

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-57/85-02

Docket No. 50-57

License No. R-77

Priority --

Category F

Licensee: State University of New York  
Rotary Road  
Buffalo, New York 14214

Facility Name: Buffalo Materials Research Center

Appraisal At: Buffalo, New York

Appraisal Conducted: August 26-29, 1985

Inspectors:

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Approved by:

T. L. Harpster  
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Emergency Preparedness Section, DRSS

12/13/85  
date

Appraisal Summary: Appraisal on August 26-29, 1985 (Report No. 50-57/85-02)

Areas Inspected: Special announced emergency preparedness appraisal regarding the implementation of the Emergency Preparedness Program.

Results: No violations were identified. The emergency preparedness program in general provides reasonable assurance that the emergency response organization can respond in the event of a radiological emergency.

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## DETAILS

### 1.0 Emergency Organization

The inspectors reviewed the overall emergency organization described in Section 3 of the Emergency Plan dated July 31, 1984, and noted that appropriate authorities, assignments, and functional areas have been established. However, lines of succession were described for only one of the three key response positions. Also, the role of the State of New York Department of Health (NYSDH) during an emergency was not clarified.

Two open items which require licensee attention are identified:

the Emergency Plan should contain a single succession list for each of the following key emergency response organization positions:

- a. Emergency Director;
- b. Health Physicist;
- c. Reactor operators. (50-57/85-02-01);

identify specific functions, assistance, and support of emergency preparedness that the NYSDH would provide in the event of an emergency and include this in the Emergency Plan (50-57/85-02-02).

### 2.0 Onsite Organization

The inspectors reviewed the description and responsibilities of the onsite organization as shown in the Emergency Plan. The inspectors held discussions and conducted walkthroughs with onsite response personnel having key positions within the organization and noted that response personnel interviewed demonstrated adequate knowledge to perform effectively in the emergency organization. The operators were not familiar with the concept of Emergency Action Levels (EAL's) and the correlation of these with initiating conditions. This lack of familiarity and understanding is attributable to the delay in training staff in the revised 1984 facility emergency plan and procedures. Since long existing emergency procedure were included in the Emergency Plan (under slightly different titles), the lack of familiarity and understanding did not impair emergency response effectiveness during walkthroughs.

Based on the above findings, this portion of the licensee's program is acceptable.

### 3.0 Fire Protection

The inspectors reviewed Section 3.4.3.A of the Emergency Plan, Emergency Procedure #6 (dated February, 1985), interviewed members of the Buffalo Fire Department, and determined that adequate support exists for providing fire protection services to the Buffalo Materials Research Center (BMRC). Fire department representatives had a good understanding of their onsite responsibilities and identified

BMRC staff members who would provide instructions regarding radiation safety during firefighting activities. An ongoing training program for the Fire Department is provided by the New York State Department of Health together with the licensee which covers basic radiation health principles and concepts, a description and tour of the reactor facility, and expected response to emergencies involving radioactive materials.

Based on the above findings, this portion of the licensee's program is acceptable.

#### 4.0 Police Protection

The inspectors reviewed Section 3.4.2.C of the Emergency Plan and interviewed members of the State University Public Safety Department (PSD) and determined that adequate support will be provided for traffic and access control, and assistance in facility and public evacuation. The Public Safety Department also provides essential communications services and initial notifications to onsite organizations such as the Environmental Health and Safety Department and University Health Services Department. Officers of the PSD are the first offsite responders to report to the BMRC in the event of an emergency. Discussions with PSD members indicated that procedures provide for 24 hour coverage. Training is provided on an annual basis and appears effective since those individuals interviewed understood their emergency duties and responsibilities.

Based on the above findings, this portion of the licensee's program is acceptable.

#### 5.0 Information Releases to the News Media and Public

The State University News Bureau has the responsibility to prepare and issue press releases and other information to the public based on information obtained from the Emergency Director. The inspectors interviewed the News Bureau Director and determined that an adequate interface exists between the News Bureau and BMRC to carry out the public affairs function during emergencies. The News Bureau staff also understand their duties and responsibilities in accident situations and have participated in facility drills.

Based on the above findings, this portion of the licensee's program is acceptable.

#### 6.0 Notification and Activation of the Emergency Organization

The inspectors reviewed Sections 6.1 and 6.2 of the Emergency Plan, and determined that a discussion of emergency communications equipment is lacking. The inspectors checked communications capability and found it to consist of commercial phones, security alarms, portable radios, instruction alarms, and fire alarms. An undated emergency call-out list

with phone numbers was available in the control room and a second list in the Health Physics Office. Preformed messages are not used for initial notification and the posted home phone list was in need of minor revision.

Two open items which require licensee attention are identified:

preformed messages should be developed for initial emergency communication (50-57-85-02-03);

the telephone lists should be dated and show office, home and pager numbers (50-57-85-02-04).

#### 7.0 Identification and Classification Procedures

The inspectors reviewed applicable sections of the Emergency Plan, Emergency Procedures, Abnormal Procedures and interviewed individuals who are responsible for identification and classification of emergency events.

During interviews with personnel who are responsible for identification and classification, it was noted that most were unfamiliar with the connection between Emergency Action Levels and initiating conditions.

One open item which requires licensee attention is identified:

A table or chart correlating initiating conditions with an Emergency Classification System should be included in the Plan and an Emergency Procedure should be provided for implementation (50-57/85-02-05).

#### 8.0 Protective Equipment

The inspectors reviewed section 9.0 of the Emergency Plan and applicable Emergency Procedures, toured the BMRC and the adjacent Howe Facility, inspected radiological survey instrumentation, and lockers storing emergency supplies used during emergencies; inspected the calibration facility and records of calibration and operability tests of monitoring equipment; and held discussions with BMRC health physicists regarding inventory control, equipment capabilities, and sampling techniques. The inspectors determined that adequate protective supplies (respiratory protection equipment, protective clothing, personnel monitoring equipment, and survey meters) were available for support personnel to respond to emergencies within the BMRC facility. However, the inspectors found that provisions were not in place for assembly, dispatch, and carrying out the functions of onsite and offsite field teams, and that equipment and supplies were not designated to monitor radiation dose rates offsite. In addition, portable radiation instruments used to detect radiation levels throughout the BMRC did not have adequate sensitivity to monitor expected dose rates as described in Emergency Action Levels.

Two open items which require licensee attention are identified:

provide Emergency Procedures and designate protective equipment and supplies to carry out essential functions of both onsite and offsite field teams (50-57/85-02-06).

provide portable equipment to monitor radiation dose rates during emergencies which are described in Section 5 of the Emergency Plan and associated emergency action levels (50-57/85-02-07).

#### 9.0 Emergency Support Center

The inspectors reviewed Section 9 of the Emergency Plan, held discussions with licensee onsite response personnel, toured the BMRC Emergency Support Center, (ESC) and determined that the ESC is adequate to provide radiological assessment, coordination of the response, and implementation of corrective actions during an emergency. Communications equipment in the BMRC is available so that information and instructions to offsite support groups is assured.

Based on the above findings, this portion of the licensee's program is acceptable.

#### 10.0 Decontamination Capabilities

The inspectors reviewed Section 8 "Decontamination" of the Emergency Plan, Emergency Procedures #2 and 3, held discussions with both licensee and medical support personnel, toured the decontamination and treatment facilities located in the Howe building and also in the Veterans Administration Medical Center, inspected decontamination supplies and equipment, and determined that the licensee has adequate provisions in place to minimize the spread of contamination and provide for onsite and offsite decontamination of personnel.

Based upon the above findings, this portion of the licensee's program is acceptable.

#### 11.0 Equipment Maintenance and Calibration

The inspectors held discussions with licensee health physics personnel, toured the instrument calibration facility, reviewed the procedure for operability and calibration checks, inspected radiation monitoring equipment for function and operation, and determined that equipment for radiation monitoring and surveillance is adequate and would be operable for use during emergencies.

Based upon the above findings, this portion of the licensee's program is acceptable.



## 12.0 Evacuation

The inspectors interviewed licensee personnel, reviewed Emergency Procedure No. 1, "Staff General Emergency Procedure," and determined that there were adequate fire and evacuation alarms. It was also noted that the alarm systems were routinely tested.

Based on the above findings, this portion of the licensee's program is acceptable.

## 13.0 Accountability of Personnel

The inspectors contacted personnel, reviewed the Emergency Plan and pertinent procedures and noted that a means had been established to account for personnel who may have been within the controlled area. It was determined during the appraisal that the system was maintained continuously. Provisions were also provided for surveying potentially contaminated personnel.

Based on the above findings, this portion of the licensee's program is acceptable.

## 14.0 Assembly Areas

The inspectors interviewed licensee personnel, reviewed the Emergency Plan and pertinent emergency procedures, and examined the primary and alternate assembly and re-assembly areas. The size of the areas appeared to be adequate for use during a radiological emergency.

Based on the above findings, this portion of the licensee's program is acceptable.

## 15.0 Personnel Monitoring

The inspectors contacted licensee personnel, reviewed the Emergency Plan and appropriate procedures and noted that there were provisions for monitoring all individuals evacuating the controlled area. It was also noted that provisions were established for monitoring potentially contaminated individuals at the primary and alternate assembly areas. The inspectors determined that all individuals authorized to enter the controlled area routinely are issued dosimetry and provisions have been established for offsite emergency support personnel to receive dosimetry when reporting to the site.

Based on the above findings, this portion of the licensee's program is acceptable.

#### 16.0 Personnel Exposure Control

The inspectors held discussions with licensee personnel, reviewed appropriate sections of the Emergency Plan and noted that only the Emergency Director is authorized to approve any individual exceeding 3 Rems per Quarter of whole body exposure. There were provisions for access control to contaminated and high radiation areas.

Based on the above findings, this portion of the licensee's program is acceptable.

#### 17.0 Medical Support, Hospital, and Ambulance Services

The inspectors reviewed Section 7 of the Emergency Plan and Emergency Procedure #2 (dated February 1985) including Appendices A-D, toured the area in the V.A. Medical Center designated for handling contaminated/injured individuals, and interviewed medical personnel who would be involved in treating radiation accident patients. The inspectors determined that adequate medical support exists for managing individuals injured in an accident which involves radioactive contamination or external exposure. Transportation of injured persons from the BMRC to the V.A. Hospital or Roswell Park Memorial Institute (identified for treatment of high radiation exposures) is via commercial ambulance. A representative from Radiation Protection Services accompanies the ambulance to aid in contamination control.

Based on the above findings, this portion of the licensee's program is acceptable.

#### 18.0 Emergency Training and Retraining

The inspectors reviewed the training/retraining program that will be used for the licensee personnel. Various exercises and drills are conducted to test the plan, implementing procedures, emergency equipment and the emergency personnel preparation. The inspectors also interviewed various offsite emergency response personnel in regard to their training. The interviews of licensee personnel are described in previous paragraphs.

One open item which requires licensee attention is identified:

Develop a training/retraining lesson plan to include the classification of emergencies, required notifications, and dose commitment calculation. Provide a training matrix that describes classroom and practical training necessary to qualify each member assigned to the BMRC emergency response organization (50-57/85-02-03).

#### 19.0 Drills and Exercises

The inspectors reviewed the established emergency drill and exercise schedule with licensee personnel. The inspectors also reviewed records

of drills and exercises during the previous two years and noted that corrective measures were implemented where deficient areas were observed. A minimum of three emergency drills are conducted each year and shall include two evacuation drills and one drill to test the integrated capability of the emergency plan and may include offsite support personnel such as police, fire, or ambulance crews. A written critique of the drill is to be provided for review by the Operating Committee.

Based on the above findings, this portion of the licensee's program is acceptable.

#### 20.0 Maintaining of Plan and Procedures

The inspectors discussed the maintenance of the Emergency Plan and Emergency Procedures with licensee personnel and noted that provisions were established for an annual review. It was also noted that the Emergency Procedures revised during February and April 1985 were reviewed and approved in accordance with the Emergency Plan. The Emergency Planning Offices was in the process of revising some procedures and was also planning on increasing the number of Emergency Procedures to provide additional detailed information.

Based on the above findings, this portion of the licensee's program is acceptable.

#### 21.0 Exit Meeting

On August 29, 1985 the inspectors met with the individuals identified in Annex A and summarized the findings (open items) as denoted in this report.

License management acknowledged the findings and indicated that appropriate action would be taken regarding the identified open items.

At no time during this appraisal was written material provided to the licensee by the inspectors.



ANNEX A

Persons Contacted

\*Alexander Adam, Jr., Reactor Engineer  
Capt. K. Bensman, Buffalo Fire Department  
Dr. C. Cecelia, Chief, Administrative, V.A. Medical Center  
William H. Elliot, Senior Reactor Operator  
J. Grela, Assistant Director, Public Safety  
\*James P. Griffin, Senior Health Physicist  
\*Louis G. Henry, Director  
R. Hunt, Director, Eviron Health & Safety Department  
L. Kobas, Director, News Bureau  
Dr. M. Kunz, Director, University Health Services  
G. MacPeak, County Disaster Coordinator, Erie County ODP  
\*Philip M. Orlosky, Operations Manager  
Dr. J. Steinback, Chief, Nuclear Medicine, V.A. Medical Center  
Anthony P. Vargas, Senior Reactor Operator

\*Denotes those present at exit meeting on August 29, 1985.