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URFO:RFB
Docket No. 40-1341
SUA-816, Amendment No. 14
0400134133CS

MEMORANDUM FOR: Docket File No. 40-1341

FROM: Randall F. Brich, Project Manager
Licensing Branch 1
Uranium Recovery Field Office, RIV

SUBJECT: REVIEW OF HEALTH PHYSICS MANUAL REVISIONS -
TVA EDGEMONT DECOMMISSIONING PROJECT

BACKGROUND

By letter dated April 10, 1985, TVA submitted Revision 3 to the project Health Physics Manual (HPM). The HPM was provided initially by letter dated September 30, 1983. Revision 1, submitted on January 16, 1984, and approved on February 27, 1984, incorporated a limited number of changes. Revision 2 was a complete revision and was submitted on October 30, 1984. Revision 3 reflects NRC concerns on Revision 2 expressed in a letter dated January 3, 1985.

DISCUSSION

The NRC comments contained in the letter dated January 3, 1985, have been addressed in Revision 3 of the HPM. Specifically:

Comment No. 1 - The USNRC block has been removed from Figure 1.1.

Comment No. 2 - The HPM was revised to state that an onsite procedure will contain visitor escort criteria. Presently, all visitors are escorted while on site.

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- Comment No. 3 - The HPM was revised to state that routine radiation protection implementation reports will be approved by management.
- Comment No. 4 - The HPM was revised to state that any changes in plans or procedures will be reviewed to ensure that the level of protection provided to individuals will not be decreased by any program modifications.
- Comment No. 5 - The HPM was revised to state that training would be documented in accordance with applicable regulatory guidelines and program training requirements.
- Comment No. 6 - The HPM was revised to state that no decommissioning activity controlled by an onsite procedure will commence until the respective management approved procedure is in place.
- Comment No. 7 - Enclosure No. 1 responded to NRC concerns regarding interpretation of areas that fall between the Table 3.1 and 3.2 values. TVA states that onsite areas with radioactivity levels between the limit of Tables 3.1 and 3.2 are designated "Controlled Area." These areas are subject to the same access control requirements for the controlled areas of the site.
- Comment No. 8 - The HPM was revised to state that posting of areas within the controlled area that exceed Table 3.2 values will be as defined in the onsite written procedures.
- Comment No. 9 - The HPM was revised to state that the personnel action level is 1000 dpm/100 cm² alpha.
- Comment No. 10 - The HPM was revised to state that should the personnel action level be exceeded, decontamination will commence per the appropriate onsite procedures.
- Comment No. 11 - Enclosure No. 1 responded to NRC concerns regarding exposure limits for airborne radioactivity. TVA states that the 1×10^{-10} uCi/ml MPC NRC referred to is used for exposure to uranium ore dust and yellowcake areas in an operating mill (Regulatory Guide 8.30). Since

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only small amounts of uranium ore and yellowcake remain at the Edgemont site, the principal airborne exposure source is mill tailings. The mill tailings are depleted to about 9 percent uranium, and sensitivity studies for a tailings mix (Ra-226, Th-230, Pb-210, Po-210, and much lesser amounts of U-238 and U-235) indicate that an MPC of about 5×10^{-11} uCi/ml gross alpha activity is applicable.

Comment No. 12 - The HPM was revised to state that area sampling will be used to supplement lapel sampling when workers migrate between locations. Outdoor grab samples and frequency of collection is addressed in onsite procedures.

Comment No. 13 - The HPM has been revised to reference the applicable regulatory guidelines and respirator requirements in the appropriate onsite procedures.

Comment No. 14 - The HPM has been revised to state that radon-222 or radon daughter samples will be collected prior to disturbance of residual radioactive materials. Monthly measurements will follow in any areas of active disturbance.

Comment No. 15 - The HPM has been revised to state that respirator usage will follow prescribed procedures and applicable regulatory guidelines.

Comment No. 16 - The HPM has been revised to state that the action levels in Table 4.1, as determined by in vivo analysis, are 50 and 80 percent of the Ra-226 Maximum Permissible Body Burden of 100 nanocuries. Uranium uptake is determined by urinalysis.

Comment No. 17 - The HPM has been revised to reference conformance to Regulatory Guide 8.30.

The HPM does not provide for retraining of the Radiation Safety Officer (RSO) or the Health Physics Technicians (HPT). Therefore, the licensee should be required to provide the health physics staff at least one refresher training course, related to their work assignments, every 2 years as recommended by Regulatory Guide 8.31.

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RECOMMENDATIONS

All of the NRC comments have been addressed by the HPM Revision 3. One item of concern noted during review of the HPM involved the absence of retraining requirements for the RSO and HPTs. Therefore, I recommend that the HPM be approved and Source Material License SUA-816 be amended by the addition of License Condition No. 42 to read as follows:

42. Notwithstanding any conflicting requirements of License Condition Nos. 26 and 31, the licensee shall adhere to the statements, representations and conditions contained in their Health Physics Manual (HPM) submitted by letter dated September 30, 1983, and as revised by letters dated January 16, 1984, October 30, 1984, and April 10, 1985. The HPM is the detailed Radiation Protection Plan originally required by this condition. Anywhere the words "should" or "will" are used in the HPM, they shall denote a requirement. In addition to the requirements of the HPM, the licensee shall ensure that the Radiation Safety Officer and Health Physics Technicians shall attend at least 1 week of refresher training related to their duty assignments, at least every 2 years.

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Randall F. Brich, Project Manager
Licensing Branch 1
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Original Signed By

Edward F. Hawkins

Approved by:

Edward F. Hawkins, Chief
Licensing Branch 1
Uranium Recovery Field Office, RIV

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