



50-264

September 14, 1998

The Dow Chemical Company
Midland, Michigan 48667

Mr. Alexander Adams, Jr., Senior Project Manager
Non-Power Reactors and Decommissioning
Projects Directorate
Division of Project Support
Office of Nuclear Reactor Regulation

Dear Mr. Adams

Enclosed is a proposed modified emergency plan for The Dow TRIGA Reactor, Facility Operating License No. R-108. Responses requested from your letter dated October 2, 1996 are submitted. Enclosed are two versions of the plan. One version has all changes highlighted; either in the form of ~~strikethrough format~~ (deletions) or **bold format** (additions); and an explanation for each change. One version has all changes incorporated into the text of the plan. Specific responses to your requests are addressed in the attachments. If you have any questions regarding these proposed changes, please contact me at (517) 636-6584.

Regards

Ward L. Rigot
Reactor Supervisor
Dow TRIGA Research Reactor
Dow Chemical Company

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Drawings in Files

RESPONSES TO REQUEST FOR ADDITIONAL INFORMATION
DOW TRIGA RESEARCH REACTOR EMERGENCY PLAN

1. The definition of EPZ has been changes to be consistent. All references are to the reactor room (lab 51-A, 1602 Building).

All references to operations boundary have been removed, including the definition.

All references to fenceline have been eliminated; therefore, no definition is necessary.

The definition of Site boundary has been changed for clarity.

2. I have included maps with the EPZ and site boundary labelled.
3. I have included a document from the manufacturer of ion chambers and G-M monitors to support our request for changes to calibration frequency.
4. I have included internal documents which describe the current training programs. These documents are not intended for inclusion in the emergency plan, only as an explanation of the current practices..
5. Backups for the reactor supervisor are already included in the plan. There is no need for internal backups for other members of the emergency organization, since these roles are filled 24 hours a day, 7 days a week. In the event additional emergency personnel are required they will be supplied by outside organizations, which are also described in the plan.
6. The training programs supplied annually by the Radiation Safety Officer is similar in scope to that received by the emergency organization and is included. Biennial training is required. We wish to have our training consistent with regulations. Additionally, on-the-job training is a valuable training tool which can be tailored to the individual needs of the facility users, whether they are operators, experimenters or other laboratory personnel.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

Training will be provided to all users of radioisotopes commensurate with the level of hazard. This training will be conducted prior to the use of radioisotopes and whenever there is a significant change in duties, regulations, or the terms of the License. Training is provided by the RSO, Alternate RSO, an Authorized User or Supervisor.

8.1 Incidental Personal

All personnel that have a potential for exposure to radioactive materials will participate in a one hour orientation training session. This training is provided to incinerator operators, medical/nursing staff, personnel receiving licensed material, housekeeping, and emergency response/security staff, it is repeated annually, and includes the following topics:

1. Applicable regulations and license conditions
2. Areas where radioactive material is used and stored
3. Potential hazards associated with radioactive material
4. Appropriate radiation safety procedures
5. Individual's obligation to report unsafe conditions to the RSO
6. Appropriate response to emergencies or unsafe conditions
7. Workers' right to be informed of occupational radiation exposure and bioassay results
8. Locations of pertinent regulations, licenses and other material required by regulations
9. Individual's responsibilities

The training courses for the groups named above are tailored for each group's special needs. Specific information is added to the above listed information for the following groups:

- Medical/Nursing staff: information on what isotopes and general quantities are used in what areas, what are the most likely incidents involving radioactive material to occur, level of hazard based on isotope and quantity, priority of treatment (e.g. treat a serious physical injury before decontamination of minor C-14 contamination), what type of injuries may be expected when using various sources of radioactive material (e.g. radiography sources may cause high level radiation exposures, X-ray diffraction machines may cause localized extremity burns etc.).
- Emergency Response/Security Staff: information on what isotopes and general quantities are used in what areas, what incidents involving radioactive material are most likely to occur, level of hazard based on isotope and quantity, priority of treatment (e.g. treat a serious physical injury before decontamination of minor C-14 contamination), where to set up access control boundaries, which individuals are authorized to enter controlled areas, how to use a radiation survey meter, health effects of acute exposures.

Eberline Instruments

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December 12, 1995

DOW CHEMICAL COMPANY
1803 BUILDING
MIDLAND, MI 48674

Attention: Janet Grappin

Fax: (517)638-9975

Dear Ms. Grappin;

Per our telephone conversation about changing the calibration interval for any instrument. If the instrument is checked for functionality and accuracy prior to each use then the interval of calibration maybe extended as far as one calendar year.

Note: If the functionality test does not pass then the instrument is not serviceable anyway. If the accuracy test fails the unit will be required to be calibrated before it can be placed into service.

Respectfully,



Albert C. Briggs
Eberline Service Engineer