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NOV 14 1978

Docket No. 70-687

Union Carbide Corporation  
ATTN: Mr. H. E. Fritz, Operating Manager  
Sterling Forest Laboratory  
P. O. Box 324  
Tuxedo, New York 10987

Gentlemen:

Subject: Inspection 70-687/78-02

This refers to the inspection conducted by Mr. J. Roth of this office on October 12-13, 1978 of activities authorized by NRC License No. SNM-639 and to the discussions of our findings held by Mr. Roth with yourself and other members of your staff at the conclusion of the inspection, and to a subsequent telephone discussion between Mr. Konnerth of your staff and Mr. Roth on October 19, 1978.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

Based on the results of this inspection, it appears that certain of your activities were not conducted in full compliance with NRC requirements, as set forth in the Notice of Violation, enclosed herewith as Appendix A. These items of noncompliance have been categorized into the levels as described in our correspondence to you dated December 31, 1974. This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office, within twenty (20) days of your receipt of this notice, a written statement or explanation in reply including: (1) corrective steps which have been taken by you and the results achieved; (2) corrective steps which will be taken to avoid further items of noncompliance; and (3) the date when full compliance will be achieved.

Another activity appears to be a deviation from ANSI Standard N16.1-1975 Section 4.1.2 "Process Analysis" in that the use of not-safe-by-geometry-containers (ranging between 7 and 20 inches in diameter) was not analyzed to determine that the entire process will be subcritical under both normal and credible abnormal conditions. Multiple units of 93% enriched U-235 concentrated solutions are handled throughout the solution makeup

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Union Carbide Corporation

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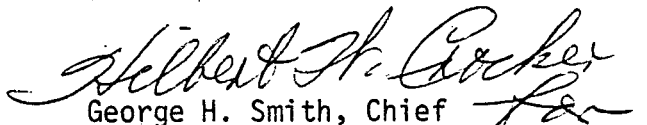
area of the facility and solutions from these multiple units are combined in not-by-safe-geometry containers prior to analysis for U-235 content. With respect to this deviation, which is discussed in the enclosed inspection report, please include in your response, your comments concerning this item.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (b) (4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Additionally, and in accordance with Section 2.790(d) of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, documentation of findings of your control and accounting procedures for safeguarding special nuclear materials and your facility security procedures are exempt from disclosure; therefore, the pertinent section of the Inspection Report, Paragraph 18, will not be placed in the Public Document Room and will receive limited distribution.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

  
George H. Smith, Chief  
Fuel Facility and Materials Safety  
Branch

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CONTAIN 10 C.F.R. 2.790 INFORMATION.

Union Carbide Corporation

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Enclosures:

1. Appendix A, Notice of Violation
2. Office of Inspection and Enforcement Inspection  
Report Number 70-687/78-02 (Contains 10 CFR 2.790 Information)

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CONTAIN 10 C.F.R. 2.790 INFORMATION.

APPENDIX A

NOTICE OF VIOLATION

Union Carbide Corporation  
Sterling Forest Research Center  
Tuxedo, New York 10987

Docket No. 70-687

License No. SNM-639

Based on the results of an NRC inspection conducted on October 12-13, 1978, it appears that certain of your activities were not conducted in full compliance with NRC regulations and the conditions of your facility license as indicated below. Item A, B, and C are infractions. Item D is a deficiency.

- A. 10 CFR 20.203(a) (1) states, in part, that except as otherwise authorized by the Commission, symbols prescribed by this section shall use the conventional radiation caution colors (magenta or purple on yellow background). The symbol prescribed by this section is the conventional three-bladed design.

10 CFR 20.203 (b) states that each radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: Caution - Radiation Area.

10 CFR 20.203(c) (1) states that each high radiation area shall be conspicuously posted with a sign or signs bearing the radiation symbol and the words: Caution - High Radiation Area.

Contrary to the above on October 12-13, 1978,

1. The Waste Drum Storage Building was a radiation area but was not posted with a sign or signs bearing the radiation caution symbol and the words: Caution - Radiation Area.
2. A location above Cell 1 in the Hot Laboratory solution make-up area was posted with a Caution - High Radiation Area sign which did not bear the radiation caution symbol and was not colored with the conventional radiation caution colors (magenta or purple on yellow background).

- B. Condition 9 of your facility license incorporates your approved license application dated June 13, 1973, which requires, in part, in paragraph B(c) "Criticality control in Hot Cells" that a maximum quantity of 650 grams of uranium will be allowed in each hot cell.

Contrary to the above, on October 13, 1978, Hot Cell No. 5 contained 1015.75 grams of U-235 which was in excess of the maximum quantity of 650 gram of uranium which is allowed in each hot cell.

- C. Condition 9 of your facility license as amended by Amendment No. 1 dated November 8, 1976, incorporates your approved license application dated August 12, 1976, which requires, in part, on page 3 that the Nuclear Safeguards Committee will appoint an individual who is not in the Nuclear Operations direct line organization to perform an audit of operations which are conducted under the SNM-639 License at least once every 12 months.

Contrary to the above, between May 5, 1977 and August 25, 1978 (a period of 15 1/2 months), an audit of operations which are conducted under the SNM-639 License was not performed, by an individual who was not in the Nuclear Operation direct line organization, at least once every 12 months.

- D. 19 CFR 21.6 "Posting Requirements" states, in part, that each corporation subject to the regulations in this part shall post current copies of (1) the regulations in this part, (2) Section 206 of the Energy Reorganization Act of 1974 and (3) procedures adopted pursuant to the regulations in this part in a conspicuous position on any premises.

If posting of the regulations in this part of the procedures adopted pursuant to the regulations in this part is not practicable, the licensee or firm subject to the regulations in this part may, in addition to posting section 206, post a notice which describes the regulations/procedures, including the name of the individual to whom reports may be made and states where they may be examined.

Contrary to the above, on October 12, 1978, the required documents and/or notice were not posted in a conspicuous position on the premises.

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

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Report No. 70-687/78-02

Docket No. 70-687

License No. SNM-639 Priority 2 Category A

Licensee: Union Carbide Corporation

P. O. Box 324

Tuxedo, New York 10987

Facility Name: Sterling Forest Research Center (Hot Laboratory)

Inspection at: Tuxedo, New York

Inspection conducted: October 12-13, 1978

Inspectors: J. Roth  
J. Roth, Fuel Facilities Inspector

11/14/78  
date signed

\_\_\_\_\_  
date signed

\_\_\_\_\_  
date signed

Approved by: H. W. Crocker  
H. W. Crocker, Chief, Fuel Facilities  
Projects Section, FF & MS Branch

11/15/78  
date signed

Inspection Summary:

Inspection on October 12-13, 1978 (Report No. 70-687/78-02)

Areas Inspected: Routine unannounced inspection by a regional based inspector of the licensed program including: scope of operations; 10 CFR Part 21; organization; facility changes and modifications; internal review and audit; safety committees; training; procedure control; review of operations; nuclear criticality safety; emergency planning-tests and drills; packaging and shipment of radioactive material; review of nonroutine events; and followup on regional office bulletins. The inspection was conducted during regular working hours and involved 12 inspector-hours on site by one NRC region based inspector.

Results: Of the 14 areas inspected, no apparent items of noncompliance were identified in 9 areas; 4 apparent items of noncompliance and one deviation were identified in 5 areas (Deficiency - failure to post the notice required by 10 CFR 21.6 (78-02-01) paragraph 4a; Deviation - Failure to evaluate, for nuclear safety, the use of unsafe geometry containers (78-02-02) paragraph 4b; Infraction - failure to post a radiation area with signs and use of improper signs in a high radiation area as required by 10 CFR 20.203 (78-02-03) paragraph 4c and 4e; Infraction - failure to maintain the quantity of SNM at or below license limits in hot cell No. 5 (78-02-04) paragraph 4d; Infraction - failure to conduct a nuclear safety audit of the hot laboratory facilities each 12 months (78-02-05) paragraph 5c.)

Region I Form 12  
(Rev. April 77)

## DETAILS

### 1. Persons Contacted

- \*Mr. H. E. Fritz, Operating Manager, Sterling Forest Laboratory
- \*Mr. C. J. Konnerth, Manager, Health, Safety, and Environmental Affairs
- \*Mr. L. Thelin, Health Physicist
- \*Mr. J. J. McGovern, Manager, Radiochemical Products

\*denotes those present at exit interview.

The inspector also interviewed 8 other licensee employees during the course of this inspection. They included MBA custodians, HP technicians, hot cell operators, and general office personnel.

### 2. Scope of Operations

The licensee operates a pool type reactor with MTR type fuel elements at a maximum thermal power output of five megawatts. The reactor is used to produce radioactive isotopes mainly for use by pharmaceutical houses. The isotopes are produced by irradiation of U-235 in target tubes, separated by chemical techniques in a hot cell network located on site and loaded onto columns for shipment. The spent uranium is packaged for shipment to a licensed burial ground.

### 3. Organization

The following is the current organization of the UCC-Sterling Forest Laboratory Reactor and Hot Laboratory Operation.

- H. E. Fritz, Operating Manager, Sterling Forest Laboratory
- C. J. Konnerth, Manager, Health, Safety, and Environmental Affairs
- L. Thelin, Supervisor, Health Physics
- D. B. Holzgraf, Manager, Nucleonics
- K. D. George, Senior Research Scientist
- J. J. McGovern, Manager, Radiochemical Products
- M. H. Voth, Manager, Nuclear Operations
- J. W. Paradiso, Reactor Supervisor
- H. C. Hart, Facilities, Services Engineer
- R. A. Strack, Chief Operator
- S. E. Lupinski, Assistant Chief Operator
- F. J. Morse, Manager, Radiochemical Development
- J. C. Perhauch, Supervisor, Radiochemical Processing
- E. Fritche, Manager, Analytical Laboratory
- H. W. Nass, Manager, Quality Assurance
- W. Leinheiser, Supervisor, Quality Control Laboratory

#### 4. Review of Operations

The inspector examined all areas of the hot laboratory facility to observe operations and activities in progress, to inspect the nuclear safety aspects of the facility and to check the general state of cleanliness, housekeeping and adherence to fire protection rules within the various facilities.

##### a. 10 CFR 21.6 Posting Requirements

The inspector noted that the licensee had not posted copies of the documents specified in 10 CFR 21.6 "Posting Requirements." They had also not posted a notice which includes section 206 of the Energy Reorganization Act of 1974 and which describes the regulations/procedures, including the name of the individual to whom reports may be made and states where they may be examined. This item of noncompliance was identified to the licensee. The licensee posted the required notice prior to the end of this inspection. However, this notice did not include section 206 of the Energy Reorganization Act of 1974 (78-02-01).

##### b. Unsafe Geometry Process Containers

The inspector noted that waste solutions, containing up to 120 grams of U-235, were being maintained in a vat in the Pickling Lab which was about 20 inches in diameter and about 21 inches high. This vat was calibrated to hold about 92 liters of solution. It was also observed that plating solutions were maintained in makeup bottles in the Makeup and Plating Labs which were about 13 inches in diameter and could hold up to about 20 liters of solution. Each of these makeup bottles (4 observed) usually contained up to 80 grams of U-235. In addition, each of the four target plating units had bottles attached to receive the depleted solutions from the plating operation. Each of these bottles were about 7 inches in diameter and contained up to 8 liters of solution. The depleted solutions were either recycled back through the plating operation or were combined with other solutions in the waste solution vat described above. The inspector requested licensee documentation which described the nuclear safety evaluations conducted on the use of these unsafe geometry containers and depicted the administrative controls on the use of these containers to preclude the combination of solutions containing up to 350 gram/liter U-235 with other solutions in these containers. Licensee representatives indicated that the use of these unsafe geometry containers had not been evaluated



for nuclear safety to assess the consequences of dumping containers of solutions containing up to 350 grams/liter U-235 into any of these unsafe geometry containers. The licensee also stated that analytical results on the various solutions were used to assure that posted limits of 300 gram U-235 per laboratory were not exceeded. However, the inspector determined that in several cases the analytical results were not received until after the fact. For instance, licensee representatives indicated that the depleted solutions were not analyzed as they were removed from the plating operations but were combined with other waste solutions in the vat and the combined solution was analyzed once each week. The inspector pointed out that this practice would not maintain positive control of U-235 being placed into the vat in order to maintain the contents at or below 300 grams U-235. In addition, this practice would not preclude the accidental dumping of solutions containing up to 350 grams U-235/liter into an unsafe geometry container. The inspector identified this situation as a deviation with respect to the requirements of ANSI Standard N16.1-1975 Section 4.1 "Administrative Practices" concerning "Process Analysis" in that, it was not determined that the entire process will be subcritical under both normal and credible abnormal conditions adequately (78-02-02).

c. High Radiation Area

The inspector observed that there was a high radiation area located on top of Cell 1 on the second floor of the hot laboratory facility. This area was properly controlled as required by 10 CFR 20.203(c) (2), however, the posted High Radiation sign did not conform to the requirements of 10 CFR 20.203(a). This was identified to the licensee as an instance of noncompliance. This area was posted with a properly authorized sign prior to the end of this inspection (78-02-03).

d. SNM Limits

The inspector noted that the nuclear material control log for Cell 5 in the Hot Laboratory indicated the presence of 1015.75 grams U-235. This quantity of material was in excess of the limit of 650 grams U-235 per cell as authorized by license conditions. Discussion held with licensee representatives indicated that the licensee had submitted an application for license amendment to NRC-NMSS to increase the authorized limit in this cell to 2000 grams U-235 on May 3, 1978. Licensee representatives also indicated that they had discussed the application with NRC-NMSS and was informed that there should

be no problem obtaining approval to increase this limit. Thus, the licensee prematurely instituted material processing on the basis of the new, higher limit. The inspector informed the licensee that failure to limit the SNM content of Cell 5 to 650 gram U-235 was an item of noncompliance. Subsequent to the inspection on October 17, 1978, the inspector determined that a waste shipment had been made on October 16, 1978, that the current content of Cell 5 was less than 600 grams U-235 and that the posted limit had been reduced to 650 grams U-235 (78-02-04).

e. Examination of Waste Drum Storage Building

During the inspection on October 13, 1978, the inspector examined the Waste Drum Storage Building. The outside of the building was posted with a Caution - Radioactive Material sign. The inspector examined several of the waste drums located in the building and determined that drums contained both radioactive material and special nuclear material. One of the drums was identified as having a radiation level of 100 mr/hr. on contact. The inspector asked the accompanying licensee representative what the radiation level was at about 2 to 3 feet from the drum storage location. The licensee representative replied that based on the last available radiation survey the level at the indicated location was about 10 mr/hr. The inspector then indicated that failure to post this area as a radiation area was contrary to 10 CFR 20.203(b) requirements. This was identified to the licensee as another instance of noncompliance with 10 CFR 20.203 requirements. This building was posted with authorized radiation signs prior to the end of this inspection (78-02-03).

5. Nuclear Criticality Safety

a. Gamma Radiation Monitors

The inspector verified that all facility area radiation and criticality monitors appeared to be operating properly. Each monitor was provided with a remote readout meter located on a control panel which was in the hot laboratory operating area. All monitors except for those located in the hot cells and the one located in the filter room were set to alarm between 5 and 10 mr/hr. The inspector also verified that all facility area radiation and criticality monitors had been calibrated annually on April 28, 1977 and April 6, 1978, as required by internally established schedules. It was also noted that the licensee documented daily operability checks and weekly alarm tests on each monitor.

b. Nuclear Criticality Safety Evaluations

During inspection 70-687/77-01, the inspector noted that additional SNM storage cabinets had been installed in the second level makeup area. These were in addition to the two original storage cabinets previously installed. During the last inspection the inspector expressed concern about the storage of SNM solutions under the 650 gram "single parameter limit" (as defined by ANSI N16.1-1975) in that the failure of one administrative control could contribute to cause a potential hazard since the posted limits do not take into account possible double batching of solutions. Because of this concern, the inspector requested to review licensee documentation relating to the nuclear safety evaluations completed to justify storage of U-235 bearing materials. During inspection 70-687/77-01, the licensee stated that no formal evaluations had been done and that they would be completed and forwarded to the NRC.

During this inspection, the inspector once again requested documentation relating to both the storage of solutions in the storage cabinets and with respect to the use of unsafe geometry process containers previously discussed in paragraph 4b. Licensee representatives stated that these evaluations had not been completed. The inspector stated that the use of the single parameter limit of 650 grams U-235 as authorized by the facility license for storage of SNM would be referred to NRC NMSS for review since the licensee is authorized to accumulate up to 4200 grams of U-235 on site and the failure of one administrative control could contribute to cause a potential hazard (78-02-07).

c. Nuclear Safety Audits

The inspector questioned licensee representatives regarding the conduct of internal audits during the time period August 17, 1976 and August 25, 1978. The inspector reviewed the reports of 2 audits conducted during this time period. The license requires that nuclear safety audits be conducted once every 12 months. One audit covering the SNM Measurements Program was conducted on May 5, 1977. According to licensee representatives, nuclear safety aspects of the operation were also examined during this audit although the audit report, dated May 18, 1977, does not address this aspect of the audit. A nuclear safety audit was conducted on August 25, 1978. During this audit the items examined included, SNM limits, evacuation drills, list of authorized users of SNM, criticality alarm

test, review of stack monitor analysis results, review of radiation monitor checks, filter changes in the Plating Laboratory and check of emergency equipment and call lists. No problem areas were identified during this audit. Failure to conduct an audit of the nuclear safety aspects of the facility once every 12 months (there was at least a 15 1/2 month interval between audits) was identified as an item of noncompliance (78-02-05).

6. Nuclear Safeguards Committee

The inspector examined the records of 5 meetings of the Nuclear Safeguards Committee held between April 14, 1977 and September 28, 1978. In each case review actions and recommendations made by the committee were adequately documented. Included in these records were supporting documents used by the committee to develop the recommendations made. In addition, the implementation of these recommendations was adequately documented in the committee minutes.

7. 10 CFR Part 21 Procedures

The inspector examined the procedures developed by the licensee to implement the requirements of 10 CFR Part 21. These procedures are contained in memos dated July 6, 1977 and August 3, 1977 entitled "Reporting of Defects and Noncompliance." In addition, the Nuclear Safeguards Committee minutes for a meeting held on August 11, 1978, was reviewed. During this meeting, implementation of 10 CFR Part 21 was discussed and the Nuclear Safeguards Committee was designated as the committee established to evaluate the hazards associated with any reported defects. Mr. D. B. Holzgraf was designated as the responsible officer who will notify the NRC and any effected vendors. In addition, bulletin board notice concerning 10 CFR Part 21 was prepared by the committee and records indicate this notice was posted on August 12, 1977. However, as previously discussed in paragraph 4a of this report, the notice was not visibly posted on the facility bulletin board at the start of this inspection.

8. Facility Changes and Modifications

During examination of the facility, the inspector observed that construction work was in progress to expand the facility shipping-receiving area. This modification was needed to expand the spent target material packaging area and will include a monorail system to transport the loaded casks from Cell 5 and the packaging area to the transporting vehicle.

9. Procedure Control

Procedures are written by members of the staff and submitted to the Nuclear Safeguards Committee for review and approval. The committee controls the maintenance and issuance of all procedures. The

inspector examined the "SNM Accountability Training Manual" which was issued on October 6, 1978. This manual contains the facility personnel authorized SNM users list, the facility FNMC, the measurements Control Program and selected portions of the facility license applications. In addition, the facility Procedure Manual AD-01 was examined by the inspector. This manual contains procedures relative to operations in the Hot Laboratory. The procedures included:

- a. HO-1 dated May 15, 1975 "Hot Lab Operations Manual"
- b. HO-2 dated May 15, 1975 "General Regulations"
- c. HO-3 dated May 15, 1975 "Regulations for Working with Radioactive Material Outside of Hot Cells"
- d. HO-4 dated May 15, 1975 "Iodine Dispensing Procedure"
- e. HO-5 dated May 15, 1975 "Operation of the Inter-Cell Conveyor"
- f. HO-6 dated May 15, 1975 "Use of Hoods"
- g. HO-7 dated May 15, 1975 "Handling of Manipulators"
- h. HO-8 dated May 15, 1975 "Operations with Radioactive Material Outside of Hot Cells"
- i. HO-9 dated May 15, 1975 "Radiochemical Assays"

The inspector determined that these procedures were not found to be readily available to operators on the floor for reference, if required. In addition, it was determined that none of these procedures discussed nuclear safety, nuclear safety criteria or the administrative controls required to maintain nuclear safety other than SNM accountability requirements. This item was discussed at the exit interview.

#### 10. Evacuation Drills

The inspector examined records of evacuation drills and unscheduled evacuations which occurred at this facility between May 6, 1977 and October 10, 1978. During this time period the licensee conducted two scheduled evacuation drills each year as required by license conditions. In addition, there were 5 unscheduled evacuations which took place between May 6, 1977 and July 29, 1977. Most of these unscheduled evacuations were caused by high radiation levels from the waste drum casks which were inadvertently moved too close to the radiation monitors during preparation of waste material for burial.

#### 11. Nonroutine Events

The inspector determined through examination of licensee records and interviews of selected personnel that no nonroutine reportable or nonreportable events within the scope of this inspection took place at this facility since the last inspection (70-687/77-01).

## 12. Packaging and Shipment of Radioactive Material

The inspector examined records of waste and/or SNM shipments made during the time period December 29, 1977 through October 10, 1978.

The records indicated that radiation surveys were taken and recorded and all shipments were labeled, marked, placarded and the containers used by the licensee included Model B-3-1 (DOT 6058) casks, 17H 55 Gallon Drums and Dot 7A boxes.

## 13. Licensee Action on Regional Office Bulletins and Circulars

The inspector examined licensee reports and interviewed selected licensee personnel to determine the status of licensee review and/or implementation of the following NRC Inspection and Enforcement Circulars and Bulletins.

- a. IE Bulletin 77-08 "Assurance of Safety and Safeguards During and Emergency-Locking Systems"
- b. IE Circular No. 77-14 "Separation of Contaminated Water Systems from Noncontaminated Plant Systems"
- c. IE Circular No. 77-15 "Degradation of Fuel Oil Flow to the Emergency Diesel Generator"

The inspector determined that the licensee had examined each of these documents for applicability and in each case no problem areas were identified.

## 14. Training

- a. All personnel working with radioactive material in the hot laboratory received basic radiation safety training. The inspector examined training records for the period July 21, 1977 through April 28, 1978. During this time period, approximately 33 new employees were given a 2 to 4 hour lecture in radiation safety and received a copy of a Health Physics Guide, "Understanding Radiation" which was assembled by members of the site Health Physics Department. This guide covers basic areas of radiation protection including health physics criteria; effects of radiation on man; handling of SNM; industrial safety; emergency procedures; contamination control procedures; warning signs; and protective equipment.
- b. Retraining or continued formal training was administered to approximately 25 persons during this same time period. Topics covered included interpretation of stack monitors; instrument manuals; transportation requirements; and the four health physics experiments which were described previously in inspection report 70-687/77-01 .

In addition, the licensee has started a program to retrain all persons working with radioactive material in the topics discussed in the site health physics guide. Each person retrained will be tested to determine proficiency. This retraining program is expected to be completed by March 30, 1979.

15. Special Nuclear Material at the Sterling Forest Research Center

The inspector examined licensee records and determined that the quantity of SNM located at the site was within the license limits established for License No. SNM-639.

16. Off-Shift Health Physics Coverage

During inspection 70-687/77-01, the inspector determined that there was no health physics coverage on site during off-shift hours. The inspector discussed this item with licensee representatives who indicated that they have not established on site off-shift health physics coverage of the facility. However, they have established a formal on-call schedule of health physics personnel which designates a specific person to be on-call during off-shift hours during a designated time period. This person would be required to be available for call-in or consultation, when required, 24 hours per day. This type of coverage is now available whenever the facility (reactor or hot cells) is working.

17. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection at 3:00 p.m. on October 13, 1978. The inspector summarized the scope and findings of the inspection. Licensee representatives made the following remarks in response to certain of the items discussed by the inspector.

- Stated that the notice required by 10 CFR 21.6 would be revised and placed in a visible location on the bulletin board. Paragraph 4a.
- Stated that the SNM limit in Cell 5 had been increased based on discussions with NRC-NMSS personnel. They were informed that there should be no problems with this revised limit and that a license amendment would be issued allowing this change in limit. The inspector reiterated the position that this limit cannot be changed until the license amendment had been issued to allow the change. Paragraph 4d.

- Stated that the high radiation area sign on the top of Cell 1 had been changed to the authorized type and that a radiation area sign had been posted on the Waste Drum Storage Building. Paragraph 4c and 4e.
- Stated that one of the makeup solution storage areas in storage cabinets No. 2, 3, and 4 had been eliminated thus reducing the allowable storage in these cabinets to 650 grams U-235 per cabinet. The inspector verified this action prior to leaving the site. Paragraph 5b.
- Stated that each operator was aware of the established locations for maintaining copies of the hot lab operating procedures and that SNM accountability was established as the only nuclear safety criteria required by the SNM license. The inspector replied that to be readily available, the operating procedures should be at or near the work stations and not located in, for example, the building receptionist's office. Paragraph 9.



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18. Search of Parcels and Packages

Section 4.5 of the facility "Physical Security Plan for the Union Carbide Corporation Research Reactor" dated October 27, 1977 requires, in part, that "Prior to entry into the protected area all parcels and packages are searched or left with the receptionist." The "protected area" is defined in Section 3.3.3 as meaning "the reactor building and hot laboratory and physically attached structures designated as Building No. 1 and 2. When the inspector entered the protected area at about 1:00 p.m. on October 12, 1978, licensee representatives failed to search the inspector's briefcase, as required, until the inspector reminded them of the requirement stated above. As soon as the licensee representatives were informed of the failure to search, a search of the inspector's briefcase was accomplished. The inspector did not observe licensee failure to search other packages brought into the facility during the remainder of the inspection. This item was discussed at the exit interview. (78-02-06.)

S-F1-78-95

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