

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

REGION V

Report No. 50-433/81-01 (IE-V-426)
Docket No. 50-433 License No. R-124
Licensee: University of California - Santa Barbara
Department of Chemical and Nuclear Engineering
Santa Barbara, California 93106
Facility Name: Nuclear Reactor Facility
Inspection at: Santa Barbara, California
Inspection conducted: February 23-24, 1981
Date of Last Physical Security Inspection Visit: July 10-12, 1979
Type of Inspection: Routine unannounced Physical Security
Inspectors: *Dennis W. Schaefer* March 13, 1981
D. W. Schaefer, Physical Protection Inspector Date Signed
Wayne P. Mortensen March 13, 1981
W. P. Mortensen, Physical Protection Inspector Date Signed
Approved by: *M. D. Schuster* 3/13/81
M. D. Schuster, Chief, Physical Security Section Date Signed

Inspection Summary

Areas Inspected: Security Plan; Protection of SNM; Security Organization; Access Control; Alarm Systems; Keys, Locks and Combinations; Communications; Surveillance; Procedures; Security Program Review; and Protection Against Radiological Sabotage. The inspection involved 20 hours onsite by two NRC inspectors. The inspection was begun during regular hours; 2 inspection hours were accomplished during offshift periods.

Results: The licensee was found to be in compliance with NRC requirements in the eleven areas examined during the inspection.

DETAILS

1. Key Persons Contacted

- *Dr. G. R. Oddette, Vice Chairman for Nuclear Engineering
- *Dr. A. E. Profio, Reactor Director
- *D. E. Bowles, Chief, Campus Police
- J. L. MacPherson Jr., Commander, Campus Police
- D. Morrissey, Dispatcher, Campus Police
- M. Dinsbacher, Administrative Assistant
- R. Wright, University Locksmith

The inspectors briefly interviewed other employees of the licensee, including members of the campus police department, physics faculty and students.

*Denotes those attending exit briefing.

2. Licensee Actions on Previous Inspection Findings

- a. (Closed) Noncompliance (50-433/77-03).

The inspectors determined through interview of licensee personnel that following the last security inspection of July 10-12, 1979,

- b. (Closed) Noncompliance (50-433/77-03).

The previous security plan limited the licensee to two keys for the [redacted] and three keys to the [redacted]. The currently approved security plan dated November 2, 1979 allows [redacted]. The inspectors verified the existence of [redacted] of reactor security keys.

- c. (Closed) Noncompliance (79-01-02).

The inspectors verified the existence of these written [redacted]

- d. (Closed) Noncompliance (79-01-03).

The inspectors determined through observation and review of records that the [redacted] respond to all security alarms at the reactor facility.

- e. (Closed) Noncompliance (79-01-04).

The inspectors determined through a review of the [redacted]

[REDACTED] records that a chronological log is maintained of all police actions to include response to reactor facility security alarms.

- f. (Closed) Noncompliance (79-01-05). [REDACTED]

[REDACTED] The inspectors determined through a review of the visitor's log book that all visitors sign this log and record all required data.

- g. (Closed) Noncompliance (79-01-06). Failure to maintain the vital area barrier clear of unnecessary apparatus. The inspectors determined through observation that the vital area barrier of the reactor facility is clear of unnecessary apparatus and the reactor operators are able to survey the barrier for evidence of sabotage devices.
- h. (Closed) Noncompliance (79-01-07). An air duct approximately 3 feet wide and 1½ feet high passed through the reactor facility vital area barrier (wall) approximately 15 feet above floor level. The air duct was protected on both sides by only a standard grill affixed with eight screws. The inspectors observed that [REDACTED]
- i. (Closed) Followup (79-01-08). Licensee commitment to promptly rekey alarm switches. The inspectors observed that the alarm switches had been rekeyed.
- j. (Closed) Followup (79-01-09). Licensee commitment to review methods to obtain better communication between the Nuclear Engineering Department [REDACTED] and the facilities management group. During this inspection it was evident to the inspectors that communications between these three University activities had improved and there existed a coordinated effort to meet NRC commitments.

3. Exit Interview

The inspectors met with those individuals denoted in Paragraph 1 at the conclusion of the inspection on February 24, 1981. The inspectors summarized the scope and findings of the inspection. As discussed in paragraph 8 of report details, the licensee agreed to the need for weekly testing of [REDACTED] and the need for establishing contingency plans for dealing with [REDACTED]

[REDACTED]

[REDACTED]

4. Security Plan - MC 81405B

No items of noncompliance were identified. The inspection results were attained through:

- a. Onsite review of the "Revised Physical Security Plan for the L-77 Training Reactor" dated November 2, 1979. This plan was approved by letter from NRC, Division of Licensing dated August 28, 1980 and incorporated as Amendment No. 2 to Facility License No. R-124. This revised security plan constitutes the approved security plan.
- b. A walk-through tour observing the facility of the reactor, the reactor tank and the reactor control console.

The inspectors did not identify any licensee measures which were different from those specified in their approved security plan. The licensee has submitted a "Revised Physical Security Plan for the UCSB L-77 Training Reactor Facility, May 1980." This plan is currently being reviewed by HQ, NRC, NMSS Licensing.

5. Protection of SNM - MC 81410B

No items of noncompliance were identified. The licensee possesses

[REDACTED]

Access to the core drain valve [REDACTED]
The panel was secured [REDACTED]
[REDACTED] as make-up fuel
were stored in a standard two door metal office cabinet [REDACTED]
The cabinet doors were secured [REDACTED]

[REDACTED] The licensee operates the
10 watt L-77 reactor infrequently. [REDACTED]

6. Security Organization - MC 81415B

No items of noncompliance were identified. The security organization as described in the licensee's approved security plan was verified. Through interview and review of procedures, it was determined that

[REDACTED]

All sworn police officers comply with the California Police Officers Standards and Training (P.O.S.T.).

[REDACTED]

The security organization also included [REDACTED]
[REDACTED]

[REDACTED] maintained written instructions for proper response to alarms at the Reactor Facility. They responded to all security alarms at the reactor facility and further maintained a chronological log of all responses to these security alarms. A separate police report was available to support each entry in this chronological log.

[REDACTED]

On March 24 and 31, 1981, the sworn police officers are scheduled to receive one hour familiarization training at the Reactor Facility. This training will be conducted by Dr. Profio, Reactor Director.

7. Access Control - MC 81420B

No items of noncompliance were identified. The result of the inspection were attained through:

- a. A review of the licensee's procedures used to control access to the vital area of the nuclear reactor.
- b. Observation that access controls have been implemented as described in the approved security plan to control personnel access to the reactor vital area.
- c. A review of the visitors register.
- d. Observation that barriers or measures to inhibit or prevent unauthorized persons from approaching access points to the reactor vital area are provided as described in the approved security plan.

The vital area barrier is [REDACTED]
[REDACTED]

[REDACTED]

8. Alarm Systems - MC 81425B

No items of noncompliance were identified. The inspectors determined through interview and observation that the licensee's [REDACTED] in accordance with their approved security plan. The inspectors identified that the licensee [REDACTED]

[REDACTED] The exterior and interior alarms were tested by the inspectors. All alarms [REDACTED]

[REDACTED] The inspectors confirmed by observation that written procedures were available for [REDACTED] from the reactor facility.

In compliance with their approved security plan, [REDACTED]

[REDACTED] The licensee agreed to the need for weekly testing of all alarm sensors and made note of this recommendation (81-01-01).

At the time of the inspection the licensee had no contingency plans for dealing with [REDACTED]. At the exit interview the licensee agreed to the need for establishing contingency plans for dealing with [REDACTED].

9. Keys, Locks and Combinations - MC 81430B

No items of noncompliance were identified. The inspectors verified that keys for locks [REDACTED] were available and controlled in accordance with the approved security plan. The licensee maintained a list of persons authorized access to specific keys and a register of keys issued. The door hinges and locks were examined by the inspectors and found to be adequate, properly installed and functioned as designed.

As committed to in inspection report 50-433/77-03, the licensee replaced and rekeyed the reactor facility keys following the inspection. Additionally, the licensee is continuing to change the security keys [REDACTED] to these keys. The licensee stated that the reactor facility keys were last changed in September 1980 [REDACTED]

[REDACTED]

As committed to in inspection report 50-433/79-01, the licensee stated that the alarm switches were promptly rekeyed following the inspection.

10. Communications - MC 81435B

No items of noncompliance were identified. The Nuclear Reactor Facility utilized [REDACTED] for communication on and off the campus which is the primary means of contact with [REDACTED]

[REDACTED] operated its own radio network on a 24-hour basis with radio equipped vehicles and portable radios carried by the individual sworn police officers. [REDACTED] were equipped with similar portable 2-way radios.

[REDACTED]

11. Surveillance - MC 81440B

No items of noncompliance were identified. The exterior walls of the reactor facility were clear of obstructions that would shield or aid in forced entry into the room. Exterior lighting to the reactor facility was very adequate. The controlled access area was clear of unnecessary items that would impede surveillance of the barriers. Weekly checks of the facility were made by the reactor operating personnel.

12. Procedures - MC 81445B

No items of noncompliance were identified. The inspectors determined through a review of licensee procedures that the licensee had procedures for responding to bomb threats and acts of civil disorder. The current security plan does not require the licensee to prepare procedures for responding to a detection of unauthorized intrusion of security area or security violation by authorized personnel.

13. Security Program Review - MC 81450B

No items of noncompliance were identified. The licensee has formally submitted a security plan titled, "Revised Physical Security Plan for the UCSB L-77 Training Reactor Facility, May 1980." Prior to submission, this plan was approved by the UCSB Reactor Operations Committee and by the University Chief of Police. This plan is currently being reviewed by HQ, NRC - NMSS Licensing Branch.

[REDACTED]

14. Protection Against Radiological Sabotage - MC 81455B

No items of noncompliance were identified. Protection against sabotage is of concern to the licensee and is primarily affected by the security consciousness of the reactor personnel and adherence to established procedures and policies. Persons entering the reactor facility are not required to be nor are they searched.