DOW CHEMICAL U.S.A.

MIDLAND, MICHIGAN 48640

January 11, 1977

Mr. James G. Keppler
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

CIRCULAR NO. 76-03

This is to confirm that the following actions have been taken at the Dow TRIGA reactor facility License R-108, Midland, Michigan, in accordance with Circular No. 76-03, dated September 13, 1976.

1. A thorough review of all areas associated with the Dow TRIGA reactor has been carried out to identify the high-radiation areas both continuous and transient as defined in 10 CFR 20.202(b). The following findings are reported.

   High-radiation areas can exist at, near or above the sample storage facility in the reactor room which consists of a lead castle built of four inch thick lead wall into which samples exceeding the expectation when retrieved from the reactor are stored until further disposal arrangements are made.

   Other high-radiation areas include the transient sample storage rack placed near the loading tube of the rotary sample rack of the reactor to receive irradiated samples during the unloading process. In such sample racks the high-radiation field exists temporarily over a distance of one or two feet. Both the lead castle and the sample rack are labeled with "High Radiation" area signs.

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Other high-radiation areas are encountered at the dry well storage facilities which are loaded with long life radioactive materials for storage purposes. These facilities are equipped with two-foot thick concrete plugs which can be locked and are labeled to contain radioactive material. A high-radiation field may exist above the well after the removal of the shielding plug with a hoist.

Another transient high-radiation area can exist in the hot lab hood when radioactive samples are retrieved via the pneumatic system. The hood area is also labeled as a high-radiation area with the name of the reactor supervisor during such operations.

The above high-radiation areas are labeled with the proper warning signs and controlled in accordance with 10 CFR 20.202(b) so that inadvertent exposure of personnel is prevented.

3. In pursuance of the intent of Circular 76-03, a written reminder has been issued to all personnel working at the facility describing the policies concerning high-radiation areas. This circular has been made available to all present personnel and will be used for training purposes in the future.

4. The policies instituted at the facilities include the labeling and direct surveillance of the transient high-radiation areas. Any person required to perform work in high-radiation areas must first obtain consent of the originator of the high-radiation area and pertaining instructions.

5. It is planned to periodically audit the high-radiation area policies during the annual check out of the facility and ensure their continued effectiveness.

A copy of this letter is to be kept in the file of the reactor facility as part of the periodic reporting to the Reactor Operations Committee. This will be in compliance with the request that a record and the detailed findings as well as the actions taken and the actions to be taken are retained within the files of the facilities for review by the NRC during the next radiological safety inspection.

Sincerely,

Oswald H. Anders *)

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