REG-74-55

TID--26635

NUCLEAR SURVEILLANCE & AUDITING CORPORATION

7777 LEESBURG PIKE • FALLS CHURCH, VA. 22043

DRAFT STANDARD FORMAT AND CONTENT
OF
PHYSICAL PROTECTION SECTION
OF LICENSE APPLICATION
FOR
FUEL REPROCESSING AND
CERTAIN SPECIAL NUCLEAR MATERIAL
FACILITIES

MASTER

Prepared for
The Regulatory Staff
U.S. Atomic Energy Commission

NOTICE

This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the United States Atomic Energy Commission, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights.

MASTER

Falls Church, Virginia

December 19, 1973

NuSAC Report No. 141

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

NuSAC

(703) 893-6004

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency Thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

STANDARD FORMAT AND CONTENT
OF
PHYSICAL PROTECTION SECTION
OF LICENSE APPLICATION
FOR
FUEL REPROCESSING AND
CERTAIN SPECIAL NUCLEAR MATERIAL
FACILITIES

Prepared by the Regulatory Staff
U.S. Atomic Energy Commission
Issued _____

FOREWORD

The Atomic Energy Act of 1954, as amended, directs the Atomic Energy Commission (AEC) to regulate the possession, use, transfer, acquisition, import, and export of Production and Utilization Facilities and to regulate the receipt, possession, use, transfer, ownership, export, and import of Special Nuclear Materials (SNM).

The Act vests the AEC with the authority and the responsibility for regulating the above functions for the purposes of protecting the health and safety of the public and to provide for the common defense and security.

In compliance with its assigned charter, the AEC has formulated regulations with which organizations and individuals possessing production and utilization facilities and SNM must comply. These requirements have been well-publicized in the Federal Register, letters of instruction, procedures, guides, and public presentations. The principal requirements for physical protection of plant and materials, on site and in transit, are found in Title 10, Code of Federal Regulations, Part 73, "Physical Protection of Special Nuclear Materials"; other pertinent regulations include 10CFR50 and 10CFR70.

Paragraph 50.34(c) of 10CFR50 of the regulations of the Atomic Energy Commission requires each application for a license to operate a production or utilization facility to include a physical security plan; and paragraph 70.22(h) of 10CFR70 requires each application for a license to possess or use at any site or contiguous sites subject to control by the licensee uranium 235 (contained in uranium enriched to 20 percent or more in the uranium-235 isotope), uranium

233, or plutonium alone or in any combination in a quantity of 5000 grams or more computed by the formula, $\text{grams} = (\text{grams contained U-235}) + 2.5 (\text{grams U-233} + \text{grams plutonium})$ to include a physical security plan. These requirements specify in general terms that the information to be furnished in the physical security plan shall consist of two parts. Part I shall address vital equipment, vital areas, and isolation zones and shall demonstrate how the applicant plans to comply with the requirements of 10CFR73 of the Commission's regulations. Part II lists tests, inspections, and other means to be used to demonstrate compliance with such requirements.

Paragraph 70.22(g) of 10CFR70 requires each application for a license which would authorize the transport or delivery to a carrier for transport, either uranium 235 (contained in uranium enriched to 20 percent or more in the uranium-235 isotope), uranium 233, or plutonium alone or in any combination in a quantity of 5000 grams or more computed by the formula, $\text{grams} = (\text{grams contained U-235}) + 2.5 (\text{grams U-233} + \text{grams plutonium})$, to include a plan for the protection of special nuclear materials in transit.

In presentations before technical societies and other public forums, the AEC has committed itself to expediting the AEC review of the license application. AEC experience indicates that very time-consuming correspondence invariably has developed following initial application for a license because of insufficient information for a complete review. Compounding the problem is the forecast of a substantial increase in the number and content of applications to be prepared, filed, and reviewed.

Most problems confronting an applicant fall into one of two areas. First, what subject should be covered so as to adequately define the application, and second, what detailed information is pertinent to a prompt review and judgment of the adequacy of the submission by the Regulatory Staff of the AEC.

The objective of a standard format is to expedite the processing of an application and to reduce delays resulting from incomplete applications and supplemental correspondence. This "Standard Format and Content of the Physical Protection Section of License Applications" identifies the principal information needed by the regulatory staff to evaluate the adequacy of physical security plans for facilities other than nuclear power reactors and submitted pursuant to paragraph 50.34(c); the information needed to evaluate physical security plans for protection of SNM at fixed sites and submitted pursuant to paragraph 70.22(h); and the information needed with respect to plans for the physical protection of SNM in transit which are submitted pursuant to paragraph 70.22(g) of the regulations of the Commission.

The applicant is urged to prepare his application in accordance with this Format, providing descriptive information in each chapter to support his conclusion that he will be able to operate in accordance with the pertinent regulations.

TABLE OF CONTENTS

	<u>PAGE NO.</u>
FOREWORD	i
INTRODUCTION	1
Purpose of Format	1
Regulatory Guides	1
Non-Standard Format	2
Use of Format	2
Approval of Plans - Security Procedures	3
Supplementary Information	3
Existing Facilities	4
Design Information	4
Definition of Terms	4
Diagrams, Sketches and Charts	5
Incorporation of Material by Reference	5
Proprietary Information and Public Document Room	5
Physical Specifications	6
Number of Copies	7
Revisions and Changes	7
Compatibility	8
STANDARD FORMAT AND CONTENT OF PHYSICAL PROTECTION SECTION OF LICENSE APPLICATIONS	1.0-1

PART ICHAPTER 1.0 ORGANIZATION

1.1 Operating Organization	1.0-1
----------------------------------	-------

1.2	Security Organization	1.2-1
1.3	Security Operating Procedures	1.2-1

CHAPTER 2.0 SITE AND BUILDINGS

2.1	Layout	2.0-1
2.2	Buildings	2.0-1
2.2.1	Exterior	2.0-1
2.2.2	Interior	2.0-1

CHAPTER 3.0 SPECIAL NUCLEAR MATERIAL

3.1	Process	3.0-1
3.2	Material	3.0-1

CHAPTER 4.0 SECURITY AREAS

4.1	Protected Areas	4.0-1
4.1.1	Physical Barriers	4.0-1
4.1.2	Isolation Zone	4.1-1
4.1.3	Illumination	4.1-1
4.1.4	Posting	4.2-1
4.2	Material Access Areas	4.2-1
4.2.1	Physical Barriers	4.2-1
4.3	Vital Areas	4.3-1
4.3.1	Physical Barriers	4.3-1

CHAPTER 5.0 ACCESS CONTROLS

5.1	Personnel	5.0-1
5.1.1	Identification	5.0-1
5.1.2	Protected Area	5.1-1

5.1.3	Material Access Areas, Vaults, Vault-Type Rooms	5.1-3
5.1.4	Vital Areas	5.2-1
5.2	Vehicles	5.2-1
5.2.1	Protected Area	5.2-1
5.2.2	Material Access Areas and Vital Areas	5.2-2
5.3	Packages	5.3-1
5.3.1	Incoming	5.3-1
5.3.2	Outgoing	5.3-1
5.4	Keys, Locks, Combinations	5.4-1
5.4.1	Types and Kinds of Locks	5.4-1
5.4.2	Keys	5.4-1
5.4.3	Combinations	5.4-2

CHAPTER 6.0 PROTECTION AND DETECTION ALARMS

6.1	Design and Performance Characteristics	6.0-1
6.1.1	Alarms for Emergency Exits in the Perimeters of Protected Areas	6.0-1
6.1.2	Alarms for Emergency Exits in Vital Areas	6.0-1
6.1.3	Alarms for Emergency Exits in Material Access Areas .	6.0-1
6.1.4	Intrusion Alarms for Protected Areas and Isolation Zones	6.0-1
6.1.5	Intrusion Alarms for Unoccupied Vital Areas	6.2-1
6.1.6	Intrusion Alarms for Unoccupied Material Access Areas	6.2-1
6.1.7	Intrusion Alarms for Vaults	6.2-1
6.1.8	Intrusion Alarms for Vault-Type Rooms	6.2-1
6.1.9	Alarms for Metal Detectors, if Used, at Entrances to Protected Areas	6.2-1

6.1.10	Alarms for Explosives Detectors, if Used, at Entrances to Protected Areas	6.2-1
6.1.11	Alarms for SNM Detectors, if Used, at Exits of Material Access Areas	6.2-1
6.1.12	Alarms for Metal Detectors, if Used, at Exits of Material Access Areas	6.2-1
6.1.13	Intrusion Alarms, if Used, for Open Scrap Storage Areas	6.2-1
6.1.14	Other Alarms	6.2-1
6.2	Central Alarm Station	6.2-1
6.2.1	Primary Annunciators	6.2-1
6.2.2	Secondary Annunciators	6.3-1
6.3	Emergency Power	6.3-1

CHAPTER 7.0 GUARD AND WATCHMAN FORCE

7.1	Posts and Patrols	7.0-1
7.2	Personnel	7.0-1
7.2.1	Qualifications	7.0-1
7.2.2	Screening	7.2-1
7.2.3	Training	7.2-1
7.2.4	Testing	7.2-1
7.3	Scope of Authority	7.3-1
7.4	Equipment	7.3-1
7.5	Training Drills	7.5-1

CHAPTER 8.0 COMMUNICATIONS

8.1	Central Alarm Station	8.0-1
8.2	Emergency Power	8.0-1

CHAPTER 9.0 LOCAL LAW ENFORCEMENT AUTHORITIES

9.1 Arrangements.....	9.0-1
-----------------------	-------

CHAPTER 10.0 SECURITY ALERTS AND THREATS

10.1 Organization and Procedures	10.0-1
10.1.1 Suspected Intrusion into a Security Area	10.0-1
10.1.2 Apparent Attempted Theft of SNM	10.0-1
10.1.3 Apparent Attempted Smuggling of Contraband into a Security Area	10.1-1
10.1.4 Bomb Threat	10.1-1
10.1.5 Civil Disturbance (Riot)	10.1-1
10.1.6 Site Evacuation	10.1-1
10.1.7 Fire or Explosion	10.1-1
10.1.8 Outage of Critical Security or Plant Protection Equipment	10.1-1
10.1.9 Multiple Alarm Annunciations	10.1-1

CHAPTER 11.0 EMPLOYEE PERSONNEL SCREENING

11.1 Policy and Procedures	11.0-1
11.2 Background, Inquiry, or Investigation	11.0-1
11.2.1 Employment Application (Questionnaire)	11.0-1
11.2.2 Inquiry or Investigation	11.0-1
11.2.3 Evaluation	11.3-1
11.3 Medical	11.3-1
11.4 Periodic Appraisal	11.3-1

CHAPTER 12.0 EMPLOYEE SECURITY ORIENTATION AND TRAINING

12.1 Program	12.0-1
--------------------	--------

12.2	Responsibility	12.0-1
12.3	Training Drills	12.0-1

CHAPTER 13.0 OPEN SCRAP STORAGE AREA

13.1	Location	13.0-1
13.2	Physical Barriers	13.0-1
13.3	Storage Containers	13.0-1
13.4	Surveillance	13.4-1

CHAPTER 14.0 REPORTS TO AEC

14.1	Incidents	14.0-1
14.2	Unusual Occurrences	14.0-1
14.3	Security Plan Changes	14.0-1

PART II

CHAPTER 20.0 SECURITY OPERATING PROCEDURES

20.1	Preparation, Approval, and Periodic Review	20.0-1
20.1.1	Personnel Identification and Controls	20.1-1
20.1.2	Lock, Key and Combination Controls	20.1-1
20.1.3	Package Controls	20.1-1
20.1.4	Vehicle Controls	20.1-1
20.1.5	Personnel Searches	20.1-1
20.1.6	Guard Posts and Patrols	20.1-1
20.1.7	Local Law Enforcement Authority Liaison	20.1-1
20.1.8	Detention or Arrests	20.1-1
20.1.9	Report Writing	20.1-1

20.1.10	Weapon Controls	20.1-1
20.1.11	Reports to Management	20.1-1
20.1.12	Equipment Tests and Inspections	20.1-1
20.1.13	Forgotten or Lost Badges	20.1-1
20.1.14	Infractions of Security Regulations or Instructions.	20.1-1
20.1.15	Security Communications	20.1-1

CHAPTER 21.0 EQUIPMENT TESTS AND INSPECTIONS

21.1	Alarms	21.0-1
21.2	Physical Barriers	21.0-1
21.3	Communications	21.0-1
21.4	Other Security Equipment	21.0-1

CHAPTER 22.0 RECORDS

22.1	Personnel	22.0-1
22.1.1	Authorized Individuals	22.0-1
22.1.2	Access to Vital Equipment and Vital Areas	22.0-1
22.1.3	Access to SNM and Material Access Areas	22.2-1
22.1.4	Non-employee Access	22.2-1
22.1.5	Employees	22.2-1
22.2	Tests and Inspections	22.2-1
22.2.1	Equipment	22.2-1
22.2.2	Security Tours and Inspections	22.3-1
22.3	Alarm Annunciations	22.3-1
22.4	Changes in Security Plan Not Approved by AEC	22.3-1
22.5	Security Inquiries and Investigations	22.3-1

CHAPTER 23.0 QUALITY ASSURANCE

23.1 Management Audit	23.0-1
23.2 Management Reports	23.2-1
23.3 Other	23.2-1

PART III

CHAPTER 30.0 MATERIAL IN TRANSIT (ALL MODES)

CHAPTER 31.0 SHIPMENT CONTAINERS (ALL MODES)

CHAPTER 32.0 ROAD TRANSPORTATION

32.1 Transit Time (Road)	32.0-1
32.2 Communications (Road)	32.2-1
32.3 Vehicle Personnel (Road)	32.2-1
32.4 Armed Escorts (Road)	32.2-1
32.5 Specially Designed Vehicle (Road).....	32.5-1
32.6 Vehicle Marking (Road)	32.5-1
32.7 Other (Road)	32.7-1

CHAPTER 33.0 RAIL TRANSPORTATION

33.1 Armed Escorts (Rail)	33.0-1
33.2 Communications (Rail)	33.2-1

CHAPTER 34.0 AIR TRANSPORTATION

CHAPTER 35.0 WATER TRANSPORTATION

35.1 Communications (Water)	35.0-1
-----------------------------------	--------

CHAPTER 36.0 TRANSFER OR STOPOVER OF SNM ENROUTE (RAIL, WATER, AND AIR)

36.1 Intermediate Stops (Air and Water)	36.0-1
36.2 Transfers (Rail, Air, and Water)	36.0-1
36.3 Monitor Guards (Domestic Only) (All Modes)	36.3-1

CHAPTER 37.0 NOTICE TO CONSIGNEES (DOMESTIC OR FOREIGN) (ALL MODES)

CHAPTER 38.0 FREE ON BOARD (FOB) SHIPMENTS (ALL MODES)

CHAPTER 39.0 EXPORTS (AIR AND WATER)

CHAPTER 40.0 IMPORTS (ALL MODES)

CHAPTER 41.0 TRACE INVESTIGATIONS (ALL MODES)

CHAPTER 42.0 REPORTS TO THE AEC (ALL MODES)

CHAPTER 43.0 RECORDS (ALL MODES)

CHAPTER 44.0 COMMUNICATIONS EQUIPMENT (ALL MODES)

CHAPTER 45.0 MANAGEMENT AUDIT AND REVIEW (ALL MODES)

INTRODUCTION

Purpose of Format

The Standard Format and Content of the Physical Protection Section of License Applications (hereinafter "Standard Format for Physical Security Plans") has been prepared by the AEC regulatory staff to provide a uniformity in physical security plans submitted as a part of applications for fuel reprocessing and certain other SNM facilities, pursuant to 10CFR50.34(c), 10CFR70.22(g), and 10CFR70.22(h) and to indicate the information to be provided in such plans. The AEC requirements for protection of fuel reprocessing and certain other SNM facilities in the interest of the common defense and security and the public health and safety are stated in 10CFR73. This Standard Format for Physical Security Plans identifies the minimum information that is required by the staff in its evaluation of the physical security plan. Use of this format will help assure the completeness of the information provided; it will assist the regulatory staff and others in locating the information; and it will aid in shortening the time required for the review process.

Regulatory Guides

Certain AEC Division 5 Regulatory Guides, "Materials and Plant Protection", provide guidance for applicants and licensees with respect to the implementation of 10CFR73. For example, Regulatory Guide 5.7 (June 1973) provides guidance with respect to "Control of Personnel Access to Protected Areas, Vital Areas and Material Access Areas".

Non-Standard Format

Conformance with this Standard Format for Physical Security Plans is not required; however, physical security plans with differing formats may require longer staff review time and there is a greater likelihood that the information will be regarded by the staff as incomplete.

Use of Format

The Standard Format for Physical Security Plans is divided into three parts. Part I provides detailed information which will show whether the applicant has the equipment, facilities, trained people, organization, and procedures to meet AEC requirements for the physical protection of plants and of materials at fixed sites. Part II describes the tests, inspections, procedures, and records the applicant will employ to assure that AEC requirements for the physical protection of plants and of materials at fixed sites are met and will be met on a continuing basis. When the transportation of special nuclear material is involved, Part III provides information which will show whether the applicant has the equipment, trained people, plans, procedures, and organization to meet AEC requirements for the physical protection of special nuclear material in transit.

The applicant's physical security plan should include a table of contents and it should follow the numbering system of the Standard Format. For example, Section 4.2 of the plan should provide all the information requested within Section 4.2 of the Standard Format for Physical Security Plans. If certain chapters, sections, or paragraphs are not applicable, the entry "Not Appli-

cable" should be made, and, if the reason for the entry is not obvious, it should be stated. Part III should be eliminated in its entirety when it is not applicable.

Approval of Plans - Security Procedures

The submission of a physical security plan to the AEC for approval constitutes commitments on the part of the applicant as to how it plans to meet AEC physical protection requirements. Once the plan is approved by the AEC, the licensee must follow it and the licensee is prohibited from making any change which would decrease the effectiveness of the security plan without prior approval of the AEC. The licensee is required to inform the AEC in writing of changes made without prior AEC approval.

In the preparation of the plan, applicants and licensees are requested to furnish descriptions of security procedures. They should not submit copies of security procedures as part of the physical security plan. Thus, security procedures can be revised and updated periodically by the licensee without approval by, or notice to, the AEC; provided, of course, the plan is not changed. Security procedures are examined by the AEC during its compliance inspections.

Supplementary Information

Any information the applicant submits to explain or support its physical security plan which it does not want incorporated in the plan approved by the Commission should be clearly identified. Such explanatory or supporting

information which is not required by the regulations will be excluded from the approval.

Existing Facilities

When a physical security plan is prepared for an existing facility and a particular AEC requirement cannot be met because of some existing condition such as the physical characteristics of the facility (which cannot be reasonably altered), the applicant should, in the appropriate chapter of the plan, provide the pertinent information on the existing facility and specify the alternative or substitute provisions or measures the applicant will take to provide an equivalent level of security.

Design Information

Upon initial application for a construction permit or authorization, the applicant should, as preliminary information, include its design criteria and design basis for the physical security aspects of the facility. In particular, such design information should be provided with respect to the physical features of the facility as requested in Chapters 2, 4, 5, 6, 8, and 13 of the format as applicable. The complete physical security plan would then be submitted at a later date for approval prior to operations.

Definition of Terms

The following terms used in this Standard Format for Physical Security Plans are defined in 10CFR73: "authorized individual", "guard", "lock", "physical

barrier", "protected area", "vault", "watchman", "industrial sabotage", "vital area", "vital equipment", "isolation zone", "intrusion alarm", "material access area", "vault-type room", and "continuous visual surveillance".

Diagrams, Sketches, and Charts

Drawings, maps, diagrams, sketches, plans, and charts included in or appended to the physical security plan should be legible, symbols should be defined, scales should be provided, and such appendices should not be reduced to the extent that visual aids are necessary to interpret them. (The use of such explanatory appendices is encouraged even if not requested or required.)

Incorporation of Material by Reference

It is not the intent that the Standard Format for Physical Security Plans require duplication of information. Pertinent information which appears in other documents on file with the AEC may be incorporated by reference (e.g., description of plant process) provided the reference is clear and specific.

Proprietary Information and Public Document Room

Physical security plans are deemed commercial or financial information and are withheld from public disclosure under the provisions of 10CFR2.790(d). Thus, each physical security plan should be submitted as a separate document.

Requests for exemptions or exceptions from applicable requirements should be submitted as a document separate from the physical security plan so the

request can be filed in the Public Document Room. Any proprietary and classified information should be clearly identified and be submitted as an enclosure to the request document. A request to exempt proprietary information from public disclosure should include the information required by paragraph 2.790(b) of 10CFR2.

Physical Specifications

The physical security plan should conform to specific standards as to the physical dimensions of page size, quality of paper and inks, and numbering of pages; more specifically:

a. Paper size

Textual pages: 8-1/2 x 11 inches.

Drawings and graphics: 8-1/2 x 11 inches preferred; however, a larger size is acceptable provided the finished copy when folded does not exceed 8-1/2 x 11 inches.

b. Paper stock and ink

Suitable quality in substance, paper color, and ink density for handling, and reproduction by microfilming.

c. Page margins

A margin of no less than one inch is to be maintained on the top, bottom and binding side of all pages submitted.

d. Printing

Composition: textual pages should be single spaced.

Type face and style: must be suitable for microfilming.

Reproduction: may be mechanically or photographically reproduced.

All pages of the text may be printed on both sides and image printed head-to-head.

e. Binding

Pages should be punched for loose-leaf ring binding.

f. Page numbering

Pages should be numbered by chapter and section and sequentially within the section. Do not number the entire report sequentially. Numbering should follow this Format insofar as possible. All references to this Format shall also be by chapter and section.

Number of Copies

The applicant should submit 10 copies of the physical security plan.

Revisions and Changes

The updating, revising or changes of the plan should be on a replacement page basis only. "Pen and ink" or "cut and paste" changes should not be used. The changed or revised portion of each page should be identified by an asterisk mark on the margin opposite the binding margin for each line changed or added. All pages submitted to update, revise, change or add pages to the plan are to show the date of the change and a change or amendment number. The transmittal letter should include instructions or a guide page listing the pages to be inserted and pages to be removed. When major changes or additions are made a revised Table of Contents page(s) should be provided.

Compatibility

The applicant should assure that the physical security plan is compatible with all health and safety, radiation protection, alert, evacuation, and emergency plans.

STANDARD FORMAT AND CONTENT OF PHYSICAL PROTECTION SECTION
OF LICENSE APPLICATIONS

PART I

This Part of the Standard Format for Physical Security Plans is designed to provide the AEC staff the minimum information it needs to evaluate the applicant's plan to determine whether the applicant has adequate equipment, facilities, trained personnel and an adequate physical security organization to meet AEC requirements.

1.0 ORGANIZATION

The information in this Chapter should show the security organization and its relationship to the overall organization of the applicant. Security responsibilities and the chain of command for decision making on security matters should be included in the description of the functional statements.

1.1 Operating Organization

Show the applicant's management structure for operation of the facility. An organization chart should be provided together with a statement of the functions, responsibilities and authority of the positions which involve physical security or protection of special nuclear material and the facility.

1.2 Security Organization

Describe the security organization and provide a chart showing the organizational units. Include functional statements and show guard and watchman force composition. Show the supervision and manning table of the security organization for each shift. (Note: Descriptions of guard and watchman post and patrol duties are included in Chapter 7.0.)

1.3 Security Operating Procedures

Describe the management system for preparation, approval, periodic review and authorization of changes of written security and plant protection procedures. Functional responsibilities and authority should be stated clearly.

2.0 SITE AND BUILDINGS

This Chapter provides a description of the site and structures as they exist or are planned at the location where licensed activities are or will be performed.

2.1 Layout

Provide a plan, sketch, drawing or schematic diagram (to scale) showing the facility site, all buildings, access roads, parking lots, area owned or exclusively controlled by the applicant, natural terrain and landscaped area.

2.2 Buildings

Describe the construction of each building which will contain special nuclear material or vital equipment.

2.2.1 Exterior

State the composition and thickness of all exterior walls and doors, and the size and location of windows and other openings and their height from the ground. State the composition and thickness of roof structure, and the size and location of doors, hatches, skylights, or other openings to or from the roof.

2.2.2 Interior

State the composition and thickness of permanent interior walls, partitions and

doors which will serve as physical barriers, and the location and size of windows, ports, or other openings therein. Provide a plan or sketch of the interior layout.

3.0 SPECIAL NUCLEAR MATERIAL

The information in this Chapter should describe the material to be protected. It should be in sufficient detail to show whether material is in a form which is susceptible to theft and whether material in process is such that diversion is possible. (Note: If this information is on file with the AEC, it may be incorporated by specific reference.)

3.1 Process

Describe in general terms the plant process involving special nuclear material.

3.2 Material

State the amount, kind, and chemical and physical form of cold (unirradiated) SNM. State the enrichment in the isotope 235 for uranium involved in the operation of the facility, such as feed material, material in process, final product, material in storage, and recoverable scrap. Provide the same information with respect to that which is irradiated but has a total external radiation dose rate of less than 100 rems per hour at a distance of three feet (without intervening shielding). State yearly peak and average plant inventory of special nuclear material.

4.0 SECURITY AREAS

This Chapter provides a description of each security area, its location, and the physical barriers planned or provided to protect each. Alarms for each area are described in Chapter 6.0 of this Format.

4.1 Protected Areas

Provide a description and a layout plan, drawing, sketch, or schematic diagram, to scale, showing the perimeter of each protected area, the location of buildings within each area, points of ingress and egress in the perimeter, and any breaches in the perimeter of each area such as tunnels, storm sewers, waste sewers, water intake or discharge conduits, culverts, creeks, or canals.

4.1.1 Physical Barriers

4.1.1.1 Fence - Describe the type, wire gauge, mesh size, top guard, and overall height of perimeter fence. State the composition of posts and methods of installation. Describe the construction method employed to preclude entry by an intruder beneath the fence, such as through soft soil or erosion openings.

4.1.1.2 Walls - Describe the composition, thickness, height, and top guard of exterior walls which are utilized as a physical barrier for the protected area perimeter.

4.1.1.3 Other Barriers - Describe the material and installation specifications of other barriers, such as grates, bars, or grills designed to preclude entry by an intruder through an opening, such as a storm sewer, that breaches

the perimeter of the protected area.

4.1.1.4 Points of Ingress and Egress - Describe the material and method of installation of equipment, such as doors, gates, and emergency exits, in the physical barriers of the protected area perimeter.

4.1.2 Isolation Zone

Describe and show on a layout plan, drawing, sketch, or schematic diagram (i.e., shaded or hatched area to scale) the location and dimensions of the isolation zone around the physical barrier at the perimeter of the protected area. State whether the zone is clear of all objects which might conceal or shield an individual in the zone, and if such an object or objects are present, describe them and show their locations.

4.1.3 Illumination

Describe the system and illumination arrangement for lighting the isolation zone around the physical barrier at the perimeter of the protected area. State the lumens (candle power) at ground level in the zone and whether lighting is controlled by electronic or photoelectric activator. Describe the wiring arrangement and state whether the wiring is protected with armored metal sheaths or conduit. Identify the source of standby, backup, or emergency power to maintain continuous lighting in non-normal situations.

4.1.4 Posting

Describe and state the location of sign(s) posted at access points to inform individuals requesting access of contraband items and conditions of entry such as search of person, packages, and vehicles. State whether signs will be posted at the protected area perimeter with respect to trespassing and entry procedures. If so, describe the signs and the general text, and state the locations.

4.2 Material Access Areas

Describe and provide a layout plan, drawing, sketch, or schematic diagram (to scale) showing each area designated as a Material Access Area; show its location and points of ingress and egress. State in general terms the amount, kind, and form of the special nuclear material and the process involved in each area (i.e., area by area). If storage of special nuclear material is involved, describe and show the location of vaults or vault-type rooms to be used for such storage.

4.2.1 Physical Barriers

4.2.1.1 Walls, Floors, and Roofs - Describe the composition and thickness of walls, floors, and roofs (or ceilings, as appropriate) for each material access area. (Note: If the information provided in Section 2.2 is adequate, it may be cross referenced with respect to building exterior walls, roof structure, and permanent interior walls.) Identify any openings in the walls, floors, and roofs, other than doors, such as windows, vents, or ducts, the opening of which exceeds 96 square inches, and describe the material and

installation specifications of barriers such as grates, grills, or rods designed to preclude entry by an intruder through such openings.

4.2.1.2 Points of Ingress and Egress - Describe the material and method of installation of equipment, such as doors, gates, and emergency exits, for each material access area.

4.2.1.3 Vaults - Show the location of each vault and describe the composition and thickness of walls, floor, roof, and doors, and the burglar-resistant features of each. State the type of locks utilized and describe the manipulation-resistant features (see Regulatory Guide 5.12, "General Use of Locks in the Protection and Control of Facilities and Special Nuclear Materials"). Identify any openings in the walls, floor, and roof, other than doors, such as vents or ducts, the opening of which exceeds 96 square inches, and describe the material and installation specifications of barriers such as grates, grills, or rods designed to preclude entry by an intruder through such openings.

4.2.1.4 Vault-Type Rooms - Describe the composition and state the thickness of walls, floor, roof, and door(s) of each vault-type room and show locations. State the type of locks utilized and describe the manipulation-resistant features. Identify any openings in the walls, floors, and roofs, other than doors, such as vents or ducts, the opening of which exceeds 96 square inches, and describe the material and installation specifications of barriers such as grates, grills, or rods designed to preclude entry by an intruder through such openings.

4.3 Vital Areas

Describe and provide a layout plan, drawing, sketch, or schematic diagram (to scale) showing each area designated as a vital area and its location. Identify and discuss the function of the vital equipment in each area.

4.3.1 Physical Barriers

4.3.1.1 Walls, Floors, and Roofs - Describe the composition and state the thickness of walls, floor, and roof (or ceiling, as appropriate) for each vital area. (Note: If the information provided in Section 2.2 is adequate, it may be cross referenced with respect to building exterior walls, roof structure, and permanent interior walls.)

4.3.1.2 Points of Ingress and Egress - Describe the material and the method of installation of equipment, such as doors, gates, and emergency exits, for each vital area.

5.0 ACCESS CONTROLS

This Chapter sets forth information to show how the applicant plans to control personnel, vehicles, and packages entering and exiting security areas. Regulatory Guide 5.7 (June 1973), "Control of Personnel Access to Protected Areas, Vital Areas, and Material Access Areas", provides guidance with respect to AEC requirements and control of personnel. Regulatory Guide 5.12 (November 1973), "General Use of Locks in the Protection and Control of Facilities and Special Nuclear Materials", provides guidance with respect to AEC requirements for the use of locks.

The various systems for controls should be described as indicated in this Chapter, and the security operating procedures for the system should be described in Chapter 20.0 of this Format. Copies of procedures should not be incorporated in or be appended to the plan.

5.1 Personnel

5.1.1 Identification

Describe the badge identification system for control of personnel who will be admitted to the site such as employees, vendors, servicemen, deliverymen, utility personnel, manufacturers' representatives, repairmen, inspectors (local, state and federal), and other visitors. Include a description of the types of badges; state the tamper-indicating features of the picture badge; describe the system for issuance, accountability, and control of badges. Describe the system for special numbering (or coding) of badges for access to such

areas as material access or vital areas. State the requirements for wearing or displaying badges on the person while on site.

5.1.2 Protected Area

5.1.2.1 Personnel Access Points - Identify each personnel access point in the physical barrier perimeter for the protected area and describe the access control established, such as a guard post, combination or key lock and alarm, key card and closed-circuit television (CCTV), for coverage 24 hours each day, seven days per week. State the differences of coverage if it varies, such as on-shift vs. off-shift.

5.1.2.2 Personnel Access Authorizations

(1) Without Escort. Give the organizational unit and position title of the person(s) who is authorized to approve access for individuals to the protected area without escort and the issuance of picture badges for such access. State the criteria for such approvals. Also, describe the system for assuring that such picture badges are not removed from the site and for recording the following information with respect to non-employees approved for access without escort: name, purpose of visit, employment affiliation, and citizenship. State whether such picture badges are designed to indicate non-employee - no escort required, to show the area(s) to which access is authorized, and to show the period of time for which such access is authorized.

(2) With Escort. State the organizational unit and position title of the person(s) who is authorized to approve access for individuals to the protected area with an escort and the issuance of badges to show an escort is required.

Describe the system for requiring each such visitor to register his name, the date, time, purpose of visit, employment affiliation, and citizenship, together with the name and badge number of the escort and the name of the individual to be visited.

5.1.2.3 Personnel Searches - Describe the system to be used for search of persons who are authorized access to protected areas to detect devices such as firearms, explosives, incendiary devices, and other items which could be used for industrial sabotage.

If a metal detector is used, describe its design and performance characteristics, its location, and state its capability for detection of non-ferrous metal placed anywhere on the body (minimum in grams). Give the confidence limit of the device (percent) and give the false alarm rate (percent maximum). State the location where the alarm for the metal detector annunciates.

Describe the system to be used to deny admission of a particular person until further and adequate search can be made should the alarm be triggered by him; e.g., the interface of the alarm with an inner door lock so that, with the alarm triggered, the inner door cannot be opened from either side without specific action by the security force. If an interlock system is used, provide a layout plan, drawing, sketch, or schematic diagram showing detector location and inner door locks.

If an explosive detector is used, describe its design and performance features, its location, and its capability for detection of dynamite, TNT, and similar nitrogen products (i.e., minimum in grams). State the confidence limit (percent) of the device and the false alarm rate (i.e., maximum percent). As in the case

of metal detection equipment (above), state the location where the explosive detector alarm annunciates, whether inner door locks are utilized, and provide a layout.

5.1.3 Material Access Areas, Vaults, Vault-Type Rooms

5.1.3.1 Personnel Access Points - Identify each material access area, vault, or vault-type room and describe each personnel access point. Describe the access control established (such as a guard post, combination or key lock and alarm, or key card and CCTV) for coverage 24 hours a day, 7 days a week when special nuclear material is present.

5.1.3.2 Personnel Access authorizations

(1) Without Escort. Give the organizational unit and position title of the person(s) who is authorized to approve access for individuals to each material access area, vault, or vault-type room without escort and the issuance of specially coded badges. State the criteria for such approvals. For each material access area, vault, or vault-type room, give the organizational unit and position title of authorized individual(s) designated to control admittance.

(2) With Escort. State the organizational unit and position title of the person(s) who is authorized to approve access to each material access area, vault, or vault-type room with an escort. Describe the system for registering such visitors and escorts, and the system utilized to assure that access is under the control of an authorized individual.

5.1.2.3 Personnel Exits - Describe the system for checking personnel exiting each material access area, vault, or vault-type room into a protected

area, for concealed special nuclear material. If physical searches are made, describe how they are performed. If SNM detectors are utilized, describe their design and performance characteristics; state their capabilities (express sensitivity in grams) for detecting Pu, U-233, or U-235 shielded by 3mm of brass concealed anywhere on an individual; and state the applicable confidence limit (percent) and false alarm rate (percent) for the device. If metal detectors are utilized, state the capability of the metal detector to detect (i.e., minimum grams) nonferrous metal (shielding), give the confidence level for detection anywhere on an individual, and state the false alarm rate for the device (percent).

If detectors are utilized, describe the system to be used to assure that each person will use the device properly (e.g., sufficient time lapse), and describe the system for the temporary detention of a particular person for further search should the alarm be triggered. If a secure access passageway is used, state whether the doors of the passageway are interlocked so that both cannot be simultaneously opened and whether the doors are alarmed so that a specific action must be taken by the security force to permit either door to open without triggering the alarm. State the location where the SNM detector(s) and metal detector(s) alarms annunciate.

5.1.3.4 Observation of Individuals - Describe the method to be utilized on a continuous basis in material access areas to observe individuals within the area to assure that SNM is not diverted.

5.1.3.5 Storage of SNM not in Process - Describe the system employed to assure that SNM which is not contained in process equipment and is not to be

processed within a 24-hour period is stored in a vault or vault-type room.

5.1.4 Vital Areas

5.1.4.1 Personnel Access Points - Identify each vital area and describe each personnel access point and the access control established (such as a guard post, combination or key lock and alarm, key card and CCTV) for coverage 24 hours a day, 7 days a week.

5.1.4.2 Personnel Access Authorizations

(1) Without Escort. Furnish the organizational unit and position title of the person(s) who is authorized to approve access for individuals to each vital area without an escort and the issuance of specially coded badges. State the criteria for such approvals. Describe the system for recording the name, purpose of visit, employment affiliation, and citizenship of each non-employee approved for such access. Describe also the system for badging non-employees to show "non-employee - no escort required", the area to which access is authorized, and the period of time for which such access is authorized.

(2) With Escort. State the organizational unit and position title of the person(s) who is authorized to approve access for individuals with an escort to each vital area.

5.2 Vehicles

5.2.1 Protected Area

5.2.1.1 Vehicle Access Points - Identify each vehicle access point in the physical barrier perimeter for each protected area and describe the

access controls, entry and exit, established (such as a guard post, combination or key lock and alarm, key card and CCTV) for coverage 24 hours each day, 7 days a week. State the differences of coverage if it varies such as on-shift vs. off-shift.

5.2.1.2 Vehicle Access Authorizations - State the organizational unit and position title of the person(s) who is authorized to approve the entry of vehicles into protected areas. State the criteria for such approvals and state whether personal vehicles are permitted in protected areas.

5.2.1.3 Vehicle Identification - Describe the system for identification of vehicles authorized entry to the protected area. Include a description of the registry, tags, cards, or decals used.

5.2.1.4 Vehicle Escort - Describe the system to be used for escort of vehicles and drivers who are authorized entry to the protected area. Describe the system for clearing vehicles upon exit.

5.2.2 Material Access Areas and Vital Areas

5.2.2.1 Vehicle Access Points - Identify each vehicle access point and describe the access control established (such as a guard post, combination or key lock and alarm, key card and CCTV) for coverage 24 hours each day, 7 days a week.

5.2.2.2 Vehicle Access Authorizations - State the organizational unit and position title of the persons(s) who is authorized to approve the entry of vehicles into material access areas or vital areas, and state the criteria for

such approvals.

5.2.2.3 Vehicle identification and Surveillance - Describe the system for identification, clearance, escort, and surveillance of vehicles authorized entry to material access or vital areas and describe the system for searching and releasing vehicles before exit from material access areas.

5.3 Packages

5.3.1 Incoming

Describe the system for search or examination, before entry to a protected or material access area, of packages, valises, tool boxes, or similar items to detect firearms, explosives, incendiary devices, or other items which could be used for industrial sabotage, and search or examination, before entry to material access areas, of such items, packages, etc. to detect counterfeit items which could be used for theft or diversion of special nuclear material.

5.3.2 Outgoing

Describe the system for search or examination of packages, valises, tool boxes, and similar items to detect theft, diversion, or concealment of special nuclear material before such items are cleared to exit a material access area, vault, or vault-type room into a protected area or to exit the site.

5.4 Keys, Locks, Combinations

5.4.1 Types and Kinds of Locks

State each type of lock utilized for security or plant protection purposes; describe the design and manipulation-resistant characteristics of each type of combination lock and the design and pick-resistant features of each type of key lock. For each type of combination lock, confirm that it is a three-position dial type, and for each type of key lock, confirm that it provides protection equivalent to a six-cylinder lock.

5.4.2 Keys

Describe the system for issuance and control of keys. State the organizational unit and position title of the person(s) who is authorized to approve the issuance of keys for access to each security area, vault, or vault-type room where key locks are utilized, and state the criteria for such approvals. Include information as to whether a record of the name, type, and keyway code of each key-lock device is maintained; whether the number of keys made, the names of persons to whom issued and key locations are recorded; whether grand master and group master key listings, with number of keys made, the names of persons to whom issued, and names of devices each key operates are maintained; whether running inventories of blanks for each key-way code are made; whether locks are rotated; whether all keys are periodically inventoried and accounted for; and whether locks are changed when a key is lost or when a person who was authorized to have a key(s) is terminated or discharged. State whether keys

for security locks are permitted to be taken outside the protected area.

5.4.3 Combinations

Describe the system for controlling combinations of locks to minimize the possibility of compromise. State the organizational unit and title of the person(s) who is authorized to approve the issuance of lock combinations for access to each area where such locks are utilized. Describe the system established to assure that combinations are changed periodically whenever there is evidence of compromise and when an employee who was authorized to have a combination is terminated or discharged.

6.0 PROTECTION AND DETECTION ALARMS

This Chapter is designed to provide technical and performance information with respect to security alarm devices and systems. The purpose of each device should be stated, but it is not necessary to repeat technical or performance information when two or more identical devices are used if proper references are included. Information on closed-circuit television (CCTV) devices is reported in Section 7.4 of this Format. Provide a layout of the overall system for security and plant protection alarms.

6.1 Design and Performance Characteristics

For each of the intrusion and detection alarms listed below, and for each additional alarm utilized for security or plant protection, state its purpose and function and describe its design and performance characteristics. Confirm that it is self-checking and tamper-indicating; is capable of operating on emergency power; has fail-safe features; and that the device and its supervisory system meet the minimum performance and reliability levels indicated by Government Services Administration (GSA) Interim Federal Specifications W-A-00450B (GSA-FSS). Provide a layout of alarm system.

6.1.1 Alarms for Emergency Exits in the Perimeters of Protected Areas

6.1.2 Alarms for Emergency Exits in Vital Areas

6.1.3 Alarms for Emergency Exits in Material Access Areas

6.1.4 Intrusion Alarms for Protected Areas and Isolation Zones

6.1.5 Intrusion Alarms for Unoccupied Vital Areas

6.1.6 Intrusion Alarms for Unoccupied Material Access Areas

6.1.7 Intrusion Alarms for Vaults

6.1.8 Intrusion Alarms for Vault-Type Rooms

6.1.9 Alarms for Metal Detectors, if Used, at Entrances to Protected Areas

6.1.10 Alarms for Explosives Detectors, if Used, at Entrances to Protected Areas

6.1.11 Alarms for SNM Detectors, if Used, at Exits of Material Access Areas

6.1.12 Alarms for Metal Detectors, if Used, at Exits of Material Access Areas

6.1.13 Intrusion Alarms, if Used, for Open Scrap Storage Areas

6.1.14 Other Alarms - Specify.

6.2 Central Alarm Station*

6.2.1 Primary Annunciators

Specify location of central alarm station. Confirm that each alarm listed in Section 6.1 of this Format annunciates in the central alarm station; that the location and type of each alarm are indicated or shown in the central alarm station when the particular alarm is activated; and that the central alarm station is continuously manned.

(*The information with respect to communications equipment in the Central Alarm Station is included in Section 8.1 of this Format.)

6.2.2 Secondary Annunciators

Confirm that each security alarm annunciates in at least one location other than the central alarm station, or that the annunciation of one or more alarms at the central alarm station will cause the annunciation of an alarm at the secondary alarm station. State the location and confirm that the alarm station(s) is continuously manned. Show the location on a plan or diagram.

6.3 Emergency Power

Describe the source of standby, backup, or emergency power provided to maintain protection and detection alarms on a continuous basis during non-normal situations (e.g., power outage).

7.0 GUARD AND WATCHMAN FORCE

The information in this Chapter describes the duties, qualifications, training, testing, equipment, and drilling of the protective force, whether it is an in-house force or contract. If contract forces are used, state whether the applicant or the contractor will perform particular functions such as personnel screening, or weapons training and testing. If the contractor is to perform a particular function, describe how the applicant will assure that the function is accomplished adequately. Such information is, of course, also needed by the AEC during its periodic compliance inspections.

7.1 Posts and Patrols

Identify each guard or watchman post and patrol and describe the duties to be performed by the individuals on duty under both normal and threat conditions. State the number of shifts per post or patrol, for 24 hours per day, 7 days a week coverage and specify the number and kinds of individuals (guards or watchman) assigned to each such shift. Provide a layout plan or sketch showing the location of each fixed post and, if practicable, show the scope and extent (i.e., the route) of each routine patrol.

7.2 Personnel

7.2.1 Qualifications

State the minimum qualifications established for guards and for watchman. Specify the age, education, physical condition (including minimum visual and hearing acuity standards), experience, and criminal record requirements.

7.2.2 Screening

Describe the system for qualification, selection, and hiring of guards and watchmen. Specify the content of employment applications, item by item, and state whether fingerprints are taken. Describe the policies and procedures established to verify an applicant's employment, military, fingerprint, and arrest records, and to ascertain his character. State whether information is gathered by letter, by telephone or in person, and whether a written report of results is prepared. State the organizational unit and position title of the person(s) who evaluates each case and has the authority to approve or disapprove it. State the criteria for approval. If guards or watchmen have AEC security clearance, clearance by another government agency, or are bonded, provide details.

7.2.3 Training

Describe the training program for guards and watchmen provided by the applicant or contractor, or both. State the scope and extent of the program, by providing an outline or list of topics covered together with a brief description of the subject matter covered by each topic and the time allotted. In general terms, state the scope, extent, and frequency of planned refresher or retraining courses.

7.2.4 Testing

Describe the program for qualification and annual requalification of guards and watchmen to demonstrate an understanding of security operating procedures

and the ability to perform assigned duties, including the use of firearms. Describe a typical test, the system for evaluation of test results, the standard for qualification, and the system for documentation of test results, qualification, and requalification.

7.3 Scope of Authority

If guards or watchmen are deputized or otherwise authorized to perform police powers by local or state authorities, state the source of the authority and the scope and extent of such authority, e.g., for the arrest, apprehension, detention, and conduct of investigations.

7.4 Equipment

List the equipment provided the guard and watchman force and give descriptive data or performance characteristics, as appropriate.

For example, list such equipment as:

- (1) Weapons (Number, kind, and caliber of firearms - supply of tear gas or mace).
- (2) Portable communications devices (make, kind, and range).
- (3) Vehicles (radio equipped, spot lights, etc.).
- (4) Uniforms.
- (5) Closed circuit television (CCTV).

7.5 Training Drills

Describe the drills which will be conducted to demonstrate the degree of effectiveness of security measures, procedures, personnel, and equipment.

State the frequency of drills, describe the records and reports made, the method of evaluation of results, and the procedures for corrective action or changes.

8.0 COMMUNICATIONS

This Chapter should describe the security communications facilities and equipment. Information on testing of equipment and operating procedures is included in Section 21.3 and Subsection 20.1.15 of this Format, respectively.

8.1 Central Alarm Station

State the kind and the performance characteristics of the equipment provided to maintain continuous two-way voice communication with the secondary alarm annunciator station and to maintain voice communication with each guard or watchman on duty. Provide similar information for the equipment used to summon other guards, watchmen, or others, including local law enforcement authorities, for assistance. Confirm that two-way radio voice communications are established, in addition to conventional telephone service, with local law enforcement authorities. Confirm that the local law enforcement authority's equipment is manned continuously.

8.2 Emergency Power

Describe the source of standby, backup or emergency power provided to maintain operable communications equipment during non-normal situations (e.g., power outage).

9.0 LOCAL LAW ENFORCEMENT AUTHORITIES

The information in this Chapter describes the contacts and arrangements which have been made with local authorities to provide help in the protection of special nuclear material and the nuclear facility when needed. The level of any meaningful assistance and the response time expected from local authorities must be clearly established and be evaluated realistically to assess the adequacy of the over-all physical security plan.

9.1 Arrangements

Describe the contacts and arrangements which have been made with local law enforcement authorities (municipal, county, and state) to provide help, assistance, and police power when requested with respect to a suspected, attempted, or real theft of SNM or a suspected or real threat to the security of the nuclear facility. Provide specific information with respect to the number and caliber of law enforcement personnel available for assistance and the estimated lapse of time for such personnel to reach the facility. If such personnel are to arrive at intervals, state the number of personnel in the initial complement and the lapse of time involved. State the type or kind of assistance which can be provided (i.e., police power, investigative work, crowd control, bomb searches, etc.) and the kind of equipment available. State the title of the person or persons with whom such arrangements are made, whether they are made in person, and whether the arrangements are oral or written. State whether the arrangements provide for written procedures, orientation training in plant protection and radiation safety, and

for periodic drills. (Note: Estimates of response time should be realistic. Also, if commitments for assistance cannot be obtained, that fact should be clearly stated in this Chapter and details should be provided.)

10.0 SECURITY ALERTS AND THREATS

This Chapter describes the organization and procedures established for response to, evaluation of, and actions to be taken with respect to security alerts and threats. Procedures described in this Chapter need not be described again in Chapter 20.0 of this Format.

10.1 Organization and Procedures

Describe the organizational system which has been established to respond to security alerts, to determine if a threat exists, to assess the extent of the threat, if any, and to take appropriate action. For each of the situations listed below (Paragraphs 10.1.1 through 10.1.9) state what happens "when the bell rings" - who does what? For example, describe the chain of command, lines of communications, action levels, and who makes what decisions; describe the deployment of security forces, when off-duty guards and watchmen are summoned, when the local law enforcement authority is informed and when it is summoned; advise when plant operations are curtailed or suspended and when the AEC is informed. In each case, describe the procedures and state the organizational unit and position title of the person(s) who is responsible for preparation and approval of such procedures and the periodic review and approval of changes thereof.

10.1.1 Suspected Intrusion into a Security Area

10.1.2 Apparent Attempted Theft of SNM

10.1.3 Apparent Attempted Smuggling of Contraband into a Security Area

10.1.4 Bomb Threat

10.1.5 Civil Disturbance (riot)

10.1.6 Site Evacuation

10.1.7 Fire or Explosion

10.1.8 Outage of Critical Security or Plant Protection Equipment

10.1.9 Multiple Alarm Annunciations

11.0 EMPLOYEE PERSONNEL SCREENING

This Chapter is designed to provide specific information about the personnel selection practices of the applicant with respect to employees (other than guards and watchmen covered in Section 7.2) assigned to the licensed facility. Since the reliability of personnel is an essential element of a protection program, the information is needed to evaluate the adequacy of the over-all physical security plan.

11.1 Policy and Procedures

State the policy and describe the procedures for the screening, hiring, and selection of personnel for employment at the licensed facility. If employees have AEC clearances, clearance by another government agency, or are bonded, provide details.

11.2 Background, Inquiry, or Investigation

11.2.1 Employment Application (Questionnaire)

If an application or questionnaire is used, specify the content by listing each item and state whether fingerprints are obtained.

11.2.2 Inquiry or Investigation

If an inquiry or an investigation is made to ascertain or verify qualifications and character of the applicant or employee, describe the scope and extent thereof. Specify whether the information is gathered by letter, by

telephone, or in person; whether fingerprint checks are made; and whether a written report of results is prepared.

11.2.3 Evaluation

If personnel are screened before employment at the licensed facility, state the organizational unit and position title of person(s) who evaluates each case and has authority to approve or disapprove it. State the criteria for approval.

11.3 Medical

State whether personnel assigned to the licensed facility are examined by a licensed physician and whether the examination includes an evaluation of the person's emotional stability. If periodic examinations are made, state the frequency.

11.4 Periodic Appraisal

State whether personnel employed at the licensed facility are evaluated periodically (by supervision and management) to assess their apparent stability and reliability. If so, describe program.

12.0 EMPLOYEE SECURITY ORIENTATION AND TRAINING

The information in this Chapter should describe the applicant's program for orientation and training of all employees, other than guards or watchmen, who have access to security areas.

12.1 Program

Describe the scope, extent, and content of the program for security orientation and training of employees who have access to the security areas at the facility. Provide an outline or list of topics covered.

12.2 Responsibility

State the organizational unit and the position title of person(s) who is responsible for preparation, implementation, and periodic review of the orientation and training program.

12.3 Training Drills

State whether personnel participate in security training drills. If so, provide a brief description of the drill(s) and the extent of employee participation.

13.0 OPEN SCRAP STORAGE AREA

If open storage is not planned, indicate by a "not applicable" entry in this Chapter. If an area is planned and an alarm is to be used, the design and performance characteristics of the alarm should be included in Paragraph 6.1.13 of this Format.

13.1 Location

Provide a description and a layout plan, drawing, sketch, or schematic diagram (to scale) showing any storage areas within the protected area which are to be used for open storage of uranium scrap.

13.2 Physical Barriers

Provide physical description of fence, walls, or other barriers, and of doors or gates in the open storage area perimeter.

13.3 Storage Containers

Provide physical description of containers to be used for storage of uranium scrap. Confirm that containers are 30 gallons or larger and that the grams per liter of uranium 235 content is less than 0.25 and describe the procedure to be used to assure this standard is met.

13.4 Surveillance

State type of protection to be utilized. If guards or watchmen are used, specify patrol intervals. In an alarm is used, show its location on layout plan or sketch.

14.0 REPORTS TO AEC

In addition to the reporting requirements in the rules and regulations, certain reports may be required by license condition. Plans for preparation and submission of all reports should be included in this Section.

14.1 Incidents

Describe procedures established for reporting to AEC any incident in which an attempt has been made, or believed to have been made, to commit a theft or unlawful diversion of SNM. Also, describe such procedures for any incident in which an attempt has been made, or believed to have been made, to commit an act of industrial sabotage.

14.2 Unusual Occurrences

Describe procedures for reporting to AEC unusual occurrences which may or could have an effect on plant security, such as civil disturbances, bomb threats, significant vandalism, and demonstrations.

14.3 Security Plan Changes

Describe procedures for furnishing reports to the AEC with respect to changes made in the security plan.

PART II

This Part of the Standard Format for Physical Security Plans is designed to provide the AEC staff the minimum information necessary for it to judge whether adequate tests, inspections, procedures, and record requirements have been established to demonstrate (to the applicant and the AEC) whether the requirements of the applicant and the AEC are met on a continuing basis with respect to physical security or protection of AEC licensed activities.

20.0 SECURITY OPERATING PROCEDURES

Copies of procedures should not be submitted to the AEC. They will be reviewed during routine AEC inspections. The information in this Chapter should identify and describe each procedure which has been prepared. If two or more procedures are consolidated or if several appear in a single publication such as a security manual, appropriate explanations should be included.

20.1 Preparation, Approval, and Periodic Review

Identify and describe each procedure, such as those listed below, which has been prepared and, for each, state the general scope and extent of the procedure by providing an outline or list of topics covered, the organizational unit and position title of the person(s) who approved it, and the required frequency of periodic review.

20.1.1 Personnel Identification and Controls

20.1.2 Lock, Key, and Combination Controls

20.1.3 Package Controls

20.1.4 Vehicle Controls

20.1.5 Personnel Searches

20.1.6 Guard Posts and Patrols

20.1.7 Local Law Enforcement Authority Liaison

20.1.8 Detention or Arrests

20.1.9 Report Writing

20.1.10 Weapon Controls

20.1.11 Reports to Management

20.1.12 Equipment Tests and Inspections

20.1.13 Forgotten or Lost Badges

20.1.14 Infractions of Security Regulations or Instructions

20.1.15 Security Communications

21.0 EQUIPMENT TESTS AND INSPECTIONS

This Chapter is designed to provide the information needed to ascertain whether AEC rules and regulations will be met on testing and inspection of security equipment.

21.1 Alarms

Describe the method or system to be utilized to inspect and test operability and to verify functional performance of each alarm (intrusion, detection, or other). State the frequency of routine and special tests and of inspections.

21.2 Physical Barriers

Describe the tests and/or inspections to be utilized to ascertain whether all physical barriers for all security areas are intact and operable. State the frequency of routine and special inspections.

21.3 Communications

Describe the method or system to be utilized to test operability and to verify functional performance of all communications equipment related to physical security. Specify the frequency of all routine and special tests and of inspections.

21.4 Other Security Equipment

Describe the method or system to be utilized to inspect or test other security equipment identified in Part I to assure operability.

22.0 RECORDS

This Chapter should include information on all records which are maintained to document actions which will show whether the security force is performing its assigned function. If the applicant maintains pertinent records in addition to those identified below, they should be included in an additional numbered paragraph or paragraphs (i.e., 22.6).

22.1 Personnel

22.1.1 Authorized Individuals

Describe the system for maintaining a record of each individual who is designated as an authorized individual to record name, badge number of the person(s) so designated, the date of the authorization, its expiration date, and the name of the approval authority.

22.1.2 Access to Vital Equipment and Vital Areas

Describe the system for maintaining a record of each individual who is authorized to have access to vital equipment, showing the individual's name, address, and badge number, the date of the authorization, its expiration date, and the name of the approval authority. Also describe the system utilized to log the name, badge number, date and time of entry, reason for entry, and time of exit of each individual who enters a normally unoccupied vital area.

22.1.3 Access to SNM and Material Access Areas

Describe the system for maintaining a record of each individual who is authorized to have access to SNM and material access areas, showing the individual's name, address, badge number, the date of the authorization, its expiration date, and the name of the approval authority.

22.1.4 Non-employee Access

Describe the system for maintaining a record (register) of each visitor, vendor, or other individual who is not an employee of the applicant, showing the individual's name, the date, time, and purpose of visit, his employment affiliation, citizenship, the name and badge number of escort (if appropriate), the name of the individual to be visited, and the name of person who authorized or approved the visit.

22.1.5 Employees

Describe the system for maintaining a record of each employee who is issued a permanent badge for access to security areas, showing the individual's name, badge number, areas to which access is authorized, the date of the authorization, its expiration date, and the name of the approval authority.

22.2 Tests and Inspections

22.2.1 Equipment

Describe the system for maintaining a record of the results of tests, inspections,

and maintenance performed on security alarms, physical barriers, communications equipment, and related security equipment such as locks, illumination, closed circuit television, and security containers.

22.2.2 Security Tours and Inspections

Describe the system to record and maintain records of the conduct of and the results of routine security tours and inspections.

22.3 Alarm Annunciations

For each on-site alarm annunciation location, describe the system to record and maintain records (at its location) of each alarm, false alarm, alarm check, and tamper indication that identifies the type of alarm, location, alarm circuit, and the date and time of the occurrence.

22.4 Changes in Security Plan not Approved by AEC

Describe the system to record and maintain records of changes which are made to the security plan without prior approval of the AEC, the date the changes are made, and the name, organizational unit, and position title of the person(s) who approved or authorized the changes.

22.5 Security Inquiries and Investigations

Describe the system to record and to maintain records and reports of inquiries and investigations of such matters as alerts, threats, incidents, abnormal occurrences, and security violations or infractions.

23.0 QUALITY ASSURANCE

The purpose of this Chapter is to provide a description of the systematic actions planned by the applicant which are designed to assure its management that the physical security plan, security operating procedures, security equipment, and the performance of the staff are adequate at the licensed facility to protect the common defense and security and the public health and safety.

23.1 Management Audit*

Describe the scope, extent, and frequency of planned periodic audits to verify compliance with all aspects of the security program and to assess its effectiveness. Describe the written procedures or check lists used; state the qualifications of the person(s) who conducts the audit (and whether such person(s) has direct responsibility for the area audited); describe the type of report written; and state the organizational unit and position title of the person in management who has responsibility to review audit reports and to initiate appropriate corrective action, if required.

*(Note: American National Standard for Industrial Security for Nuclear Power Plants (N18.17-1973) provides that periodic audits of the industrial security program be conducted independently of plant management at intervals not to exceed two years. This Standard is referenced in Regulatory Guide 1.17, titled, "Protection of Nuclear Power Plants Against Industrial Sabotage".)

23.2 Management Reports

Describe type, kind, and general content of security operating reports and security inquiry or investigative reports (i.e., security alerts, violations, infractions, incidents, and occurrences) which are furnished management on a routine basis. Specify the level of management to which particular reports go. Identify those reports which are for information and those which are for action.

23.3 Other

If additional systems or procedures are utilized to assist management in its periodic evaluation of the performance of the plant protection function, they should be described in this Section.

PART III

This Part of the Standard Format for Physical Security Plans is designed to provide the AEC staff the minimum information it needs to evaluate an applicant's plan for physical protection of special nuclear material in transit to determine whether the applicant's plan is adequate to meet AEC requirements. Under the heading for each chapter or section below, there is an indication, in parentheses, as to whether the chapter or section applies to all modes of transportation or only to one or more particular modes of transportation.

30.0 MATERIAL IN TRANSIT
(ALL MODES)

State the amount, kind, and chemical and physical form (and percent uranium enrichment, if applicable) of the material to be transported. State the points of origin, destinations, and the anticipated frequency of shipments. Give the mode or mixed modes of transportation (road, rail, air, or water) to be used; the expected times in transit, if known; and the number of transfer points, if any.

State whether the applicant will be the consignor or consignee; and if the applicant is the consignee, describe the free on board (FOB) arrangements. If the applicant will be an importer or an exporter of the material, provide details.

31.0 SHIPMENT CONTAINERS
(ALL MODES)

Describe the containers to be used and confirm that they will be sealed by tamper-indicating type seals. Describe the type of seals and the tamper-indicating features. State whether the containers will be locked or will be placed in other locked containers, vehicles, or vehicle compartments. When outer containers, locked vehicle, or locked compartments are used, state whether seals are also used. Describe locks (see paragraph 5.4.1 for the type of information to be supplied). State the weight of containers (when loaded).

32.0 ROAD TRANSPORTATION

If road transportation will be used, state whether the vehicles will be under the control of the applicant (owned, leased, or rented) or under the control of a contract or common carrier. If a contract or common carrier will be utilized, confirm that the SNM will be transported under an established system which provides for the physical protection of valuable material in transit, such as Motor Carrier Signature Service or REA Express Protective Signature Service, and which requires an exchange of hand-to-hand receipts at origin and destination and all points enroute where there is a transfer of custody of the SNM shipment.

32.1 Transit Time
(Road)

Describe the arrangements which will be made and the method to be used to assure that a minimum amount of time will elapse during an entire shipment; that areas of natural disaster or civil disorder will be avoided enroute; and that for each shipment the consignee will be available to receive the shipment when it is scheduled to arrive. Describe the procedures to be used should circumstances require changes in the routing or a change in the planned arrival time of a shipment. Confirm that no scheduled stops will be made to transfer SNM or other cargo between the facility from which it is shipped and the facility of the receiver.

32.2 Communications (Road)

Confirm that vehicles to be used to transport SNM will be equipped with radiotelephones. Describe the design and performance characteristics of the radiotelephone equipment. State names (if available), the employer, organizational unit, position title, and physical location of persons who will be pre-designated to receive communications from the occupants of transport vehicles while enroute. Describe the procedures to be employed for making periodic reports of the location and status of SNM shipments while enroute. Specify the time intervals for routine reports, the maximum period of elapsed time permitted with no report, and the action to be taken if planned or scheduled reports are not received.

32.3 Vehicle Personnel (Road)

State whether SNM transport vehicles will be manned with two drivers, or one driver and one other authorized person. Describe the procedures to be employed to assure that at least one of these persons maintains continuous visual surveillance of the SNM vehicle at all times during a shipment.

32.4 Armed Escorts (Road)

Unless shipments will be made in a specially designed truck or trailer, confirm that two armed guards will accompany SNM shipment vehicles in a separate escort vehicle. Describe the procedures and methods to be used to

assure such escorts will maintain continuous vigilance to detect the presence of conditions which might threaten the security of SNM; to take particular actions to avoid interference with continuous safe passage of SNM vehicles. Describe the actions to be taken in case of emergencies and to check and observe SNM vehicles during stops, breakdowns, or layovers. Describe the design and performance characteristics of the radiotelephones in escort vehicles and the equipment used to maintain continuous radio communication between SNM vehicles and escort vehicles. For guards employed as armed escorts, the information requested in Sections 7.2, 7.3, 7.4(1), and 7.5 of this Format should be provided unless the information is already included in the applicant's physical security plan with respect to such guards.

32.5 Specially Designed Vehicle (Road)

If specially designed vehicles will be used for transportation of SNM, describe their design features such as vulnerability to theft or diversion, immobility, and barriers or deterrents to physical penetration of the cargo compartment, as appropriate. Include copies of drawings and specifications.

32.6 Vehicle Marking (Road)

Describe the markings to be used on the top and sides of SNM vehicles to permit their identification from the air and the ground.

32.7 Other
(Road)

If SNM vehicles are to be enroute for a period of less than one hour, and the driver is not to be accompanied, describe the procedures to be utilized to assure that continuous radiotelephone or radio communication will be maintained by the driver or escorts with the applicant or his agent during the course of such shipments.

33.0 RAIL TRANSPORTATION

If rail transportation will be used, describe the arrangements which will be made and the method to be used to assure that a minimum amount of time will elapse during an entire shipment; that areas of natural disaster or civil disorder will be avoided enroute; and that for each shipment the consignee will be available to receive the shipment when it is scheduled to arrive. Describe the procedures to be used should circumstances require changes in the routing or in the planned arrival time of a shipment.

Confirm that SNM will be transported under established procedures which provide a system for the physical protection of valuable material in transit, such as REA Express Protective Signature Service, and which require an exchange of hand-to-hand receipts at origin and destination and at all points enroute where there is a transfer of custody.

33.1 Armed Escorts
(Rail)

Confirm that two guards will occupy SNM shipment cars or escort cars of the same train. Describe the procedures and methods to be used to assure that SNM shipment cars will be kept under observation; that guards will detrain during stops, breakdowns, or layovers to guard the cars and to check the car or container seals, when practicable; and describe the actions to be taken in case of emergencies. For guards employed as armed escorts, the information requested in Sections 7.2, 7.3, 7.4(1), and 7.5 of this Format should be provided, unless the information is already included in Section 32.4 above or in the applicant's physical security plan with respect to such guards.

33.2 Communications
(Rail)

Confirm that radiotelephone equipment will be provided armed escorts of SNM rail shipments. Describe the design of the equipment and its performance characteristics. State names (if available), the employer, organizational unit, position title, and physical location of persons who will be predesignated to receive communications from the armed escorts while enroute. Describe the procedures to be employed for making periodic reports of the location and status of SNM shipments while enroute; specify the time intervals for routine reports and the maximum period of elapsed time permitted with no report; and describe the action to be taken if planned or scheduled reports are not received.

34.0 AIR TRANSPORTATION

If air transportation will be used, confirm that SNM shipments will be by cargo aircraft. Describe the arrangements which will be made and the method to be used to assure that a minimum amount of time will elapse during an entire shipment; that areas of natural disaster or civil disorder will be avoided enroute; and that for each shipment the consignee will be available to receive the shipment when it is scheduled to arrive. Describe the procedures to be used should circumstances require changes in routing or a change in the planned arrival time of a shipment. Describe the arrangements which have been or will be made with the carrier to assure that enroute transfers of SNM will be minimized.

Confirm that SNM will be transported under established procedures which provide a system for the physical protection of valuable material in transit, such as air lines Signature Service, and which require an exchange of hand-to-hand receipts at origin and destination and at all points enroute where there is a transfer of custody.

35.0 WATER TRANSPORTATION

If water transportation will be used, describe the arrangements which will be made and the method to be used to assure that a minimum amount of time will elapse during an entire shipment; that areas of natural disaster or civil disorder will be avoided enroute; and that for each shipment the consignee will be available to receive the shipment when it is scheduled to arrive. Describe the procedures to be used should circumstances require changes in routing or a change in the planned arrival time of a shipment. Describe the procedures and methods to be used to assure that SNM will be placed in secure compartments which will be locked and sealed; that such locks and seals will be periodically inspected in transit (if accessible); and confirm that no scheduled transfers of SNM to other ships will be made.

Confirm that SNM will be transported under established procedures which provide a system for the physical protection of valuable material in transit and which require an exchange of hand-to-hand receipts at origin and destination and at all points enroute where there is a transfer of custody.

35.1 Communications
(Water)

Confirm that ship-to-shore communications will be available. Describe the procedures to be used to assure that at least one contact will be made each 24-hour period with shore facilities to report position information of the vessel and the results of daily inspections of SNM shipments, when such inspections are possible. Describe the arrangements for the relay of such reports to the

NUSAC

applicant or his agent. Describe the action to be taken if planned or scheduled reports are not received.

36.0 TRANSFER OR STOPOVER OF SNM ENROUTE (Rail, Water, and Air)

For rail, water, and air transportation of SNM which involves scheduled transfers and, for air and water transportation which involves scheduled intermediate stops, the information requested in this Chapter should be provided. If such transfers or stops are not scheduled, an appropriate entry such as "none scheduled" should be made.

36.1 Intermediate Stops (Air and Water*)

Describe the procedures and methods to be used to assure that at scheduled intermediate stops a guard, or a designated alternate guard, will observe the opening of cargo compartments to assure SNM shipments are not removed; to maintain continuous visual surveillance of cargo compartments until shipments depart; and to notify the applicant or his agent of the status of shipments at departure.

36.2 Transfers (Rail, Air, and Water)

Describe the procedures and methods to be used to assure that all transfers of SNM, e.g., from carriers to storage, between carriers, from storage to carriers, or, other physical transfers of SNM enroute, will be under the continuous visual surveillance of a guard or a designated alternate guard.

*For road and rail transportation this information is included in Sections 32.4 and 33.1.

Confirm that guards or alternates will observe the opening of cargo compartments containing incoming SNM and examine shipment locks and seals; will observe the SNM while it is in a terminal or in storage; will observe the SNM while it is loaded; and, will maintain surveillance of the cargo compartment until the vehicle or vessel departs. Describe the procedures to be used to assure that guards will notify the applicant or his agent of the status of the SNM at departure times. State who will immediately notify the applicant or his agent and responsible carriers of any deviation from or attempted interference with the schedule or routing of SNM shipments. Confirm that an effort will be made to avoid any pre-planned storage time of SNM shipments enroute in excess of 24 hours.

36.3 Monitor Guards (Domestic Only)
(All Modes)

For guards employed or utilized as monitors during transfer or stopover of SNM shipments, the information requested in Sections 7.2, 7.3, 7.4(1), and 7.5 of this Format should be provided, unless the information is already included in Sections 32.4 or 33.1 above or in the applicant's physical security plan with respect to such guards.

37.0 NOTICE TO CONSIGNEES (DOMESTIC OR FOREIGN)
(ALL MODES)

Describe the procedure and methods to be used to assure that when SNM is delivered to a carrier for transport, the consignees (domestic or foreign) will be immediately notified by telegraph, teletype, or telephone of the departure times, the methods of transportation (including the names of carriers), and the estimated times of arrival of shipments at their destination. Confirm that such procedures will also provide that consignees will notify consignors by telegraph, teletype, or telephone immediately upon the arrival of SNM shipments at their destination, or of any shipments which are lost or unaccounted for after the estimated time of arrival at their destination.

38.0 FREE ON BOARD (FOB) SHIPMENTS
(ALL MODES)

If FOB shipments will be made, describe the procedure and methods to be used to assure that written certificates will be obtained from licensees who take delivery of SNM shipments at FOB designated points, that arrangements have been made to meet AEC requirements set forth in 10CFR73, paragraphs 73.30 through 73.35 for the physical protection of the SNM material during transit; or, if the consignee is an AEC license-exempt contractor, to obtain written certificates to the effect that physical protection arrangements required by AEC Manual, Chapter 2401 or 2405, have been made.

39.0 EXPORTS
(AIR AND WATER)

For air or water export shipments, describe the procedures and methods to be used to assure that SNM shipments will be escorted by unarmed, authorized individuals from the last terminal in the United States until the shipment is unloaded at a foreign terminal; and that, during intermediate stops, the authorized individuals will observe the opening of cargo compartments to assure that SNM shipments are not removed, and that authorized individuals will maintain continuous visual surveillance of the cargo compartments containing SNM until departure of such aircraft or vessels.

40.0 IMPORTS
(ALL MODES)

Describe the procedures and methods to be used to assure that SNM shipment container counts and lock and seal examinations are made to detect any evidence of tampering at the first place in the United States at which shipments are discharged from arriving carriers. (Information with respect to SNM shipments when in terminals or in storage should be included in Section 36.2.)

41.0 TRACE INVESTIGATIONS
(ALL MODES)

State the position title and organizational unit of the persons who are responsible for the initiation and conduct of trace investigations of lost or unaccounted-for shipments. State the criteria for such actions, the scope and extent of the planned investigations, report content, and the procedures to be used to assure that the results of the investigation are reported to the consignee. Describe actions to be taken with respect to any attempt which has been made, or is believed to have been made, to commit a theft or unlawful diversion of special nuclear material.

42.0 REPORTS TO THE AEC
(ALL MODES)

State the position title and organizational unit of the persons who are responsible for informing the AEC of accidents, unusual occurrences, the failure of SNM shipments to arrive at their destination at the estimated time of arrival, the failure to receive scheduled (preplanned) radiotelephone or conventional telephone calls with respect to shipments enroute, trace investigations, and changes in plans for physical protection of SNM in transit. State the criteria for such actions. Identify the type of reports to be made and describe the procedures to be used for performance of the function.

43.0 RECORDS
(ALL MODES)

Describe the system to be used to record and maintain records, such as those listed, to demonstrate to the applicant and the AEC that the requirements of the applicant and the AEC have been or will be met on a continuous basis, with respect to physical protection of SNM shipments:

- (1) Names of carriers
- (2) Major highways used
- (3) Flight numbers
- (4) Dates and times of departures and arrivals
- (5) Names and addresses of monitors
- (6) Testing and operability of communications equipment
- (7) Names of individuals who receive communications for or on behalf of the applicant
- (8) Container seal descriptions and identifications
- (9) Reports of communications
- (10) Shipping plan changes or modifications
- (11) Reports of trace investigations
- (12) Violations or infractions of applicant's instructions or requirements

44.0 COMMUNICATIONS EQUIPMENT
(ALL MODES)

Describe the method or system to be utilized to test operability and to verify functional performance of all communications equipment related to physical protection of SNM in transit. Specify the frequency of all routine and special tests and inspections.

45.0 MANAGEMENT AUDIT AND REVIEW
(ALL MODES)

Describe the system the applicant will use to ascertain whether carriers and others, such as monitors and guards, who are involved in the physical protection of SNM in transit, comply with the applicant's plans and instructions. State whether arrangements with carriers and others for protection of SNM in transit are in writing. State the names, position title, organizational unit, and employer of those who made the arrangements for the applicant and of those who represented the carrier or other entities involved. Describe the applicant's management system for preparation, approval, periodic review, and authorization of changes of written procedures for the physical protection of SNM in transit.

CROSS REFERENCE OF 10CFR, PARTS 50, 70, & 73

TO

STANDARD FORMAT FOR PHYSICAL PROTECTION

50.34	<u>Contents of Applications: Technical Information</u>	
	50.34(c).....	Page 1 Introduction, Purpose of Format
		Page 2 Introduction, Use of Format
50.54	<u>Conditions of Licenses</u>	
	50.54(p).....	Page 3 Introduction, Approval of Plans - Security Procedures
70.22	<u>Contents of Applications</u>	
	70.22(g).....	Page 1 Introduction, Purpose of Format
		Page 2 Introduction, Use of Format
	7.2	Guard and Watchman Force, Personnel
	7.3	Guard and Watchman Force, Scope of Authority
	7.4.1	Guard and Watchman Force, Equipment
	7.5	Guard and Watchman Force, Training Drills
	70.22(h).....	Page 1 Introduction, Purpose of Format
		Page 2 Introduction, Use of Format
70.32	<u>Conditions of Licenses</u>	
	70.32(d).....	Page 3 Introduction, Approval of Plans - Security Procedures
	42.0	Reports to the AEC - (All Modes)
	70.32(e).....	Page 3 Introduction, Approval of Plans - Security Procedures

70.32 Conditions of Licenses (continued)

70.32(e).....	14.3	Security Plan Changes
	22.4	Changes in Security Plan Not Approved by AEC

PHYSICAL PROTECTION OF SPECIAL NUCLEAR MATERIAL IN TRANSIT

73.30 General Requirements

73.30(a).....	32.0	Road Transportation
	33.0	Rail Transportation
	34.0	Air Transportation
	35.0	Water Transportation
73.30(b).....	32.1	Transit Time (Road)
	33.0	Rail Transportation
	34.0	Air Transportation
	35.0	Water Transportation
73.30(c).....	31.0	Shipment Containers (All Modes)
73.30(d).....	32.4	Armed Escorts (Road)
	33.1	Armed Escorts (Rail)
	36.3	Monitor Guards (Domestic Only) (All Modes)
	7.2	Guard & Watchman Force, Personnel
	7.3	Guard & Watchman Force, Scope of Authority
	7.4(1)	Guard & Watchman Force, Equipment
	7.5	Guard & Watchman Force, Training Drills

73.31 Shipment by Road

73.31(a).....	32.1	Transit Time (Road)
73.31(b).....	32.2	Communications (Road)
	42.0	Reports to the AEC (All Modes)
73.31(c).....	32.3	Vehicle Personnel (Road)

73.31 Shipment by Road (Continued)

73.31(c)(1)	.....	32.4	Armed Escorts (Road)
		32.7	Other (Road)
73.31(c)(2)	.....	32.5	Specially Designed Vehicle (Road)
73.31(d)	.....	36.0	Transfer or Stopover of SNM Enroute (Rail, Water, and Air)
73.31(e)	.....	32.6	Vehicle Marking (Road)

73.32 Shipment by Air

73.32(a)		34.0	Air Transportation
73.32(b)	.....	34.0	Air Transportation
		36.0	Transfer or Stopover of SNM Enroute (Rail, Water, and Air)
73.32(c)	.....	39.0	Exports (Air and Water)

73.33 Shipment by Rail

73.33(a)		33.1	Armed Escorts (Rail)
		33.2	Communications (Rail)
		42.0	Reports to the AEC (All Modes)
73.33(b)	.....	36.0	Transfer or Stopover of SNM Enroute (Rail, Water, and Air)

73.34 Shipment by Sea

73.34(a)	.....	35.0	Water Transportation
		36.0	Transfer or Stopover of SNM Enroute (Rail, Water, and Air)
73.34(b)	.....	35.0	Water Transportation
73.34(c)	.....	39.0	Exports (Air and Water)
73.34(d)	.....	35.1	Communications (Water)

73.35 Transfer of Special Nuclear Material

73.35(a)		32.4	Armed Escorts (Road)
		33.1	Armed Escorts (Rail)
		36.1	Intermediate Stops (Air and Water)
73.35(b)	.....	36.2	Transfers (Rail, Air, and Water)
73.35(c)	.....	36.2	Transfers (Rail, Air, and Water)

73.36 Miscellaneous Requirements

73.36(b)(1)	.....	40.0	Imports (All Modes)
73.36(b)(2)	.....	36.2	Transfers (Rail, Air, and Water)
73.36(c)(1)	.....	37.0	Notice to Consignees (Domestic or Foreign) (All Modes)
73.36(c)(2)	.....	38.0	Free On Board (FOB) Shipments (All Modes)
73.36(c)(3)	.....	37.0	Notice to Consignees (Domestic or Foreign) (All Modes)
73.36(d)	.....	37.0	Notice to Consignees (Domestic or Foreign) (All Modes)
73.36(e)	.....	42.0	Reports to the AEC (All Modes)
73.36(f)	.....	41.0	Trace Investigations (All Modes)
		42.0	Reports to the AEC (All Modes)

PHYSICAL PROTECTION REQUIREMENTS AT FIXED SITES

73.50 Requirements for Physical Protection of Licensed Activities73.50(a) Physical Security Organization

- 73.50(a)(1) 1.0 Organization
- 73.50(a)(2) 1.2 Security Organization
- 73.50(a)(3) Page 3 Introduction, Approval of Plans,
Security Procedures
- 1.3 Security Operating Procedures
- 20.0 Security Operating Procedures
- 73.50(a)(4) 7.0 Guard and Watchman Force

73.50(b) Physical Barriers

- 73.50(b)(1) 4.3 Vital Areas
- 73.50(b)(2) 4.2 Material Access Areas
- 73.50(b)(3) 4.1 Protected Areas
- 6.1.4 Intrusion Alarms for Protected Areas
and Isolation Zones
- 7.1 Posts and Patrols
- 73.50(b)(4) 2.1 Layout
- 4.1.2 Isolation Zone
- 5.2.1.2 Vehicle Access Authorization
- 6.1.4 Intrusion Alarms for Protected Areas
and Isolation Zones
- 7.1 Posts and Patrols
- 73.50(b)(5) 4.1.3 Illumination

73.50(c) Access Requirements

73.50(c)		5.1.1	Identification
		5.1.2.1	Personnel Access Points
		5.1.2.2	Personnel Access Authorizations
		5.1.4.1	Personnel Access Points
		5.2.1.1	Vehicle Access Points
		5.2.1.3	Vehicle Identification
		5.2.2.1	Vehicle Access Points
		5.2.2.3	Vehicle Identification and Surveillance
		7.1	Posts and Patrols
73.50(c)(1)	.....	5.1.2.3	Personnel Searches
		5.2.1.4	Vehicle Escort
		5.3.1	Incoming
		6.1.9	Alarms for Metal Detectors at Entrance to Protected Areas
		6.1.10	Alarms for Explosive Detectors at Entrance to Protected Areas
73.50(c)(2)	.....	5.3.1	Incoming
73.50(c)(3)	.....	5.1.1	Identification
		5.1.2.2	Personnel Access Authorizations (1) Without Escort
73.50(c)(4)	.....	5.1.3.2	Personnel Access Authorizations
		5.1.4.2	Personnel Access Authorizations
		6.1.5	Intrusion Alarms for Unoccupied Vital Areas
		6.1.6	Intrusion Alarms for Unoccupied Material Access Areas
73.50(c)(5)	.....	5.1.2.2	Personnel Access Authorizations
		5.1.4.2	Personnel Access Authorizations

73.50(c)(6) 5.2.1.2 Vehicle Access Authorizations

73.50(c)(7) 5.4 Keys, Locks, Combinations

73.50(d) Detection Aids

73.50(d)(1) 6.2 Central Alarm Station

73.50(d)(2) 6.1.1 Alarms for Emergency Exits in the
Perimeters of Protected Areas

6.1.2 Alarms for Emergency Exits in Vital Areas

73.50(e) Communication Requirements

73.50(e)(1) 8.1 Central Alarm Station

73.50(e)(2) 8.1 Central Alarm Station

73.50(e)(3) 8.1 Central Alarm Station

73.50(e)(4) 8.2 Emergency Power

73.50(f) Testing and Maintenance

73.50(f)(1) 21.0 Equipment Tests and Inspections

73.50(f)(2) 21.1 Alarms

73.50(f)(3) 21.3 Communications

73.50(g) Response Requirement

73.50(g)(1) 9.0 Local Law Enforcement Authorities

73.50(g)(2) 10.0 Security Alerts and Threats

73.60 Additional Requirements for Physical Protection of Special Nuclear
Material at Fixed Sites

73.60(a) Access Requirements

73.60(a)(1)		4.2	Material Access Area
73.60(a)(2)	.....	4.2	Material Access Area
73.60(a)(3)	.....	5.1.3.1	Personnel Access Points
		5.1.3.5	Storage of SNM Not in Process
		6.1.7	Intrusion Alarms for Vaults
		6.1.8	Intrusion Alarms for Vault-Type Rooms
73.60(a)(4)		6.1.13	Intrusion Alarms for Open Scrap
Storage Areas
		13.0	Open Scrap Storage Area
73.60(a)(5)	.....	5.1.3.2	Personnel Access Authorizations
73.60(a)(6)	.....	5.3.1	Incoming
73.60(a)(7)	.....	5.1.3.4	Observation of Individuals

73.60(b) Exit Requirements

73.60(b)		5.1.3.3	Personnel Exits
		5.2.2.3	Vehicle Identification and Surveillance
		5.3.2	Outgoing
		6.1.11	Alarms for SNM Detectors at Exits of
Material Access Areas
		6.1.12	Alarms for Metal Detectors at Exits of
Material Access Areas

73.60(c) Detection Aid Requirements

73.60(c)	.....	5.1.3.1	Personnel Access Points
		6.1.3	Alarms for Emergency Exits in Material
Access Areas
		6.1.6	Intrusion Alarms for Unoccupied Material
Access Areas

73.60(d) Testing and Maintenance

73.60(d)(1) 21.2 Physical Barriers

73.60(d)(2) 21.1 Alarms

RECORDS AND REPORTS

73.70 Records

73.70(a)		22.1.1	Authorized Individuals
73.70(b)	.....	22.1.2	Access to Vital Equipment and Vital Areas
		22.1.3	Access to SNM and Material Access Areas
73.70(c)	.....	22.1.4	Non-Employee Access
73.70(d)	.....	22.1.2	Access to Vital Equipment and Vital Areas
73.70(e)	.....	22.2	Tests and Inspections
73.70(f)	.....	22.3	Alarm Annunciations
		22.5	Security Inquiries and Investigations
73.70(g)	.....	43.0	Records (All Modes)
73.70(h)	.....	20.0	Security Operating Procedures

73.71 Reports of Unaccounted For Shipments, Suspected Theft, Unlawful Diversion, or Industrial Sabotage

73.71(a)		42.0	Reports to the AEC (All Modes)
73.71(b)		14.0	Reports to the AEC

CROSS REFERENCE OF STANDARD FORMAT
FOR PHYSICAL PROTECTION
TO 10CFR PARTS 50, 70, & 73

INTRODUCTION

<u>Purpose of Format</u>	50.34 (c) 70.22 (g) 70.22 (h)
<u>Regulatory Guides</u>	
<u>Non-Standard Format</u>	
<u>Use of Format</u>	50.34 (c) 70.22 (g) 70.22 (h)
<u>Approval of Plans - Security Procedures</u>	70.32 (d) 70.32 (e) 50.54 (p) 73.50 (a)(3)
<u>Supplementary Information</u>	
<u>Existing Facilities</u>	
<u>Design Information</u>	
<u>Definition of Terms</u>	
<u>Diagrams, Sketches, and Charts</u>	
<u>Incorporation of Material by Reference</u>	

Proprietary Information and Public Document Room

Physical Specifications

Number of Copies

Revisions and Changes

Compatibility

PART I

1.0 ORGANIZATION

73.50 (a) (1)

1.1 Operating Organization

1.2 Security Organization 73.50 (a) (2)

1.3 Security Operating Procedures 73.50 (a) (3)

2.0 SITE AND BUILDINGS

2.1 Layout 73.50 (b) (4)

2.2 Buildings

2.2.1 Exterior

2.2.2 Interior

3.0 SPECIAL NUCLEAR MATERIAL

3.1 Process

3.2 Material

4.0 SECURITY AREAS

<u>4.1 Protected Areas</u>	73.50 (b) (3)
<u>4.1.1 Physical Barriers</u>	
<u>4.1.1.1 Fence</u>	
<u>4.1.1.2 Walls</u>	
<u>4.1.1.3 Other Barriers</u>	
<u>4.1.1.4 Points of Ingress and Egress</u>	
<u>4.1.2 Isolation Zone</u>	73.50 (b) (4)
<u>4.1.3 Illumination</u>	73.50 (b) (5)
<u>4.1.4 Posting</u>	
<u>4.2 Material Access Areas</u>	73.50 (b) (2)
	73.60 (a) (1)
	73.60 (a) (2)
<u>4.2.1 Physical Barriers</u>	
<u>4.2.1.1 Walls, Floors, and Roofs</u>	
<u>4.2.1.2 Points of Ingress and Egress</u>	
<u>4.2.1.3 Vaults</u>	
<u>4.2.1.4 Vault-Type Rooms</u>	
<u>4.3 Vital Areas</u>	73.50 (b) (1)
<u>4.3.1 Physical Barriers</u>	
<u>4.3.1.1 Walls, Floors, and Roofs</u>	
<u>4.3.1.2 Points of Ingress and Egress</u>	

5.0 ACCESS CONTROLS

5.1 Personnel

<u>5.1.1 Identification</u>	73.50 (c) 73.50 (c)(3)
<u>5.1.2 Protected Area</u>	
<u>5.1.2.1 Personnel Access Points</u>	73.50 (c)
<u>5.1.2.2 Personnel Access Authorizations</u>	73.50 (c) 73.50 (c)(3) 73.50 (c)(5)
<u>5.1.2.3 Personnel Searches</u>	73.50 (c)(1)
<u>5.1.3 Material Access Areas, Vaults, Vault-Type Rooms</u>	
<u>5.1.3.1 Personnel Access Points</u>	73.60 (a)(3) 73.60 (c)
<u>5.1.3.2 Personnel Access Authorizations</u>	73.50 (c)(4) 73.60 (a)(5)
<u>5.1.3.3 Personnel Exits</u>	73.60 (b)
<u>5.1.3.4 Observation of Individuals</u>	73.60 (a)(7)
<u>5.1.3.5 Storage of SNM Not in Process</u>	73.60 (a)(3)
<u>5.1.4 Vital Areas</u>	
<u>5.1.4.1 Personnel Access Points</u>	73.50 (c)
<u>5.1.4.2 Personnel Access Authorizations</u>	73.50 (c)(4) 73.50 (c)(5)

5.2 Vehicles

<u>5.2.1 Protected Area</u>	
<u>5.2.1.1 Vehicle Access Points</u>	73.50 (c)
<u>5.2.1.2 Vehicle Access Authorizations</u>	73.50 (b)(4) 73.50 (c)(6)
<u>5.2.1.3 Vehicle Identification</u>	73.50 (c)
<u>5.2.1.4 Vehicle Escort</u>	73.50 (c)(1)

5.2.2 Material Access Areas and Vital Areas5.2.2.1 Vehicle Access Points 73.50 (c)5.2.2.2 Vehicle Access Authorizations5.2.2.3 Vehicle Identification and Surveillance 73.50 (c)
73.60 (b)5.3 Packages5.3.1 Incoming 73.50 (c)(1)
73.50 (c)(2)
73.60 (a)(6)5.3.2 Outgoing 73.60 (b)5.4 Keys, Locks, Combinations 73.50 (c)(7)5.4.1 Types and Kinds of Locks5.4.2 Keys5.4.3 Combinations6.0 PROTECTION AND DETECTION ALARMS6.1 Design and Performance Characteristics6.1.1 Alarms for Emergency Exits in the Perimeters of Protected Areas 73.50 (d)(2)6.1.2 Alarms for Emergency Exits in Vital Areas 73.50 (d)(2)6.1.3 Alarms for Emergency Exits in Material Access Areas 73.60 (c)6.1.4 Intrusion Alarms for Protected Areas and Isolation Zones 73.50 (b)(3)
73.50 (b)(4)6.1.5 Intrusion Alarms for Unoccupied Vital Areas 73.50 (c)(4)6.1.6 Intrusion Alarms for Unoccupied Material Access Areas ... 73.50 (c)(4)
73.60 (c)6.1.7 Intrusion Alarms for Vaults 73.60 (a)(3)

6.1.8	<u>Intrusion Alarms for Vault-Type Rooms</u>	73.60 (a)(3)
6.1.9	<u>Alarms for Metal Detectors, if Used, at Entrances to Protected Areas</u>	73.50 (c)(1)
6.1.10	<u>Alarms for Explosive Detectors, if Used, at Entrances to Protected Areas</u>	73.50 (c)(1)
6.1.11	<u>Alarms for SNM Detectors, if Used, at Exits of Material Access Areas</u>	73.60 (b)
6.1.12	<u>Alarms for Metal Detectors, if Used, at Exits of Material Access Areas</u>	73.60 (b)
6.1.13	<u>Intrusion Alarms, if Used, for Open Scrap Storage Areas</u>	73.60 (a)(4)
6.1.14	<u>Other Alarms - Specify</u>	
6.2	<u>Central Alarm Station</u>	73.50 (d)(1)
6.2.1	<u>Primary Annunciators</u>	
6.2.2	<u>Secondary Annunciators</u>	
6.3	<u>Emergency Power</u>	
7.0	<u>GUARD AND WATCHMAN FORCE</u>	73.50 (a)(4)
7.1	<u>Posts and Patrols</u>	73.50 (b)(3) 73.50 (b)(4) 73.50 (c)
7.2	<u>Personnel</u>	73.30 (d) 70.22 (g)
7.2.1	<u>Qualifications</u>	
7.2.2	<u>Screening</u>	
7.2.3	<u>Training</u>	
7.2.4	<u>Testing</u>	
7.3	<u>Scope of Authority</u>	70.22 (g) 73.30 (d)
7.4	<u>Equipment</u>	70.22 (g) 73.30 (d)
7.5	<u>Training Drills</u>	70.22 (g) 73.30 (d)

8.0 COMMUNICATIONS

<u>8.1 Central Alarm Station</u>	73.50 (e)(1)
	73.50 (e)(2)
	73.50 (e)(3)
<u>8.2 Emergency Power</u>	73.50 (e)(4)

<u>9.0 LOCAL LAW ENFORCEMENT AUTHORITIES</u>	73.50 (g)(1)
--	--------------

9.1 Arrangements

<u>10.0 SECURITY ALERTS AND THREATS</u>	73.50 (g)(2)
---	--------------

10.1 Organization and Procedures

- 10.1.1 Suspected Intrusion into a Security Area
- 10.1.2 Apparent Attempted Theft of SNM
- 10.1.3 Apparent Attempted Smuggling of Contraband into a Security Area
- 10.1.4 Bomb Threat
- 10.1.5 Civil Disturbance (riot)
- 10.1.6 Site Evacuation
- 10.1.7 Fire or Explosion
- 10.1.8 Outage of Critical Security or Plant Protection Equipment
- 10.1.9 Multiple Alarm Annunciations

11.0 EMPLOYEE PERSONNEL SCREENING

11.1 Policy and Procedures

11.2 Background, Inquiry, or Investigation

- 11.2.1 Employment Application (Questionnaire)
- 11.2.2 Inquiry or Investigation
- 11.2.3 Evaluation

11.3 Medical

11.4 Periodic Appraisal

12.0 EMPLOYEE SECURITY ORIENTATION AND TRAINING

12.1 Program

12.2 Responsibility

12.3 Training Drills

13.0 OPEN SCRAP STORAGE AREA

73.60 (a)(4)

13.1 Location

13.2 Physical Barriers

13.3 Storage Containers

13.4 Surveillance

14.0 REPORTS TO AEC

73.71 (b)

14.1 Incidents

14.2 Unusual Occurrences

14.3 Security Plan Changes 70.32 (e)

PART II20.0 SECURITY OPERATING PROCEDURES73.50 (a)(3)
73.70 (h)20.1 Preparation, Approval, and Periodic Review20.1.1 Personnel Identification and Controls20.1.2 Lock, Key, and Combination Controls20.1.3 Package Controls20.1.4 Vehicle Controls20.1.5 Personnel Searches20.1.6 Guard Posts and Patrols20.1.7 Local Law Enforcement Authority Liaison20.1.8 Detention or Arrests20.1.9 Report Writing20.1.10 Weapon Controls20.1.11 Reports to Management20.1.12 Equipment Tests and Inspections20.1.13 Forgotten or Lost Badges20.1.14 Infractions of Security Regulations or Instructions20.1.15 Security Communications21.0 EQUIPMENT TESTS AND INSPECTIONS

73.50 (f)(1)

<u>21.1 Alarms</u>	73.50 (f)(2) 73.60 (d)(2)
<u>21.2 Physical Barriers</u>	73.60 (d)(1)
<u>21.3 Communications</u>	73.50 (f)(3)

21.4 Other Security Equipment

22.0 RECORDS

22.1 Personnel

22.1.1 Authorized Individuals 73.70 (a)

22.1.2 Access to Vital Equipment and Vital Areas 73.70 (b)
73.70 (d)

22.1.3 Access to SNM and Material Access Areas 73.70 (b)

22.1.4 Non-employee Access 73.70 (c)

22.1.5 Employees

22.2 Tests and Inspections 73.70 (e)

22.2.1 Equipment

22.2.2 Security Tours and Inspections

22.3 Alarm Annunciations 73.70 (f)

22.4 Changes in Security Plan not Approved by AEC 70.32 (e)

22.5 Security Inquiries and Investigations 73.70 (f)

23.0 QUALITY ASSURANCE

23.1 Management Audit

23.2 Management Reports

23.3 Other

PART III30.0 MATERIAL IN TRANSIT
(ALL MODES)31.0 SHIPMENT CONTAINERS
(ALL MODES)

73.30 (c)

32.0 ROAD TRANSPORTATION

73.30 (a)

32.1 Transit Time - (Road) 73.30 (b)
73.31 (a)

32.2 Communications - (Road) 73.31 (b)

32.3 Vehicle Personnel - (Road) 73.31 (c)

32.4 Armed Escorts - (Road) 73.30 (d)
73.31 (c)(1)
73.35 (a)

32.5 Specially Designed Vehicle - (Road) 73.31 (c)(2)

32.6 Vehicle Marking - (Road) 73.31 (e)

32.7 Other - (Road) 73.31 (c)(1)

33.0 RAIL TRANSPORTATION

73.30 (b)

73.30 (a)

33.1 Armed Escorts - (Rail) 73.30 (d)
73.33 (a)
73.35 (a)

33.2 Communications - (Rail) 73.33 (a)

34.0 AIR TRANSPORTATION

73.30 (a)

73.30 (b)

73.32 (a)

73.32 (b)

<u>35.0 WATER TRANSPORTATION</u>	73.30 (a)
	73.30 (b)
	73.34 (a)
	73.34 (b)
<u>35.1 Communications - (Water)</u>	73.34 (d)
<u>36.0 TRANSFER OR STOPOVER OF SNM ENROUTE</u> <u>(Rail, Water, and Air)</u>	73.31 (d)
	73.32 (b)
	73.33 (b)
	73.34 (a)
<u>36.1 Intermediate Stops - (Air and Water)</u>	73.35 (a)
<u>36.2 Transfers - (Rail, Air, and Water)</u>	73.35 (b)
	73.36 (b)(2)
	73.35 (c)
<u>36.3 Monitor Guards (Domestic Only) - (All Modes)</u>	73.30 (d)
<u>37.0 NOTICE TO CONSIGNEES (DOMESTIC OR FOREIGN)</u> <u>(ALL MODES)</u>	73.36 (c)(1)
	73.36 (c)(3)
	73.36 (d)
<u>38.0 FREE ON BOARD (FOB) SHIPMENTS</u> <u>(ALL MODES)</u>	73.36 (c)(2)
<u>39.0 EXPORTS</u> <u>(AIR AND WATER)</u>	73.32 (c)
	73.34 (c)
<u>40.0 IMPORTS</u> <u>(ALL MODES)</u>	73.36 (b)(1)
<u>41.0 TRACE INVESTIGATIONS</u> <u>(ALL MODES)</u>	73.36 (f)
<u>42.0 REPORTS TO THE AEC</u> <u>(ALL MODES)</u>	70.32 (d)
	73.31 (b)
	73.33 (a)
	73.36 (e)
	73.36 (f)
	73.71 (a)

43.0 RECORDS
(ALL MODES)

73.70 (g)

44.0 COMMUNICATIONS EQUIPMENT
(ALL MODES)

45.0 MANAGEMENT AUDIT AND REVIEW
(ALL MODES)