

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

REGION I

Report No. 50-54/80-02

Docket No. 50-54 License No. R-81 Safeguards Group II

Licensee: Union Carbide Corporation  
ATTN: Mr. J. J. McGovern, Business Manager, Radiochemicals  
Sterling Forest Laboratory  
P.O. Box 324  
Tuxedo, New York 10987

Facility Name: Sterling Forest Research Center

Inspection At: Tuxedo, New York 10987

Inspection Conducted: April 14-17, 1980

Date of Last Physical Security Inspection: August 21-24, 1979

Type of Inspection: Routine, Unannounced, Physical Security

Inspectors: Lisa M. McKeown May 9th 1980  
Lisa M. McKeown, Physical Security Inspector Date

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Date

Approved by: J. W. Devlin 5/13/80  
J. W. Devlin, Chief, Security Section, Date  
Safeguards Branch

Inspection Summary: Routine, Unannounced Inspection, April 14-17, 1980  
(Report No. 50-54/80-02)

Areas Inspected: Included a review of Security Plan, Protection of SNM, Security Organization, Access Control, Alarm Systems, Keys, Locks and Combinations, Communications, Surveillance, Procedures, Security Program Review and Radiological Sabotage. The inspection was begun during regular duties hours and involved 27 inspector hours onsite by one regional based NRC inspector. Three inspection hours were accomplished during offshift periods.

Results: Within the scope of the 11 areas examined during the course of this inspection, no apparent items of noncompliance were identified.

THE INFORMATION ON THIS PAGE IS DEEMED  
TO BE APPROPRIATE FOR PUBLIC DISCLOSURE  
PURSUANT TO 10 CFR 2.790  
THE REPORT DETAILS CONTAIN [REDACTED]

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DETAILS

1. Key Persons Contacted

- \*Mr. M. H. Voth, Manager, Nuclear Operations
- Mr. J. J. McGovern, Business Manager, Radiochemicals
- \*Mr. D. D. Grogan, Supervisor, Radiochemical Production
- \*Mr. H. C. Hart, Facility Engineer
- \*Mr. K. D. George, Senior Development Scientist
- Mr. P. Drake, Maintenance Supervisor
- \*Mr. W. G. Ruzicka, Reactor Project Engineer

\*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Open) Infraction (79-04-01): A review of the licensee's corrective action relative to this item of noncompliance was performed to determine the adequacy of the specific steps taken. The licensee has not taken any steps to lock and alarm the hot cell manipulators. Further the licensee's answer to this citation indicates that a new procedural step now requires that the elevator which leads into

able for review by the inspector during the course of this inspection. This item will remain open pending the results of an ongoing review by ONMSS to determine if further licensing action is necessary.

No such procedure was avail-

3. Unresolved Item

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 5.

4. Exit Interview

An exit interview was conducted on April 17, 1980. The licensee was advised of the scope and findings of the inspection. Discussion topics included the following:

- a. Rewrite of the physical security plan as a part of the application for renewal of reactor license R-81.
- b. Referral of item 79-04-01 (alarming of hot cell manipulators) to NMSS for licensing action.
- c. Maintenance of current security procedures and establishment of new procedures pursuant to the security plan revision.

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- d. Incorporation of the physical protection of SNM possessed under SNM License No. 639 into the Physical Security Plan.
5. MC 92713 - Independent Inspection Effort For Safeguards Inspectors: The independent inspection effort expended during the course of the inspection was directed primarily towards a review of the licensee's SNM No. 639 license limits and verification that the licensee only holds material in the amounts and types specified by license limitations. SNM License No. 639 allows the licensee to hold 13 kgs. of special nuclear material. However, the licensee is required to maintain the inventory of unirradiated material (target feed material and fresh reactor fuel elements) below 5 kgs. The Security Plan (dated December 1978) which the licensee is currently utilizing does not address the physical protection of the material held against the SNM 639 license, however, the inspector examined the controls exercised over this material: to include an examination of storage areas [REDACTED] used to control access to the material and [REDACTED]
6. MC 81405B - Security Plan: No apparent items of noncompliance were identified. The licensee is currently implementing its physical security program in accordance with the provisions of the "Physical Security Plan for the Union Carbide Corporation Research Reactor, Docket 50-54, License No. R-81," dated December 20, 1978. To date, the licensee has not received any correspondence relative to this plan from NRC, nor an approval of this plan. The December 20, 1978 plan incorporates several changes into the security program which do not appear in the previous, NRC approved plan, dated May 1977. The most significant changes include:
- . discontinued use of a contract security watch force and replacement of same with UCC [REDACTED]
  - . a "request" by the licensee to test each individual [REDACTED]

The determination as to whether the new Physical Security Plan, which is currently utilized but which has not been approved by the NRC, decreases the facility's overall security remains an unresolved item (79-04-02).

While performing an onsite review of the Physical Security Plan (dated December 20, 1978), the licensee informed the inspector that the facility's reactor operating License, No. R-81, is due to expire in June 1980. As a condition of the application for renewal of the license, the licensee is required to submit a revised Physical Security Plan. This new submittal, which is currently being prepared by the Manager, Nuclear Operations, will address the following new security requirements in addition to current program requirements:

1. fixed site physical protection of moderate and low strategic quantities of SNM.

[REDACTED]

- 2. transportation of moderate and low strategic quantities of SNM.
- 3. 10 CFR 73.67 requirements
- 4. 10 CFR 73.37 requirements
- 5. Regulatory Guide 5.51 recommendations

Also, the licensee informed the inspector that the site Emergency Plan is being revised (also in conjunction with the license renewal process) in accordance with ANSI 15.16, Regulatory Guide 2.6 and 10 CFR 50, Appendix E, section IV.

The target date for the submittal of the entire license renewal package is May 31, 1980.

- 7. MC 81410 - Protection of SNM: No apparent items of noncompliance were identified. The inspection results were attained through:
  - a. An examination of the licensee's new [redacted]
  - b. Verification that the [redacted] is only opened under the supervision of one or more of the four individuals specified by Union Carbide Corp. procedures.
  - c. A tour of the [redacted] to determine the vulnerability of material in process.
  
- 8. MC 81415 - Security Organization: No apparent items of noncompliance were identified. The inspection results were attained through:
  - a. Verification that the UCC employees [redacted] responsible for security watchmen duties are deployed as prescribed in the Physical Security Plan.
  - b. Discussions with the [redacted] relative to the number of watchmen who are currently members of the security organization. As of this inspection, the site retains [redacted]. These individuals are assigned to [redacted] in the case of a manpower shortage. There are [redacted]
  - c. Discussions with the [redacted] to determine the entry on duty dates for the UCC [redacted]. There has been no turnover (individuals leaving the company) of personnel assigned to the watchforce since the last inspection.

9. MC 81420 - Access Controls: No apparent items of noncompliance were identified. The inspection results were attained through:
- a. A complete exterior tour of [redacted] During the course of the tour all doors, hatches and openings into these buildings were examined to determine their vulnerability.
  - b. A review of the Visitors Register entries since September 1979. The inspector determined that the register was being completed as required. The Manager, Nuclear Operations is responsible for reviewing this register to insure completeness.
  - c. Observation that all packages brought into the Research Facility were subject to a search.
  - d. Observation of the procedure utilized before opening the new fuel vault.
  - e. Verification that all exterior doors were locked [redacted]
  - f. Discussions with licensee representatives relative to the identification of those circumstances under which the [redacted] is energized.
10. MC 81425 - Alarm Systems: No apparent items of noncompliance were identified. The inspection results were attained through:
- a. Examination of the [redacted]
  - b. Review of the [redacted] Log maintained by the [redacted]
- It should be noted that the Security Plan does not require [redacted]
- c. A functional test of the [redacted]
11. MC 81430 - Keys, Locks and Combinations: No apparent items of noncompliance were identified. The inspection results were attained through:
- a. A tour of the [redacted] administered over these storage areas.

b. A tour of [redacted]

c. A tour of [redacted] to examine the types of locking mechanisms utilized on material in storage in these areas.

d. Examinations of records to verify the dates (subsequent to the last inspection) on which the [redacted] were changed. The [redacted] were changed on the following dates:

8/24/79	1/24/80
12/17/79	1/25/80
1/4/80	3/17/80

[redacted] (are initiated upon termination of any individual who has knowledge of them.)

e. Performance of a key inventory of all [redacted] All keys were accounted for.

f. Inventory of all keys maintained in the [redacted] key cabinet. The following security keys are maintained in the [redacted]

[Large redacted area]

(All keys were accounted for on 4/15/80.)

g. Review of the "Key Sign Out Log" maintained and administered by the [redacted]. Records reveal that the [redacted] have not been changed in over a year, however, the "Key Sign Out Log" revealed that the [redacted] are rarely signed out (six times since last inspection).

12. MC 81435 - Communications: No apparent items of noncompliance were identified. The inspection results were attained through:

a. Observation of the onsite, as well as the offsite, [redacted] in use.

[Redacted signature]

- [REDACTED]
- a. Onsite review of the licensee's procedures as outlined in the Physical Security Plan dated December 20, 1980. The licensee assured the inspector that all of the security procedures would be reviewed and brought in line with the revised Physical Security Plan.

It should be noted, however, that a procedural change which the licensee committed to in the answer to a previous item of noncompliance (79-04-01) was not available for inspection. (See paragraph 2 for details.)

- b. Discussions with [REDACTED] relative to response procedures.
15. MC 81450 - Security Program Review: No apparent items of noncompliance were identified. The licensee's last Security Program Review consisted of the December 20, 1978, Physical Security Plan revision. Current security plan commitments mandate a security program review every two years, however, the licensee advised that the Physical Security Plan revision which is currently being drafted as part of the submittal for the reactor license renewal will constitute the next Security Program Review. This review should be completed by May 31st, 1980.
16. MC 81455 - Radiological Sabotage: No apparent items of noncompliance were identified. The inspection results were attained through examination of [REDACTED] employed by the licensee to prevent the introduction of weapons, explosives or other items into the [REDACTED] where they could be utilized for radiological sabotage purposes.
- [REDACTED]