Subgroup Exercise 2-1: Evaluate Types of Instructions

Session Objectives

After the session, the participants will be able to do the following:

1. Review instructions for a procedure and consider different methods for communicating instructions
2. Determine the advantages and disadvantages of different methods for communicating instructions

Estimated Time

25 minutes for both activities and 20 minutes for group discussion

Activities

1. Review Instructions for "X-ray Unit Pre-Operating Instructions" and determine what methods could be used for communicating instructions.
2. Discuss and list the advantages and disadvantages for each method.

Group Discussion

At the end of this exercise, each subgroup will discuss its results with the class. Discussion will be facilitated by the instructor.

Activity 1: Review Instructions for "X-ray Unit Pre-Operating Instructions" and Determine Methods for Communicating Instructions

Below are written steps for the "X-ray Unit Pre-Operating Instructions." You will read through the instructions and then have a discussion within your group. A list of different methods is shown in Table 1 (next page). Discuss each method and determine if the instructions could be presented in this method (enter "Yes" or "No" in the second column of the table).

X-ray Unit Pre-Operating Instructions

A visual inspection of the entire X-ray unit will be conducted before use each day. The inspection will include the following:

Step 1. Curtains in the entry and exit of the inspection chamber will be checked for missing or torn strips.

Step 2. The conveyor belt and conveyor belt lacing will be checked for damage or tears.

Step 3. All access panels will be inspected for tampering and to ensure that they are securely fastened to the frame of the machine.

Step 4. All visible electrical connections will be inspected.

Step 5. If any problems are found, immediately notify a security supervisor or the Central Alarm Station Communicator. The communicator will document the deficiency and notify Electronics Security department. Do not operate the machine prior to the deficiency being corrected by Electronics Security department personnel. Until the deficiency is corrected utilize the appropriate back up procedures (refer to Security Force Gate Orders).

Step 6. When the visual inspection of the entire unit is completed, then proceed with the next step of instructions (Operating Instructions).

Activity 2: Determine Advantages and Disadvantages for each Method for Communicating Instructions

Discuss in your groups the advantages and disadvantages for each method of communicating instructions. Document your discussion in the table below.

Table 1			
Method of communicating instructions	**Could the instructions be presented in this form? Yes or No**	**Describe the <u>Advantages</u> of this method**	**Describe the <u>Disadvantages</u> of this method**
Written steps	Yes		
Tables			
Flow charts			
Illustrations			
Photos			

Table 1			
Method of communicating instructions	**Could the instructions be presented in this form? Yes or No**	**Describe the <u>Advantages</u> of this method**	**Describe the <u>Disadvantages</u> of this method**
Video			
Live Demonstrations			
Other?			

Subgroup Exercise 2-2: Compare Methods for Communicating Instructions

Session Objectives

After the session, the participants will be able to do the following:

1. Compare two methods for communicating the same instructions and be able to comment on the clarity and completeness of the information for each method
2. Evaluate a set of instructions for clarity and completeness
3. Identify if the user would be successful in following the instructions

Estimated Time

35 minutes for both activities and 25 minutes for group discussion

Activities

1. Review Instructions for "X-ray Unit Pre-Operating Instructions" in both the (1) written format and (2) check list format. Comment on the clarity and completeness of the information for both methods. If one set of instructions is not complete, determine how to improve the set of instructions.
2. Review Instructions for "X-ray Unit Operating Instructions" in both the (1) written format and (2) flowchart format. Comment on the clarity and completeness of the information for both methods. If one set of instructions is not complete, determine how to improve the set of instructions.

Group Discussion

At the end of this exercise, each subgroup will discuss its results with the class. Discussion will be facilitated by the instructor.

Activity 1: Review and Evaluate the Information for Two Different Formats for "X-ray Unit Pre-Operating Instructions"

Below are two different methods for communicating the instructions for "X-ray Unit Pre-Operating Instructions." You will read through the different formats and then have a discussion within your group. You will comment on the clarity and completeness of the information (and determine if the user would be successful following the instructions). Based on your group's discussion determine if each method of instructions is clear and complete. That is, determine if any steps are missing or information is not clearly stated. If the set of instructions are inadequate for one of the methods then make suggestions on how to improve the set of instructions.

Written Format: X-ray Unit Pre-Operating Instructions

A visual inspection of the entire X-ray unit will be conducted before use each day. The inspection will include the following:

Step 1. Curtains in the entry and exit of the inspection chamber will be checked for missing or torn strips.

Step 2. The conveyor belt and conveyor belt lacing will be checked for damage or tears.

Step 3. All access panels will be inspected for tampering and to ensure that they are securely fastened to the frame of the machine.

Step 4. All visible electrical connections will be inspected.

Step 5. If any problems are found, immediately notify a security supervisor or the Central Alarm Station Communicator. The communicator will document the deficiency and notify Electronics Security department. Do not operate the machine prior to the deficiency being corrected by Electronics Security department personnel. Until the deficiency is corrected utilize the appropriate back up procedures (refer to Security Force Gate Orders).

Step 6. When the visual inspection of the entire unit is completed, then proceed with the next step of instructions (Operating Instructions).

Checklist Format: X-ray Unit Pre-Operating Instructions

Action	Yes	No	Okay?**
Curtains in place and complete?			
Belt and lacing damaged?			
Access panels secure?			
Electrical connections intact?			
Proceed to next step if all are okay			

** If there is a deficiency contact the Electronics Security Department

---

Discussion Notes for Activity 1

Comment on the clarity and completeness of the information for both methods – written and checklist format. Use the table below to document your comments.

Question	Written Format	Checklist Format
Are the Instructions Clear? (do the instructions make sense?)		
Are the Instructions Complete? (What steps are missing or what information is not clearly stated?)		
Would the user be successful following the instructions? If no, describe why not.		

Decide between both methods (written format and checklist format) and determine which is the least adequate approach for communicating instructions. Then discuss how you could improve it?

Would including both methods (written format and checklist format) be useful in a procedure? If "Yes", when would it be appropriate to use both formats?

Activity 2: Review and Evaluate the Information for Two Different Formats for "X-ray Unit Operating Instructions"

Below are two different methods for communicating the instructions for "X-ray Unit Operating Instructions." You will read through the different formats and then have a discussion within your group. You will comment on the clarity and completeness of the information (and determine if the user would be successful following the instructions). Based on your group's discussion determine if each method of instructions is clear and complete. That is, determine if any steps are missing or information is not clearly stated. If the set of instructions are inadequate for one of the methods then make suggestions on how to improve the set of instructions.

Written Format: X-ray Unit Operating Instructions

This check requires no warm-up procedures that operators must follow to ensure reliable operation. The Control Panel will be inspected before use each day to ensure all controls are intact and operable.

Caution: Never press buttons with sharp objects as this can result in permanent damage to the control panel.

Caution: Do not have any items or personnel on the conveyor during this automatic power-up-cycle. Carefully check that the Inspection Chamber is clear.

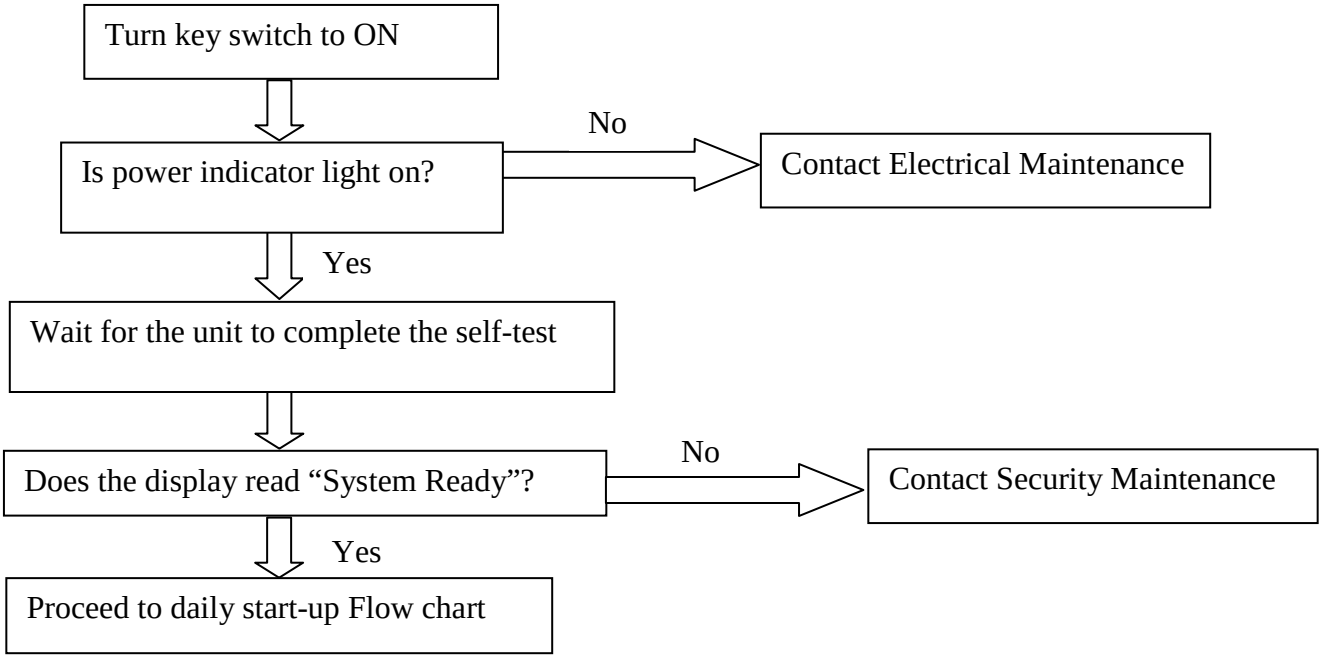
Step 1. Initiate the power up procedure by turning the "key switch" to the on position (horizontal). The power indicator should light when the key is turned to the "on" position.

Step 2. When the power is turned on, the Linescan unit performs a self-test to verify that all components are working correctly. During this self-test, the conveyor belt runs in reverse and a "WAIT" message is displayed in the message bar at the bottom of the monitor screen. When the self-test is completed, the conveyor belt stops and a "SYSTEM READY" message is displayed.

Step 3. To turn power off, turn the key to the "off" (vertical) position and remove the key. The power indicator should turn off when the key is turned to the "off" position.

Step 4. When the operations inspection of the unit is completed, then proceed with the next step of instructions (Daily Start-up Instructions).

Flowchart Format: X-ray Unit Operating Instructions



Discussion Notes for Activity 2

Comment on the clarity and completeness of the information for both methods – written and flowchart format. Use the table below to document your comments.

Question	Written Format	Flowchart Format
Are the instructions clear? (Do the instructions make sense?)		

Are the instructions complete? (What steps are missing or what information is not clearly stated?)		
Would the user be successful following the instructions? If no, describe why not.		

Decide between both methods (written format and flowchart format) and determine which is the least adequate approach for communicating instructions. Then discuss how you could improve it.

Would including both methods (written format and flowchart format) be useful in a procedure? If "Yes", when would it be appropriate to use both formats?

Subgroup Exercise 2-3: Identify the User and Purpose for Procedures

Session Objectives

After the session, the participants will be able to do the following:

1. Identify the user (responsible group) for security instructions
2. Identify the purpose for security instructions

Estimated Time

30 minutes for both activities and 30 minutes for group discussion

Activities

Note: for this exercise only certain sections from entire procedures are included.

1. Review the partial procedure for "Hand-held Metal Detector Calibration." Identify who is responsible for following the instructions and determine the purpose of the procedure.
2. Review the partial procedure for "Random Personnel Package inspections." Identify who is responsible for following the instructions and determine the purpose of the procedure.

Group Discussion

At the end of this exercise, each subgroup will discuss its results with the class. Discussion will be facilitated by the instructor.

Activity 1: Review Procedure for "Hand-held Metal Detector Calibration" and determine the User and Purpose

Below is a partial procedure for "Hand-held Metal Detector Calibration." You will read through the procedure and then have a discussion within your group. You will determine who is responsible for following the instructions. You will also determine the purpose of the procedure.

Procedure for Hand-held Metal Detector Calibration

Acroynms

HNRF - Hypothetical Nuclear Research Facility

Required Tools and Materials

The following tools, materials and personnel are required to conduct procedure:

- 220-gram ferrous metal test source
- 220-gram non-ferrous metal test source
- Garrett hand-held metal detector
- Copy of Attachment A (form HNRF 001)

Note: for this exercise Attachment A is not provided.

Prerequisites

_____ is required to take Garrett Handheld Metal Detector Calibration and User Training and be certified prior to conducting the calibration.

Instructions

These instructions are applicable for the Garrett hand-held metal detector.

Step 1. Press power switch up for continuous operation.

Step 2. Verify that a 220-g non-ferrous metal test source can be detected from 8-cm or greater.

Step 3. If hand-held detector passes steps 2 and 3, record the results in test report HNRF-001 (see Attachment A).

Step 4. Skip the remaining steps if hand-held detector passes steps 2 and 3. If the hand-held detector does not pass steps 2 and 3, recalibrate by removing battery cover and adjusting the internal control (set screw) to set the Audio Alert threshold at a level where it can just be heard. Then turn back slightly, when not detecting metal.

Step 5. Repeat steps 2 and 3 until hand held detector can detect both 220-g ferrous metal and non-metal test sources from 8-cm or greater.

Step 6. Repeat Steps 1 through 6 for remaining Garrett hand-held metal detectors.

Note: Check the battery on units that will not calibrate. If battery is low, replace it. If battery is okay, return to factory for repair.

Discussion Notes for Activity 1

Who (what group) is this procedure written for?

What is the purpose of this procedure?

Activity 2: Review Procedure for "Random Personnel Package Inspections" and determine the User and Purpose

Below is a partial procedure for "Random Personnel Package Inspections." You will read through the procedure and then have a discussion within your group. You will determine who is responsible for following the instructions. You will also determine the purpose of the procedure.

Procedure for Random Personnel Package Inspections

Acroynms

HNRF - Hypothetical Nuclear Research Facility
PA - Protected Area
CAS - Central Alarm Station
DAR - Daily Activity Report
SP – Security Report

Instructions

WHO?

Step 1. Generate the random package inspection sheet at beginning of shift.

Step 2. Issue the inspection sheet to the security guard responsible for performing the inspection.

WHO?

Step 1. Perform random package inspections at the locations designated by the random generator.

Step 2. Verify individual's badge is in accordance with SP-006 (Access Controls)

Step 3. If the individual does not have any hand-carried items, then allow them to enter the protected area (PA) as normal. If the individual has a hand carried item then:

Step 3-1 Identify yourself as a HNRF security guard

Step 3-2 Advise the individual that a package inspection is required of their hand-carried items.

Step 4. Search all compartments of the hand-carried item, also search for any hidden compartments.

Step 5. Replace the articles into the hand-carried item as close to the location they were in prior to searching.

Step 6. If the bottom of the hand-carried item is not visible, ask the owner to move or remove items so that the bottom can be searched.

Step 7. If a prohibited or controlled item is discovered, contact the on-duty security supervisor and perform as directed in SP-011 (Prohibited and Controlled Articles)

Step 8. Once the inspection is complete, inspection forms must be filled out.

Step 9. Hand over completed forms for the on-duty security supervisor at the end of the shift.

Step 10. Report the results of the package inspection to the Central Alarm Station (CAS) operator for annotation to the Daily Activity Report (DAR).

Discussion Notes for Activity 2

Who (what groups) is this procedure written for?

What is the purpose of this procedure?

Subgroup Exercise 2-4: Write Instructions for a Security Procedure

Session Objectives

After the session, the participants will be able to do the following:

1. Document the purpose for a security procedure
2. Document step-by-step instructions for a security procedure

Estimated Time

45 minutes for both activities and 30 minutes for group discussion

Activities

1. Develop and document the purpose statement for entry through a security point by facility personnel.
2. Develop and document the step-by-step instructions for entry through a security point by facility personnel.

Group Discussion

At the end of this exercise, each subgroup will discuss its results with the class. Discussion will be facilitated by the instructor.

Activity 1: Develop and Document the Purpose Statement for a Security Procedure

At the Hypothetical Nuclear Research Facility (HNRF), the entry control points use a badge, personnel identification number (PIN), and hand geometry to authorize the entry of facility personnel. After being authorized, personnel enter the facility through a turnstile.

You will be writing the instructions for personnel entry into the HNRF facility. First develop the purpose of the procedure.

Purpose:

Activity 2: Develop and Document the Instructions for a Security Procedure

In your groups, discuss the steps for processing facility personnel through the entry point. Document any acronyms you might use and required tools and materials (if appropriate). Use the table on the next page to document your instructions. You may have to make some assumptions as you write your instructions (document your assumptions).

Instructions for Authorized Entry into HNRF by Facility Personnel

Badge → PIN → Hand Geometry → Turnstile

Acronyms Used

HNRF - Hypothetical Nuclear Research Facility

Required Tools and Materials

The following tools and materials are required to conduct procedure:

Instructions

Step 1	
Step 2	
Step 3	
Step 4	
Step 5	
Step 6	
Step 7	
Step 8	

Note: you are not limited to eight steps, add additional steps if necessary

---

Discussion Notes for Activity 2

Do you think you have all the information you need for completing the instructions? If not, what information do you think you need to ensure your instructions are complete?

Subgroup Exercise 2-5: Write Instructions for a Security Procedure Using Photos

Session Objectives

After the session, the participants will be able to do the following:

1. Document step-by-step instructions for a security procedure which uses photos to communicate instructions.

Estimated Time

30 minutes per activity and 30 minutes for group discussion

Activities

1. Develop and document the step-by-step instructions for entry through a security point by facility personnel. The procedure will include photos for communicating instructions.

Group Discussion

At the end of this exercise, each subgroup will discuss its results with the class. Discussion will be facilitated by the instructor.

Activity 1: Develop and Document the Instructions for a Security Procedure Using Photos

You can refer to the information you developed in Exercise 2-4 for processing facility personnel through the entry point. After each photo you will write simple and clear instructions associated with the photo. If you determine the photo is self-explanatory, you can decide not to write words to support photo. There are 5 steps in this set of instructions. You may have to make some assumptions as you write your instructions (document your assumptions).

Instructions for Authorized Entry into HNRF by Facility Personnel

Instructions

The user will follow the instructions as shown in the photo and described in the steps following the photo.

STEP 1.

Instructions:

STEP 2.

Instructions:

STEP 3.

Instructions:

STEP 4.

Instructions:

STEP 5.

Instructions:

STEP 6.

Instructions:

Discussion Notes for Activity 1

Do you think you have all the photos and information you need for completing the instructions? If not, what additional photos and information do you think you need to ensure your instructions are complete?

After completing this exercise, did you find that you have additional acronyms or tools and materials that you did not include in Exercise 2-4?

Compare your instructions from Exercise 2-4 and the instructions for the exercise you just completed with photos. Discuss among your team and decide which format you might prefer to use at your facility and why.

Do you think this procedure should also include instructions for personnel who make several attempts to enter the facility and are unsuccessful (e.g., entering their PIN incorrectly several times and after so many tries the system locks them out)?

Subgroup Exercise 3-1: Examine the instructions for a specific procedure

Session Objectives

After the session, the participants will be able to do the following:

1. Identify the desired contents for each major portion of a procedure.

Estimated Time

10 Minutes for Activity 1. Activity 2 will be conducted as a discussion activity as the following slides are presented and discussed.

Activities

1. Quickly review the "Walk Through Metal Detector Sensitivity Test". The intent of these instructions is to assure that sensitivity is adequate to continue normal operation.
2. Student activity – follow along and indicate where or if each requirement discussed in the next several slides is located in the example.

Group Discussion

During this exercise please add comments and your observations as each of the associated slides are presented. Discussion will be facilitated by the instructor.

SEC – OP - 0001

Procedure for

Weekly Walk-Through Metal Detector Sensitivity Test

Revision 0

_____ _____

Approval, Electronic Security Manager Date

Effective Date: _____

Controlled Copy: # _____

*Note: if there is no CC#, the copy is to be used for Information Only

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Contents

1 Purpose

Walk-Through Metal Detector will be tested weekly in accordance with the following procedures. Test results will be recorded on the attached test report form and maintained by the Electronic Security Department (ESD).

2 Scope

This test is only performed in the Protected Area (PA) of HNRF. The portal Metal Detector must remain powered on (24 hours a day) in the PA. If detector is turned off, it must be re-calibrated by the Electronic Security Department. Initial calibration and Probability of Detection testing in accordance with HNRF requirements shall be performed by Electronic Security Department. Detector sensitivity adjustments are to be made by Electronic Security Department personnel only.

3 Responsibilities

Roles and responsibilities for this procedure are defined below.

3.1 Manager

The Electronic Security Department Manager has overall responsibility for this procedure.

3.2 Procedure Author and Owner

The procedure author has responsibility for developing, writing, reviewing, and finalizing this procedure. The procedure author also has the responsibility for determining the schedule for periodic review.

3.3 Users

The ESD personnel assigned to conducting weekly walk-through sensitivity tests for the metal detector portals are responsible for following this procedure.

4 Definitions

4.1 Acronyms

ESD	Electronic Security Department
HNRF	Hypothetical Nuclear Research Facility
PA	Protected Area
P_d	Probability of Detection

4.2 Glossary

TBD

5 Required Tools and Materials

The following tools, materials and personnel are required to conduct procedure:

- Pad and pencil
- Copy of Attachment A (form HNRF-002).
- Security Guard
- Hand held metal detector
- Test Standard (ie. Metallic test source designed for the level of sensitivity required)

6 Procedure Instructions

Before beginning instructions, adhere to the precautions, know the limitations, and comply with the prerequisites as described below.

6.1 Precautions and Limitations

TBD

6.2 Prerequisites

Garrett Portal Metal Detector Calibration and user training.

6.3 Instructions

Step 1. Verify that the power is on (*power should be left on continuously*). If power is not on, the unit must be powered on and allowed to warm up for 30 minutes prior to testing.

Step 2. The person performing the testing must remove any extraneous metal such as rings, watches, keys, coins, eyeglasses, pager, belt buckle, shoes with steel shanks, etc. The tester will have a Guard use a hand held metal detector to verify that the tester has removed all metal for their person.

Step 3. The test standard shall be carried through the portal metal detector in the worst-case configuration (noted from calibration tests), near the center of the detector, at normal walking speed (approximately one meter per second (1 m/s)), for five passes, at each of three different heights (above shoulders, front of waist, and ankle height). This makes a total of 15 passes.

Step 4. The detector must alarm on at least 4 of the 5 passes at each height to be functioning properly.

Step 5. If the detector does not alarm on at least 4 of the 5, make the necessary sensitivity adjustments, and re-test at each height (5 passes).

Step 6. If the sensitivity cannot be adjusted to detect the test standard, the unit shall be taken out of service until it is repaired and calibrated, and the problem shall be noted on a Security Deficiency Form. Compensatory measures (hand checking for metal) as defined in SP XXX will be implemented until the Portal is operational.

Step 7. Record test result information and comments of test on Weekly Calibration / Sensitivity Test for Metal Portal Detector Weekly Calibration / Sensitivity Test for Metal Portal Detector form 002

7 Records

All records will be maintained according to the HNRF Records Retention and Disposition Schedule

8 References

8.1 External Source (Requirements) Documents

Garrett Portal Metal Detector manufactures operational manual.

8.2 Related Documents

Attachment A- Weekly Calibration / Sensitivity Test for Metal Portal Detector Form-002

Test Report form for the Weekly Calibration / Sensitivity Test for Metal Portal Detector

Rapid Scan Portal Metal Detector Calibration and Sensitivity Test

Detector Number And Location	Test Area	Test Results		Comments
		Pass	Fail	
#12345 Building 101	Above Shoulders			
	Front of Waist			
	Ankle Height			

Current Sensitivity Setting	Change Required				New Sensitivity Setting
	Yes	☐	No	☐	

Tested by	Print Name		Signature
Date		Form Number	HNRF-002

Subgroup Exercise 3-2: Develop a draft for your own situation

Session Objectives

After the session, the participants will have done the following:

1. Developed a draft outline showing what sections should be included in their security procedures

Estimated Time

30 minutes for Activities. 30 minutes for subgroup summaries.

Activities

1. Review the examples provided.
2. Discuss and select an approach that will most likely meet your specific needs. Your approach may be similar or completely different than the examples.
3. Generate a procedure outline that fits your needs. The table of contents from the procedure used in Exercise 3-1 is provided below and can be marked up or ignored as is appropriate for your approach selected.

Contents

Subgroup Exercise 4-1: Is a Written Procedure Needed to Implement the Policy Requirement?

Session Objectives

After the session, the participants will be able to do the following:

1. Extract from policy statements the possible need for procedures
2. Determine if the policy statement contains enough information to develop a procedure

Estimated Time

45 minutes per activity and 45 minutes for group discussion

Activities

Note: Refer to NSS13 / INFOCIRC225/r5 for additional information.

1. Review the policy requirements and determine if a written procedure is needed.
2. Determine whether or not the requirement provides enough information for you to develop a procedure, or if additional information will be needed.

Group Discussion

At the end of this exercise, each subgroup will discuss its results with the class. Discussion will be facilitated by the instructor.

Activity 1: Review requirements to determine needs for procedures

Review the NSS 13/INCIRC 225 requirement statements in the following table. Determine if the statement provides enough information for you to know if a procedure needs to be developed and record your yes or no answer in the third column.

NSS13 Item #	Requirement Description	Procedure Needed? (Yes/No)	Sufficient Information ? (Yes/No)	Additional Clarification or Information Needed
4.9	The *physical protection system* of a *nuclear facility* should be integrated and effective against both *sabotage* and *unauthorized removal*			
4.10	Computer based systems used for physical protection, nuclear safety, and nuclear material accountancy and control should be protected against compromise (e .g. cyber-attack, manipulation or falsification) consistent with the *threat assessment* or *design basis threat*.			
4.14	*Nuclear material* should be used or stored within at least a *limited access area.*			
4.15	Provision should be made for detecting unauthorized intrusion and for appropriate action by sufficient *guards* and/or *response forces* to address a *nuclear security event*			
4.16	Every *nuclear material* handler should be required to conform to procedures for transferring custody of the *nuclear material* to the succeeding handler. Additionally, *nuclear material* handlers should endeavor to ascertain on reporting for duty that no interference with or *unauthorized removal* has taken place.			
4.17	Technical means and procedures for access control, such as keys and computerized access lists, should be protected against compromise, e.g. manipulation or falsification.			
4.18	For movements of Category III *nuclear material* within a *limited access area*, the *operator* should apply all prudent and necessary *physical protection measures*			
4.34	The guards should conduct random patrols of the protected area. The main functions of the patrols			

	should be to: - Deter an adversary Detect intrusion; - Inspect visually the physical protection components; - Supplement the existing physical protection measures; - Provide an initial response.			
4.43	To counter the *insider* threat, whenever an *inner area* is occupied, *detection* of unauthorized action should be achieved by constant surveillance (e.g. the *two person rule*).			

Activity 2: Determine if the requirement statement is sufficient to develop a procedure

In the cases where you think a procedure needs to be developed, discuss whether or not the requirement contains enough information for you to develop a procedure and indicate your yes or no response in the fourth column.

During these discussions, list in the fifth column additional information that may be required to develop the procedure.

Subgroup Exercise 4-2: Identify Potential Procedures from a Simple Security Plan

Session Objectives

After the session, the participants will be able to do the following:

1. Review security plans to identify areas where procedures are needed

Estimated Time

45 minutes for the activities and 30 minutes for group discussion

Activities

1. Review the following abbreviated security plan and identify areas where procedures will need to be developed to meet the security requirements. List your findings in the table below.

Group Discussion

At the end of this exercise, each subgroup will discuss its results with the class. Discussion will be facilitated by the instructor.

Page	Section	Procedure needed
CH-1	A-2	How to conduct Nuclear Material Audits

SEC-PLN-008 (V4) — EXAMPLE SIMPLE HNRF SITE SECURITY PLAN (SSP)

Author/Owner: Dr. **Martinez**

Issue Date: 30 September 2008

Revision Date: 10 July 2012

CONTENTS

Figures

1.0 Introduction

1.1 Overview

HNRF operates a research reactor under authority of the state. This Site Security Plan (SSP) reflects the mission and configuration of Safeguards and Security (S&S) interests at HNRF.

1.2 Ownership and Oversight

Dr. Martinez, Assistant manager of HNRF owns this security plan and maintains, reviews, and updates it at least annually with the assistance of the guard force and director of research.

1.5 Site Mission, S&S Interests, and Targets

HNRF serves as the nation's premier nuclear energy research facility. The Institute houses various research, administrative, and plant support facilities.

HEU Category I quantities of SNM are on site. Limited amounts of Category III materials for research and testing purposes are stored onsite as well.

A. Program Management and Support

A.2 Management Control

The S&S Performance Assurance Program uses realistic tests to evaluate and verify the effectiveness of HNRF's security systems to identify potential vulnerabilities and areas requiring system improvements.

The Performance Assurance Program includes:

- Limited Scope Performance Tests (LSPTs)
- Alarm Response Assessment Performance Tests (ARAPTs)
- Nuclear Material Audits

The elements of the integrated protection system are evaluated, and performance is tested throughout the year, to validate operability and effectiveness.

B. Guard Force

B.1 Guard Force Management and Overview

The Guard Force reports through the Guard Force Manager to Dr. Martinez. Guard Force planning and organization is based on site threats identified by Local police and a representative from the state.

Changes in protection strategy, reduction in staffing levels, changes in guards, equipment or weapons, or any significant operational or procedural modification that could affect tactical effectiveness or readiness must be coordinated with the Guard Force manager and Dr. Martinez.

B.2 Duties

HNRF Guard Force personnel provide physical protection of Cat I and III nuclear material, the waste storage area, HNRF assets and proprietary information.

Primary duties are access control, security patrols, and incident response. The primary means of communication is through the Central Alarm Station (CAS).

The Guard Force consists of the 15 response force personnel and 15 guards who man the posts and conduct patrols.

All alarms are received and assessed at the Central Alarm Station. The Secondary Alarm Station verifies the CAS operator's assessment to ensure all alarms are properly assessed. The CAS operator immediately notifies the Commander of the Guard Force so preparations for deployment can begin by the appropriate tactical team. In addition, the nearest guard is also dispatched to the point of the alarm. .

Once the tactical team arrives at the appropriate facility, they deploy as a team and proceed with operations to enter the facility and ensure the protection of material and assets.

B.3 Description of Response Forces at the HNRF

Types of Response Force Personnel

The response force consists of two types of security personnel:

- unarmed guards
- the tactical response force

Responsibilities of Response Force

These security personnel are responsible for:

- assessment of alarms
- administrative duties such as access control and key service
- routine patrol and staffing of fixed posts
- armed response to all intrusion alarms

Equipment: Guards

All **guards** are equipped with:

- a straight baton
- one set of handcuffs
- a small flashlight
- a handheld radio

Equipment: Tactical Response Team

The **tactical response** team members are equipped with

- a pistol with a fully loaded magazine
- an assault rifle with a fully loaded magazine
- two spare magazines of ammunition for each weapon.
- a straight baton
- handcuffs
- flashlight
- handheld radio
- body armor is readily available in the response force building

Alarm Stations and Communication

The **Central Alarm Station** (CAS) is staffed by a minimum of one guard at all times.

The **Secondary Alarm Station** (SAS) is staffed by a minimum of one guard at all times.

Both the CAS and the SAS are equipped with:

- 100-watt radios that can communicate to all posts and patrols within the boundaries of the Institute.
- 2 telephone lines. One is linked to each fixed post via a buried telephone cable and the second telephone is a direct link to the Ministry of Interior headquarters located in the city.

All handheld radios and fixed posts are equipped with a duress switch to allow a covert signal to the CAS and SAS of unauthorized activity.

C. Physical Security

C.1 Security Areas

The HNRF-controlled property continuum begins with public areas, and extends to security controlled areas as defined below:

C.1.1 Limited Access Areas (LAA) (Public Areas and Non-Public Areas)

The LAA is defined as the outermost boundary of HNRF.

C.1.2 Protected Areas (PA)

The PA is defined as the fenced boundaries of the Reactor and Waste Storage facilities.

C.1.3 Inner Areas (IA)

At HNRF, there are inner areas established within the Reactor facility, controlling access to stored nuclear materials as well as the reactor.

C.1.4 Vital Areas (VA)

Vital areas are defined as the areas immediately around the shielding wall of the reactor.

C.2 Access Controls

Access and entry controls are applied at all security areas, entry control points (ECPs), as well as for vaults, and other areas where additional access restrictions are necessary. Access and entry controls include:

- Automated or administrative access controls.
- Alarms.
- 100% package, vehicle and person inspections for entry to protected areas, inner areas, and vital areas.
- Cursory or detailed explosive detection and SNM detection.
- Two-person rule at inner and vital areas.

C.2.1 Automated Access Control

Automated access requires a badge swipe and personal identification number (PIN) for entry to a protected area, inner area, and vital area.

C.2.2 Government Vehicles

Delivery, Government-owned and/or leased vehicles are admitted into PAs only on official business and when the driver is properly cleared or properly escorted by authorized personnel.

C.3 Intrusion Detection and Assessment Systems

Intrusion detection and assessment systems (IDS) used for the protection of Category I and III nuclear material, proprietary information, and other assets.

C.4 Barriers and Delay Mechanisms

Security areas are bounded by barriers that consist of vehicle barriers, fences, cables, buildings, and steel doors and frames.

C.5 Testing and Maintenance

There are three key components to the Testing and Maintenance Program that ensure the reliability and operability of S&S-related equipment and systems used in the protection of classified information and matter: system operational checks, preventive and corrective maintenance, and periodic assurance testing.

System operational checks are either those performed periodically by personnel as part of their job duties, such as a vehicle check, or those performed as part of continuous monitoring of the security systems.

Periodic assurance testing is performed in conjunction with the Self-Assessment Program and associated performance testing.

Subgroup Exercise 4-3: Complete Procedure Steps for Random Personnel Package Inspections

Session Objectives

After the session, the participants will be able to do the following:

1. Using partially completed procedure provided, list steps needed for “Random Personnel Package Inspections Procedure”

Estimated Time

45 minutes activity and 35 minutes for group discussion

Activities

1. View step by step instructions conducted by Instructors and role players.
2. Develop steps needed to complete procedure.

Group Discussion

At the end of this exercise, each subgroup will present procedure steps identified with the class. Discussion will be facilitated by the instructors.

SEC–OP-004

Procedure for

Random Personnel Package Inspections

Revision 0

_____ _____

Approval, Security Force Operations Manager Date

Effective Date: _____

Controlled Copy: # _____

*Note: if there is no CC#, the copy is to be used for Information Only

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Contents

Purpose

This procedure provides the requirements for security guards in the performance of random package inspections at entry points into the protected area of HNRF. Security guards will perform random hand-carried package inspections at the location designated by the random generator.

1 Scope

This procedure is only performed at the personnel entry points into the Protected Area (PA) of HNRF. Only personnel with hand-carried packages will be subject to inspection. The requirements of this procedure are implemented by the Security Guards and Security Guard Supervisors in a safe and professional manner.

2 Responsibilities

Roles and responsibilities for this procedure are defined below.

2.1 Manager

The Security Force Operations Manager has overall responsibility for this procedure.

2.2 Security Supervisor

The Security Supervisor has the responsibility for generating, issuing and collecting the random package inspection sheets.

2.3 Procedure Author and Owner

The procedure author has responsibility for developing, writing, reviewing, and finalizing this procedure. The procedure author will review and update this document at least annually.

2.4 Security Guard

The security guards assigned to conducting random package searches are responsible for following this procedure. Any deficiencies identified during the procedure must be reported to a security supervisor.

3 Definitions

3.1 Acronyms

HNRF	Hypothetical Nuclear Research Facility
PA	Protected Area
OP	Operating Procedure
CAS	Central Alarm Station

3.2 Glossary

Search – the examination of a person, place, or thing by security guards if probable cause exists that a person is attempting to introduce contraband or prohibited articles into controlled security areas.

4 Required Tools and Materials

The following tools, materials and personnel are required to conduct procedure:

- Assigned security guard
- HNRF Random package inspection sheet

5 Procedure

Before beginning instructions, adhere to the precautions, know the limitations, and comply with the prerequisites as described below.

5.1 Precautions and Limitations

Security guards will treat all personal property with respect and care.

5.2 Prerequisites

TBD

5.3 Instructions

5.3.1 Security Supervisor

Step 1. Generate the random package inspection sheet at beginning of shift.

Step 2. Issue the inspection sheets to the security guards responsible for performing the inspections.

Step 3. Collect random package inspection forms from security guards and deliver to security operations center.

5.3.2 Security Guard Performing the Random Package Inspection

Step 1.

Step 2.

Step 3.

Step 4.

Step 5.

Step 6.

6 Records

All records will be maintained according to the HNRF Records Retention and Disposition Schedule.

7 References

7.1 External Source (Requirements) Documents

IAEA document

7.2 Related Documents

SEC-OP-006 (Access Controls)
SEC-OP-011 (Prohibited and Controlled Articles)
Random Package Inspection Form 222

7.3 Change History

July 1,2012 Random Package Inspection Form 222 updated.

8 Attachment A – Form-222

Example Inspection Form for the Random Personnel Package Procedure

HNRF Random Inspection Report							
Post #		Inspection time	0800-1700	Date:			
Location if not Security Post							
Time Conducted	Conducted During		Prohibited Articles Entry Only		Facility Property Exit Only no authorization		Action Taken
	Entry	Exit	No	Yes	No	Yes	
Guard conducting inspections: (print name and sign)					Supervisor: (print name and sign)		
Revision 01	Date revised July 01,2012						HNRF Form -222

Subgroup Exercise 4-4: Identify Security Elements that May Need a Procedure

Session Objectives

After the session, the participants will be able to do the following:

1. Identify portions of a security system that may need to have a procedure

Estimated Time

35 minutes for the activities and 25 minutes for group discussion

Activity

Review the implementation elements of a security system provided in the following table and indicate in column three or four whether you think a procedure may be needed for this implementation.

Group Discussion

At the end of this exercise, each subgroup will discuss its results with the class. Discussion will be facilitated by the instructor.

Requirement	Implementation	Procedure Needed?	
		Yes	No
Perimeter	3 m chain link fence		
	Video system		
	Locked gates		
	Intrusion sensors		
Access control	Badge readers with turnstiles		
	Badge issuance		
	Metal detectors		
Information protection	Document movement control		
	Document marking		
Alarm response	Guards assess		
	Radio communications		
	LLEA response		

Subgroup Exercise 4-5: Identify Procedures you Might Need to Develop

Session Objectives

After the session, the participants will be able to do the following:

1. Identify areas in their own situations which may need a procedure

Estimated Time

35 minutes for the activity and 25 minutes for group discussion

Activity

Consider what we have discussed in this module and discuss where procedures may be required to meet the needs in your situation. List the ideas in the table below and establish a priority depending on the criticality of the need for the procedure.

Group Discussion

At the end of this exercise, each subgroup will discuss its results with the class. Discussion will be facilitated by the instructor.

Procedure	Priority

Configuration Management Checklist

Use this checklist to help guide you in developing your procedure organization system, processes, and library. Think about when, where, and by whom documents created, modified, published, and stored.

Element	Questions to Think About	How We Might Achieve This
Collaboration and Review	If documents need to pass from one person to another, what are the rules for how their work should flow?	
Filing (Numbering) Systems	How will documents be filed? What methods will be used to organize or index the documents to assist in later retrieval? Document management systems will typically use a database to store filing information.	
Distribution, Availability, and Storage	How can documents be made available to the people who need them? Where will documents be stored? Where will people need to go to access documents? Physical journeys to filing cabinets and file rooms are analogous to the onscreen navigation required to use a document management system.	
Version Control and Access Control (Security)	Is there a way to vouch for the authenticity of a document? How will documents be kept secure? How will unauthorized personnel be prevented from reading, modifying, or destroying documents? How are revisions tracked to ensure only the latest version is accessible?	
Change Tracking	How can users know of revisions without reading the entire procedure? How will they know a document has been updated?	
Retention and Archiving	How long should documents be retained? As organizations grow and regulations increase, informal guidelines for keeping various types of documents give way to more formal records management practices. How can documents be preserved for future readability?	