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MAY 5 1978

INTERNAL THREATS

MEMORANDUM FOR: George McCorkle, Chief
 Physical Security Licensing Branch, SG:NISS

FROM: Ralph J. Jones, Chief
 Materials Protection Standards Branch,
 SHSS:SD

SUBJECT: PROPOSED CHANGES TO THE UPGRADE RULE TO
 PROVIDE PROTECTION AGAINST INTERNAL THREATS

The attached is in response to your request for development of regulatory changes to the Safeguards Upgrade Rule to account for a series of requirements proposed by you to protect against internal threats. These requirements were developed in response to a memorandum from S. J. Chilk to L. V. Gossick, April 26, 1978, on the Safeguards Upgrade Rule (SECY 78-195) briefing to the Commission, April 20, 1978.

Ralph J. Jones, Chief
 Materials Protection Standards Branch
 Division of Siting, Health and
 Safeguards Standards
 Office of Standards Development

Enclosure:
 As stated

Task MP 705-1

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PROPOSED CHANGES TO THE UPGRADE RULE TO PROVIDE PROTECTION AGAINST
INTERNAL THREATS

There were sixteen requirements proposed. Five of these are already included in the Safeguards Upgrade Rule. These are as follows:

1) Entrance search of personnel packages and vehicles.

This requirement is contained in paragraphs 73.46(d)(4),(5),(6) and (7), page 76, Enclosure A.

2) Internal access controls and surveillance.

This requirement is contained in paragraphs 73.46(d)(1),(2) and (3), page 75, Enclosure A, and 73.46(e)(8) and (9), page 81, Enclosure A.

3) Storage of special nuclear material in vaults.

This requirement is contained in paragraph 73.46(c)(5), page 74 Enclosure A.

4) Dual independent alarm stations

This requirement is contained in paragraph 73.46(e)(5), page 79, Enclosure A.

5) Tamper-indicating interior alarm systems

This requirement is contained in paragraph 73.46(e)(7), page 80, Enclosure A.

Proposed changes (underlined) to Part 73 to include the remaining requirements are as follows:

6) Redundant personnel exit search plus random, third-party shakedown.

Amend 73.46(d)(9) last sentence, page 78, to read as follows:

Each individual, package, and vehicle shall be searched

by one individual, and on a random basis by two individuals for concealed strategic special nuclear material before exiting from a material access area unless exit is to a contiguous material access area.

7) Zoning of functions and process activities

The zoning of functions is covered under Part 70, Section 70.58. The zoning of process activities can be added by amending paragraph 73.46(d)(2), page 75, to read as follows:

Access to vital areas, material access areas and controlled access areas shall be limited to individuals who are authorized access to the material and equipment in such areas and who require such access to perform their duties. Individuals shall not be permitted access to more than one material access area if the sequence of admittance could lead to an increased capability to divert special nuclear material. Authorization for such individuals

8) Zoning of guard functions (non-rotation of certain functions, e.g., alarm station operator not permitted access to MAA, or facility keys and combinations)

Amend 73.46(b) to add another paragraph (7) on page 73 to read as follows:

(7) Guards shall not be rotated into assignments or permitted access to equipment which could enhance the internal diversion of special nuclear material.

9) Use of tamper seals

Amend 73.46(e), Page 81, to add two new paragraphs (10) and (11) as follows:

(10) Strategic special nuclear material not in process equipment shall either be personally attended by at least three individuals two of whom shall be authorized individuals or be stored in cages that are sealed by tamper indicating seals. Procedures shall be established for storage, issuance and use of these seals.

(11) Contaminated waste containers which exit from a material access area other than to a contiguous material access area shall be tamper sealed in the presence of three individuals two of whom shall be authorized individuals. Each container shall be drum scanned in the presence of three individuals working and recording as a team or by a single individual who did not participate in the tamper sealing.

10) Improved containment of SSNM in process (e.g., alarming and locking or welding shut process equipment)

This requirement will be included in the material control and accounting upgrade rule.

11) Use of penetration-resistant and tamper-indicating containers for long term storage of divertable size SNM.

Amend 73.46(c)(5), page 74, to read as follows:

Strategic special nuclear material which is not undergoing processing shall be stored in a vault or vault-type room. Strategic special nuclear material that can be used directly in the manufacture of a nuclear explosive device shall be stored only in a vault. Strategic special nuclear material shall be stored in penetration-resistant and tamper-indicating containers when placed in long term storage.

12) Upgrading integrity of material access area (MAA) barriers

Amend 73.46(c)(1), page 73, by adding sentence between the first and second sentence as follows:

Vital equipment shall be located only within a vital area and strategic special nuclear material shall be stored only in a material access area. Material access area barriers shall be penetration resistant or alarmed to prevent removal by stealth of strategic special nuclear material. Both vital areas

- 13) Special team search of trash, wastes, tools and equipment and other materials leaving a MAA.

Amend 73.46(d)(9), page 78, be adding a sentence to the end of the paragraph as follows:

All materials, including trash, wastes, tools and equipment exiting from a material access area shall be searched for concealed strategic special nuclear material by individuals who are not authorized access to that material access area unless exit is to a contiguous material access area.

- 14) Third-party verification of authorized transfer of SSNM and alarm assessment inside vaults and unoccupied MAA's.

Third-party verification of authorized transfers of SSNM will either be explicitly required in the material control and accounting upgrade or Regulatory Guide 5.49 "Internal Transfers of Special Nuclear Material" will be revised for this purpose.

For third-party verification of alarm assessment inside vaults and unoccupied MAA's amend paragraph 73.46(h), page 86, by adding a new paragraph (7) to read as follows:

- (7) A minimum of 3 individuals shall assess alarms occurring within vaults and unoccupied material assess areas. At least one of these individuals shall assess alarms from a remote location, preferably by closed circuit television.

- 15) CCTV monitoring of vaults and certain process areas.

Amend 73.46(e)(9), Page 81, Enclosure A to read as follows:

Methods to observe individuals within material access areas to assure that strategic special nuclear material is not moved to unauthorized locations or in an unauthorized manner shall be provided and used on a continuing basis. At least 3 individuals shall verify access to vaults and certain process areas containing easily divertible strategic special nuclear material.

16) Sectionalization of alarm search equipment for maintenance.

Amend 73.46(g)(3), page 82, by adding new paragraph (iii) after (ii) to read as follows:

(iii) All tests shall be performed by a third party who does not have direct responsibility for maintaining or operating that equipment

and

Amend 73.46(g)(4), page 83, by adding new sentence at end of paragraph to read as follows:

Upon completion of the maintenance program, the physical protection related subsystems shall be tested by a third party who does not have direct responsibility for operating or maintaining that equipment.