
- duration of disposal operation
- potential capacity of each site accounting for desirability of excavating at the disposal site to:
  - eliminate need for or reduce to the maximum extent practicable the size of embankments
  - provide a final cover of at least 3 meters thickness
- need to return to the current site fill material necessary to replace contaminated volumes removed

Detailed Information Needed on Selected Site

three months

- Information needed to evaluate the potential for groundwater contamination including:
  - description of stratigraphy below site
  - location of groundwater formations
  - properties of stratigraphic units as they related to groundwater or seepage movement, e.g.:
    - permeabilities
    - degree of fracturing or discontinuties (e.g. sand dikes) which could provide channels for spread of contamination
    - strength and other engineering properties of foundation materials

- Details on design of impoundment (not necessary to have level of detail required for construction):
    - acreage of impoundment
    - shape of impoundment
    - depth of excavation
    - thickness of liners
    - properties of liner material

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OFFSITE STRUCTURES

- each agency will determine what resources are available to conduct the needed additional measurements
- TVA staff has general Board approval to conduct initial studies
- NRC will cooperate in the measurement program. NRC will examine providing assistance from its contractors experienced in making radon measurements
- State will take lead in gaining access to properties for further measurements.
- Measurements will involve:
    - for sites surveyed to date soil samples will be taken at suspected tailings locations - up to four per site - to determine whether tailings are present or not (ore, mine waste or other natural sources could be responsible for the high gamma readings)
    - if tailings are present then RDC measurements will be required to determine whether a health hazard exists
    - in Cottonwood Community, TLD measurements and RDC measurements are needed in structures to determine the potential for health impacts

- The general strategy is to be to

  - start with most likely and worst case sites first; conducting RDC measurements as soon as possible to reach the point of knowing what work, if any, on the most limiting structures is needed as soon as possible

  - A more detailed strategy of measurements will be worked out at a meeting held at the same time that the NRC scoping meeting is held