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WMUR:DMS  
Docket No. 40-8728  
04008728090E

MEMORANDUM FOR: Frederick W. Ross, Project Manager  
Operating Facility Section I, WMUR

FROM: Dennis M. Sollenberger, Project Manager  
Operating Facility Section II, WMUR

SUBJECT: REQUEST FOR INTERIM IN-PLANT RADIATION PROTECTION  
PROGRAM AT THE UNC TETON R&D SITE

Discussion

By letter dated July 19, 1982, UNC Teton Exploration Drilling Company, Inc. requested that their license be amended to reduce the radiological environmental monitoring programs and the in-plant radiation safety program. The licensee has cleaned up the equipment on site and has decontaminated the process buildings. The survey results show that the process building has been decontaminated to below 100 dpm/100 cm<sup>2</sup>. The process equipment has been dismantled, rinsed, and sealed.

The licensee proposes to use the process building for storage during the interim period. The building will be opened approximately three (3) days per month to retrieve and replace sampling equipment used to conduct wellfield stabilization sampling. The licensee estimates that the actual time in the building at approximately one (1) hour per month for one individual. The licensee has committed to maintaining postings on all area perimeter gates, pond fence gates, building doors and compound gates with warning signs stating, "Caution. Any area or room within this facility may contain radioactive materials." All gates and doors will remain chained and locked at all times when no one is on the site. During the interim period, the Teton R&D staff will consist of one individual. This individual will be designated the interim Radiation Safety Officer (RSO).

Qualifications for an Interim RSO

The interim RSO will have at least four (4) years experience in the uranium industry and be familiar with in situ uranium chemistry,

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radiation safety procedures, contamination control procedures, and a technician's knowledge of the sampling procedures and applicable sampling and radiation monitoring equipment.

The staff has concluded that the qualifications for the interim RSO are acceptable.

Duties of the Interim RSO

The interim RSO will control all access to the plant property and buildings and all activities conducted onsite. The interim RSO will be responsible for maintaining a log which will include entrance and exit times of people required to enter the building. He will direct all activities within the building and perform the in-plant monitoring as necessary. The interim RSO will also conduct any environmental sampling and maintain the necessary records. The interim RSO will supply copies of the results of the records to the Teton Safety Officer.

The staff has concluded that the duties of the interim RSO are acceptable.

Procedures for Interim Plant Building Occupancy

The licensee has requested that the restricted area designation for the building and fenced area be dropped from the license. However, the licensee has committed to controlling access to the plant building as if the entire building was a restricted area until they can sufficiently document that no radiation hazard exists within the building. Therefore, they proposed the following procedures to be followed for personnel entering the plant building during the interim period:

1. The interim RSO will authorize and control all access to the plant building.
2. The interim RSO will maintain a time log showing the date, name, time in and time out for all persons who enter the building during the interim period, including himself. This time log will act as an authorization to enter, a record of time spent in the plant, and will replace the preceding work permit program.

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3. If it is necessary to remain in the plant building for more than short periods of time, the plant will be ventilated by opening all bay and outside doors.
4. At any time when the radon sampling in the plant building shows radon buildup of 25% or greater of the maximum permissible concentration, the electric forced air ventilation system will be activated and remain on during occupancy.
5. Any maintenance work within the plant building or on process equipment which may contain residual radioactive material will be preceded by radon sampling in the plant (to determine potential inhalation exposures). After the work has been completed an alpha contamination wipe survey will be performed on the potentially effected work area. If the survey indicates contamination above 100 dpm/100 cm<sup>2</sup>, the work area will be washed down with clean water and resurveyed.
6. Equipment or material removed from the site or plant building will either be disposed of at a licensed disposal facility or put to use at a licensed uranium recovery facility. There will be no equipment or material which has been potentially contaminated released for unrestricted use unless the procedures in Annex C, "Guidelines For Decontamination of Facilities and Equipment Prior To Release For Unrestricted Use or Termination of Licenses For Byproduct, Source, of Special Nuclear Material," dated November 1976 are followed and a record maintained.

The staff has concluded that the procedures above are acceptable except that the restricted area designation shall not be dropped until the license has been terminated, and the licensee shall be required to perform alpha contamination wipe surveys on potentially contaminated equipment prior to conducting maintenance activities.

Radon Sampling

The licensee proposes to sample radon gas near the process plant floor on a monthly basis until it can be determined that the radon concentration has remained below 25% of the maximum permissible concentration or radon progeny remain below 0.33 working levels for four (4) consecutive monthly

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of the time log, and a review of the records maintained by the interim RSO.

The staff has concluded that the above interim audit program is acceptable.

Interim Reporting

The licensee has committed to submit to the NRC a brief quarterly report during the interim phase. This report will be in the form of a letter summary that provides the status of the plant and any pertinent activity occurring during the previous quarterly period including a copy of the time log showing the actual time spent in the plant during the quarter and the results of the available radiation samples conducted.

The staff has concluded that the proposed interim reporting is acceptable.

Conclusion

Based on the discussion presented by the licensee in the attachments to letter dated July 19, 1982, the staff has concluded that the proposed in-plant radiation safety program is acceptable with the following exceptions:

- ° If radon daughter measurements are done instead of radon gas measurements, the radon daughter action point should also be 25% of the occupational limit of 0.33 WL (i.e., 0.08 WL).
- ° The licensee shall maintain the controlled area as a restricted area until the license is terminated.
- ° The licensee shall perform alpha contamination surveys prior to conducting maintenance activities on potentially contaminated equipment.

The staff recommends that License Condition Nos. 25 and 30 of SUA-1373 be revised to read as follows:

- 25. The project facilities shall be restricted by enclosing the processing areas and the pond(s) with at least three strands of ,

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barbed-wire fencing. The licensee shall maintain the fenced area as a restricted area until the license is terminated.

- 30. The licensee shall perform the interim in-plant radiation safety programs described in Part 2 of the attachment to the letter dated July 19, 1982. The radon or radon daughter sampling shall not be reduced to quarterly unless four (4) consecutive monthly radon or radon daughter samples show less than 25% of the maximum permissible concentration or 0.08 working levels, respectively. The licensee shall perform removable alpha contamination surveys on any potentially contaminated equipment prior to performing maintenance on the equipment.

**Original signed by**

Dennis M. Sollenberger, Project Manager  
Operating Facility Section II  
Uranium Recovery Licensing Branch  
Division of Waste Management

**Original signed by**

Approved by:

H. J. Pettengill, Section Leader  
Operating Facility Section II  
Uranium Recovery Licensing Branch  
Division of Waste Management

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