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U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATION

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REGION III

RO Inspection Report No. 070-1193/74-02

Licensee: Kerr-McGee Corporation
Kerr-McGee Building
Oklahoma City, Oklahoma

Cimarron Facility
Plutonium Plant
Crescent, Oklahoma

Type of Licensee: Special Nuclear Material

Type of Inspection: Special, Unannounced Physical Pro

Dates of Inspection: March 11-13, 1974

Dates of Previous Inspection: February 11-15, 1974

Principal Inspector: J. F. Donahue

Accompanying Inspector: None

Other Accompanying Personnel: None

Reviewed By: J. A. Hind, Chief
Materials and Plant
Protection Branch

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Attachment: Findings
(Exempt from Disclosure)

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SCOPE

A special unannounced physical protection inspection was conducted on March 11-13, 1974 to ascertain the existing degree of protection afforded Special Nuclear Materials at the Kerr-McGee Plutonium Plant pending full implementation of the new security plan and the license conditions. Criteria followed during this inspection consisted of 10 CFR 73 (April 30, 1973) and License Conditions applicable prior to March 6, 1974.

FACILITY PERSONNEL CONTACTED

Primary contacts during this inspection were:

Morgan Moore, Cimarron Plant Manager
Raymond Janka, Manager, Administration and Accountability
Fred H. Welch, Security Officer

SUMMARY OF FINDINGS

A. Items of Noncompliance

1. 10 CFR 73.3(j) (April 30, 1973) defines a security container as a "safe, vault, vault-type room or security cabinet". "Locked" is defined in 73.3(e) as "protected by an operable lock".

Contrary to the above, the combination lock of the Material Storage Vault was found to be broken and inoperable and reportedly had been in this condition for approximately three weeks. This violation is considered to be of Category II severity.

2. License Condition 9.3.7 requires that visitors, vendors and other non-employees entering the protected area be registered and a record made of name, date, time, purpose of visit, and person visited.

Also, License Condition 9.3.8 states that visitors, vendors and other non-employees shall be escorted by a guard, watchman or authorized individual while within the protected area.

Contrary to the above, the visitor log sheet used to record individuals who visit the Plutonium Plant does not provide a section for "purpose of visit". Also, over the past year, several log sheets fail to indicate the identity of an assigned escort by signed name or initials or fail to reflect the identity of the person visited within the protected area. This violation is considered to be of Category III severity.

B. Program Weakness

3. The following was identified as a program weakness:

At the exit point within the Pu Plant leading to the dock area, the Pu monitor has apparently given numerous spurious alarms over a period of several months. The "Security Log" maintained by the Pu Plant watchman indicated that, on occasion, as many as 20 false alarms were transmitted during a given shift. While it is standard practice to notify personnel within the Pu area that an alarm has been received, there is no assurance or record to indicate that each such alarm is checked out by authorized personnel to determine its cause.

Possible causes for spurious alarms were identified as:

- (1) Weather conditions
- (2) Material movement or storage within the corridor inside the exit door
- (3) Material received at the Receiving and Shipping Dock
- (4) Poor or faulty calibration or instrumentation

Presently there is no capability for the watchman to visually determine the cause for an alarm at his vantage point in the building's front lobby. A possible solution would be installation of a television camera positioned to monitor the portal in question. Facility personnel were requested to resolve this matter to assure that prompt and effective response this portal monitor alarm is realized.

C. Other Matters Discussed

4. The present system for recording required tests and maintenance of security devices appears to need revision. While these items are kept in a chronological "Security Log", creation of individual records on alarm tests and responses, tests of Pu monitors and communication systems and required inspections of other physical security devices, e.g. fences, doors, locks and barriers, would be preferable to the existing system.
5. The K-M agreement with the Guthrie Police Department, where a radio receiver will be placed, provides for weekly tests of communications equipment. It was pointed out the new regulations require such tests be conducted not less frequently than once at the beginning of each security personnel work shift. Facility personnel were requested to resolve this matter with the Police Department.

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6. With the changes in the protected area fenced perimeter, the existing lighting should be re-evaluated to assure that illumination requirements are met.

D. Actions taken on previous items of noncompliance

RO:III Report 070-1193/73-01 dated February 16, 1973, identified the following items of noncompliance:

- (1) [The physical barrier surrounding the protected area was not kept clear of objects that could aid in concealing individuals in that eight (8) 55-gallon drums were located within 10 feet inside the fence line.] (License Condition 9.4.1)

Action taken: The drums were relocated to comply with the 50 foot distance requirement. Responsible personnel were reinstructed on this requirement. (During the current inspection a sufficient isolation zone was in evidence completely clear of any objects capable of concealing an intruder)

- (2) [The perimeter of the physical barrier surrounding the protected area was not being inspected for evidence of breaching or intrusion at two hour intervals (License Condition 9.4.3).]

Action taken: The fence perimeter was placed on around-the-clock inspection rounds conducted at two hour intervals by operating personnel. Records are maintained to reflect the bi-hourly inspections. Procedures were reviewed and reemphasized with persons responsible for conducting such patrols. (Records checked during the current inspection verified that surveillance rounds were being conducted each two hours 24 hours a day.)

- (3) [The material vault storage area, when locked, was not protected by an intrusion alarm in active status (License Condition 9.4.5). Further, the entrance door of the vault was not protected by a built-in lock as specified in 10 CFR 73.3 (k).]

Action taken: An intrusion alarm was installed on this portal and the door was equipped with a built-in three position changeable Sargent and Greenleaf combination lock. (During the current inspection the alarm was inspected and tested for operability and performance. Inspection of the combination lock disclosed it was broken and inoperable thus resulting in citation number 1 mentioned earlier in this report).

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- (4) Each intrusion alarm used for protection of plutonium was not being tested for operability and functional performance at least once every seven days (License Condition 9.4.8).

Action taken: Responsible personnel were reinstructed regarding the test frequency and tests of all intrusion alarms were to be conducted not less frequently than once each seven days. (During the current inspection, records reflecting required tests of alarms within seven day intervals were reviewed and found adequate).

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DETAILS

A. Physical Security Plan

The licensee submitted a new security plan, as required by 10 CFR 70.32(f), to the Directorate of Licensing on January 5, 1974. This plan was reviewed by a representative of DL, Dr. Frank Costanzi, during his visit to the facility on February 6-8, 1974. The plan was discussed, item for item, and certain suggested changes and modifications were made to assure conformance with requirements. Revisions were submitted to DL by K-M on February 27 and March 6, 1974. In order to strengthen the security program, DL revised Materials and Plant Protection Amendment MPP-1 to License No. SNM-1174 to delete old License Condition 9.0 and to add a new License Condition 9.0 to become effective, with limited exceptions, on March 6, 1974.

B. Security Organization

The overall responsibility for effective administration of the security program rests with the Facility Manager, Morgan Moore. He is assisted by Raymond Janka, Manager of Administration and Accountability. They perform periodic review of security activities to determine the effectiveness of the security organization.

The Security Officer, Fred Welch, who reports to Janka, supervises the day-to-day activities of the guard force and prepares procedures for implementation. He directly supervises the basic security organization including the guards and shift supervisors, initiates written security procedures and is responsible for training and retraining. Shift Security Supervisors report to Welch and assume responsibility for overall security activities in his absence.

At the time of this inspection, the plant protective force consisted of five company watchmen who are assigned to control access to the Pu Plant protected area. On each shift, pending completion of the new security fence and installation of the perimeter intrusion alarm system, there is at least one armed Pinkerton Guard who is assigned to patrol the fence line at 15 minute intervals.

Mr. Welch was in the processing of interviewing guard applicants who will form the protective force as K-M employees. The Pinkerton contract guards and K-M watchmen will be phased out as new guard employees are hired and trained. It is anticipated to have a protective force complement of 13 guards, including 6 or 7 Security Shift Supervisors. At least two guards and a supervisor will be assigned to each shift. Guards will be stationed at the main gate house (Uranium Plant) and in the lobby of the Pu Building. The supervisor will provide post relief and backup to these guards.

search of persons entering was being conducted by a portable electronic metal-explosives detector in the corridor adjacent to the watchman (guard) post.

A new badge system for employees and visitors was pending implementation. In the interim, the old badge system is employed (See RO:III Report 070-1193/73-01).

Examination of records relating to visitors to the protected area revealed some deficiencies in that the visitor log sheet does not contain a section for the purpose of the visit. Also the log did not show, in all instances, the name of the person visited or the name or initials of the authorized employee who provided escort. This is in noncompliance with License Conditions 9.3.7 and 9.3.8. This violation was discussed with management at the close-out.

E. Detection Aids

Tests of the existing intrusion alarm system and Pu monitors were conducted with no malfunctions experienced. Attempts to defeat the intrusion alarm on certain emergency exits met with negative results. The upgrading of the alarm system is pending implementation.

With respect to the Pu monitor positioned at the portal leading from a corridor to the dock of the Shipping and Receiving area, it was determined that numerous spurious alarms are frequently transmitted due to several possible causes. The Security Log, maintained by the watchman who is stationed at the alarm console in the building's front lobby, indicated that on occasion as many as 20 false monitor alarms were received during a given shift. Standard practice requires the watchman, monitoring the alarm console, to report the alarm activation via the public address system for check out by authorized employees who work within the Pu area. There is, however, no assurance or record to indicate that each such alarm is checked out to determine its cause. This was identified and reported to management as a program weakness which requires resolution. Since there is no present capability for the watchman to visually determine the cause for the Pu monitor alarm from his vantage point in the front building lobby, a possible solution would be the installation of a television camera to view this portal.

F. Communications

K-M has established liaison with Local Law Enforcement Agencies who will provide assistance in emergencies, including security threats. Letters of agreement have been received from the following:

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Organization

Crescent Police

Guthrie Police

Oklahoma State Highway
Patrol

Oklahoma Bureau of
Identification

Sheriff Logan County

FBI



Safeguards Info.

At the time of this inspection the means of off-site communication consisted of conventional telephones and a radio-telephone link with Kingfisher, Oklahoma (Pioneer Telephone Company). It is currently planned to install an emergency radio in the Guthrie Police Station to establish a redundant means of off-site communication. In the preliminary negotiations with the Chief of the Guthrie Police, it was agreed that tests of the emergency radio would be conducted once each week. Licensee representatives were advised that new Part 73 requires tests not less frequently than once at the beginning of each security personnel work shift and that provisions should be made with the Guthrie Police Department to meet the spirit and intent of the requirement.

For on-site radio communications, K-M currently utilizes two way portable radios, one in the Pu Building Lobby, the other carried by the Pinkerton Guard who makes periodic patrols of the protected area fence. When the gate house at the uranium plant is completed and manned, radio communication will be established between that post and the Pu building post.

G. Testing and Maintenance of Controls

Review of the chronological "Security Log" and the Utility Operator's surveillance check sheet revealed that required exterior patrols were conducted as required and that radio-telephone communications checks as well as alarm tests were conducted in timely fashion. Tests of the Pu monitors were conducted weekly. One deficiency, reported earlier,

involved failure to record and correct the inoperable combination lock on the Material Storage Vault room.

H. Records System

As reported earlier in Section D, deficiencies were disclosed with respect to the visitor register.

The present mechanism for recording required tests in a chronological "Security Log" makes verification of the tests a cumbersome chore. In the management discussion it was pointed out that time frames for required tests and inspections vary and it might be worthy to consider generation of individual records to substantiate the conducting of required tests within the required frequency.

I. Recovery and Response Procedures

Details concerning response actions to a variety of threats are outlined in the security plan. There were no incidents since the last inspection involving unaccounted for shipments, suspected theft, unlawful diversion or industrial sabotage. Appropriate notification channels have been established to assure that responsible persons are made aware of such incidents and of the actions being taken to cope with them.

J. Emergency Procedures

Detailed procedures for responding to normal and threat conditions are contained within Security Manual KM-NC-22-7 dated April 27, 1973. With the recent changes in the regulations, such procedures will be revised and updated. Assurances were provided that the emergency procedures would be compatible with the security plan and that organizational responsibilities will be clearly defined.

K. Comments

Discussion of the inspection findings was held with Messrs. Moore, Janka and Welch on March 13, 1974. They were advised that another inspection would be conducted in the near future to ascertain implementation of the new security plan, new license conditions and 10 CFR 73.

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Category: A (1)
Priority: I

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Plutonium Plant
Crescent, Oklahoma

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Dates of Previous Inspection: February 11-15, 1974 (Materials)

Principal Inspector: *J. F. Donahue*
J. F. Donahue

4/11/74

(Date)

Accompanying Inspector: None

Other Accompanying Personnel: None

Reviewed By: *J. A. Hind*
J. A. Hind, Chief
Materials and Plant
Protection Branch

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