IPT SCRIPTS

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

SAND2014-0917P

Exercise 12-1: Performance Test for Material Transfers

Exercise Goal: Prevent unauthorized removal of nuclear material by verifying items being moved against the transfer documentation; detain material movement personnel, quarantine transfers with anomalies, and report anomalies to appropriate personnel (MC&A, Security, and Operations management).

Role Players: Guard 1, Supervisor 1

Guard 1 is located inside the ECP of the Processing Facility. The following responsibilities for Guard 1 are as follows:

- Continue to maintain control of access leading into the PF.
- When authorized personnel attempts to exit the ECP with authorized nuclear material, verify that all identification numbers of the nuclear material sample items and Tamper Indicating Devices (TID) numbers match the material transfer form.
- Ensure the material transfer form is signed by authorized personnel.
- Ensure authorized personnel do not have additional nuclear material in possession not on the approved material transfer form.
- Conduct an SNM check on all personnel leaving the ECP.
- If there are no discrepancies on the material transfer form or signs of unauthorized removal of nuclear material, resume normal duties.
- If there are discrepancies found on the material transfer form or signs of unauthorized movement of nuclear material, notify CAS to send a supervisor.
- Secure the nuclear material.
- Detain unauthorized personnel.
- Wait for the Guard Supervisor to address the concern.

Supervisor 1 is located inside the CAS. The following responsibilities for Supervisor 1 are as follows:

- Respond to the PF and link up with Guard 1 to address the situation.
- Work with appropriate personnel to address the anomaly
- Ensure nuclear material is secured
- Ensure the authorized personnel is detained
- Question authorized personnel of the anomaly.
- Place and secure all nuclear material in the vault.

Exercise 12-2 Script: Performance Test for Material Transfers

Exercise Goal
This performance test will check the ability of the SPP waste monitoring system to detect the removal of significant quantities of special nuclear material (SNM) in waste containers being transferred from the Processing Facility (PF) Material Access Area (MAA) to the Waste Storage Area for accountability measurement.

Exercise Objective
This performance test will determine whether the non-destructive assay (NDA) equipment used to check waste containers leaving the PF will detect a container with above normal quantity of U-235. A radioactive source simulating highly enriched U-235 will be placed in a container and the container monitored by an NDA instrument.

Role Players: MBA Custodian, Material handler

MBA Custodian and the Material handler will be located in the hallway just outside the Waste Material Room located in the Processing Facility (PF). The following responsibilities for the MBA Custodian are as follows:

.

- There will be two 55 gallon drums (canisters) located in the hallway ready for inspection.
- Prior to the material handler attempting to transport the nuclear waste out of the PF, the MBA custodian will search both canisters.
- A check on each canister will be performed by the MBA custodian using the NDA instrument used to monitor.
- If the test shows a PASS of the NDA system to detect the presence of the simulated SNM source, the waste transfers can resume as planned.
- If the test shows a failure of the NDA system to detect the presence of the simulated SNM source, all waste transfers from the PF to the Waste Storage Area will be suspended until the NDA waste monitoring system is returned to acceptable status.
- The MBA Custodian will notify the MC&A Manger and the Plant Manager to address the anomaly.

Exercise 13: Performance Test for Emergency Evacuation

Role Players: Guard 1 and Guard 2

CAS operator will communicate alarm to Guard 1 and 2. Inject Note: "CAS to all patrols, a fire alarm has gone off in the Processing Facility".

Guard 1 is located inside the guard barracks. Responsibilities for Guard 1 are as follows:

- As soon CAS dispatches information of the alarm, respond to the east side of the Processing Facility and set up containment at the above-grade stairwell.
- Contact CAS when arriving on scene and when containment is established.
- Ensure all operating personnel evacuated the stairwell.
- Ensure all personnel are sequestered at the evacuation gathering point.
- Prevent unauthorized access into the Processing Facility.

Guard 2 is located inside the ECP of the Processing Facility. The following responsibilities for Guard 2 are as follows:

- As soon CAS dispatches information of the alarm, ensure all personnel inside the Process Facility evacuated the area.
- Secure the ECP and MAA.
- Maneuver outside of the Processing Facility and set up a containment of the exterior roll-up door.
- Contact CAS when containment is established.
- Ensure all personnel are sequestered at the evacuation gathering point.
- Prevent unauthorized access into the Processing Facility.


INSIDE

Springfield Nuclear Institute Research Facility

Alarm Response Assessment (ARA) Demonstration Exercise Plan

Date: October 31, 2012	Senior Controller: Bud Siple
Responsible Organization: 6812	Exercise Time: 1300 – 1600 hours
Briefing: Conference Room Building 6582	

TEST OBJECTIVE

The objective of this demonstration exercise is to conduct an Alarm Response Assessment (ARA) [demonstration only], located at a factitious training facility (Springfield Nuclear Institute Research Facility), of a Guard/Response Force responding to an alarm at a simulated Material Storage Area (MSA) in a controlled environment.

SCENARIO DESCRIPTION

An alarm located inside the MSA will be initiated by controller inject to stimulate the on-site guard/response force to respond to designated response positions.
Note: Responders will have assigned **simulated weapons (inert replica) and equipment.**

TEST METHODOLOGY

The events of this ARA will be purposely conducted, directed and executed by the Planning Team in order to achieve certain demonstration exercise goals **(See Diagram Attachment pg. 5).**
This demonstration exercise will be performed by one team of three (3) on-site response force officers.

- Simulated Security Operations: This ARA demonstration exercise will be conducted during day-light hours simulating non-operational hours.
- Scenario Type: Containment.
- Response Force Staging: Inside simulated Guard House.
- Response Point: Designated Response Positions located near the vicinity of the MSA, then respond to exterior of the MSA. Controllers will be positioned to control the responders.

- CAS Communications: Simulated by role player. CAS controller will provide an inject card to CAS operator and monitor situation **(see CAS MESSAGE CARD #1& 2, Pgs. 6 & 7).**

Conditions

- The on-site guard/response force will respond in a simulated duty equipment configuration, under simulated security operations, and under normal environmental conditions.
- The on-site guard/response force will respond to an event of an alarm generated from the CAS via inject.
- The on-site guard/response force will communicate over the radio their action and adjust to the situation as directed.

EVALUATION CRITERIA

Individual performance evaluation will be identified through the use of evaluators/controllers, as appropriate.

This demonstration exercise is designed to demonstrate a response to establish containment of the MSA. Additionally, controllers/evaluators will simulate the following areas to be evaluated (a formal evaluation of role players will not be conducted):

- Assessment
- Response
- Communications

TEST CONTROLS

General Responsibilities

All participants (controllers, evaluators, players, observers) involved in the demonstration exercise are responsible for ensuring the demonstration is conducted in a safe and orderly manner. It is the ultimate responsibility of each participant to ensure the Safety Plan is understood and followed.

- Controllers will attend a Safety Briefing scheduled prior to the demonstration exercise. The Safety Briefing will be conducted by the Senior Controller (or designee).
- If an emergency situation arises, the demonstration exercise will be terminated and rescheduled as necessary.
- Safety personnel review plans and documentation and will be available to address any safety concerns.

CONTROLS	
Safety Controls	Identified in the Safety Plan and Risk Analysis.
Controllers	Listed under *Resource Requirements* of this plan

Prior to the start of the demonstration exercise, the Senior Controller will brief all controllers on their duties and responsibilities. The Senior Controller will instruct the CAS Controller to conduct a radio check with all controllers ensuring definitive radio communication between all personnel. Upon completion of the radio check the CAS controller will notify the Senior Controller with the results of the communication check. Once communication is established with all controllers the Senior Controller will officially open the demonstration exercise window to initiate the demonstration.

RESOURCES REQUIREMENTS

Control Personnel

Key Positions

- Senior Controller
- CAS Controller
- Other Controllers as determined by the Senior Controller.
- A controller exercise briefing will be scheduled prior to the start of the demonstration exercise.
- Safety Controller

Controller/Evaluator

- Demonstration exercise controllers/evaluators will be assigned position(s) to control their areas of responsibility.

Adversaries

- No adversaries will be used for the demonstration exercise. An inject card will be used to guide and prompt the direction and initiation of the exercise.

Logistical Requirements

- Role Player personnel
  - Three on-site guard/response force,
  - One CAS Operator
- Controllers
  - One senior controller
  - One CAS controller
  - Three response controllers
  - One observer Controller

Specific equipment

- Controller/player radios (8 - provided by TA-V site personnel)
- Identification vests (Safety Controller, Controller / Evaluator, and Senior Controller.)
- 3 red guns (inert replica weapons)

TEST COORDINATION

The Demonstration Exercise Planning Team will coordinate with the appropriate facility personnel.

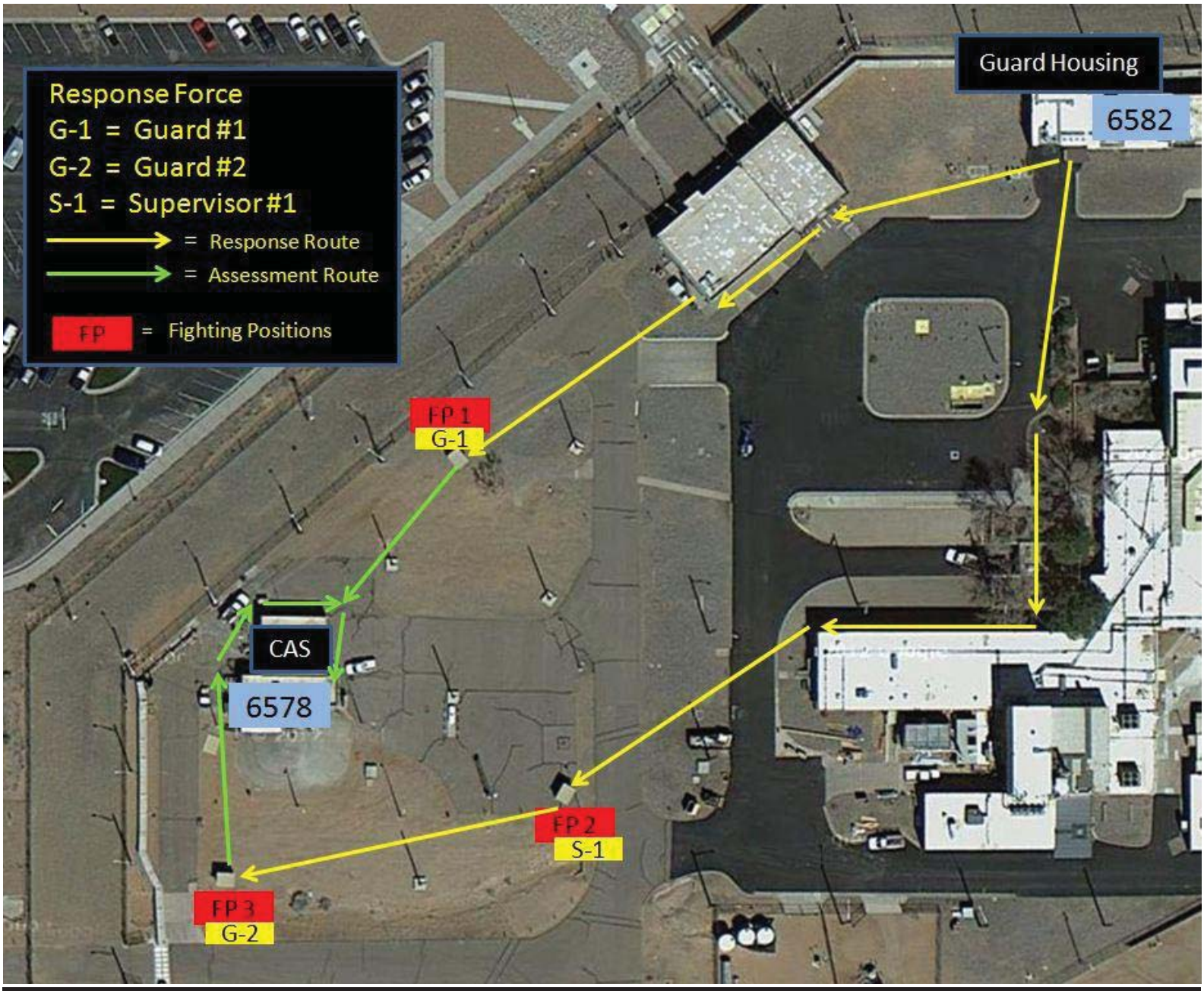
OPERATIONAL IMPACTS

The Demonstration Exercise Planning Team does not anticipate any negative impact on any operation in or around the training facility as a result of this demonstration. The Demonstration Planning Team will notify facility personnel of the date and time, and will provide guidelines so that facility personnel will not interfere with the demonstration exercise.

SCHEDULE OF EVENTS

Event	Date	Time	Location
Finalize Plans	10/15/2012	1600-1700	Don Funk Office
All Player Walkthrough	10/17/2012	0800-0930	Training Facility
Confirm Resources	10/18/2012	End of Day	
Finalize Scenario Injects	10/18/2012	1600-1700	Mike Pooler Office
Full Dress Rehearsal	10/24/2012	1630-1830	Training Facility
Demonstration Exercise	10/31/2012	1300-1600	Training Facility

Diagram Attachment



CAS MESSAGE CARD #1

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

THIS IS A PRACTICE ALARM RESPONSE ASSESSMENT FOR CONTAINMENT OF THE SPRINGFIELD NUCLEAR INSTITUE RESEARCH FACILITY MATERIAL STORAGE AREA.

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

CAS MESSAGE CARD #2

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

CAS TO ALL RESPONSE FORCE

WE HAVE RECIEVED AN ALARM ON THE MATERIAL STORAGE AREA DOUBLE DOORS

ACHKNOLEDGE PATROLS 1, 2 and 3

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

CAS MESSAGE CARD #3

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

TERMINATE

THE ALARM RESPONSE ASSESSMENT DEMONSTRATION EXERCISE FOR THE MATERIAL STORAGE AREA.

ALL RESPONDING GUARD/RESPONSE FORCE ROLE PLAYERS REMAIN IN PLACE WITH EQUIPMENT UNTIL RELEASED BY A CONTROLLER/EVALUATOR.

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

Springfield Nuclear Institute Research Facility

Enhanced Limited Scope Performance Test (ELSPT) Demonstration Exercise Plan

Date: October 31, 2012	Senior Controller: Bud Siple
Responsible Organization: 6812	Demonstration Time: 1300 – 1600 hours
Briefing: Conference Room Building 6582	

TEST OBJECTIVE

The objective of this Enhance Limited Scope Performance Test (ELSPT) demonstration exercise is to conduct a demonstration only, of an initiated controlled attack on a factitious training facility (Springfield Nuclear Institute Research Facility). The demonstration will be an on-site Guard/Response Force responding to a simulated threat scenario (simulated theft) in a controlled environment that simulates a response to a simulated adversary attack to a Material Storage Area (MSA).

SCENARIO DESCRIPTION

Two (2) adversary role players (A1 and A2) will be pre-positioned inside the perimeter vehicle gate at sector three (3) prior to initiation on the ELSPT demonstration exercise. Flash Bangs will be deployed by a special controller to simulate a breaching signature.

- A1 will place an explosive breaching charge (backpack will be used to simulate the explosive charge) on the **exterior** gate while A2 provide cover. After the charge is placed both adversaries will retreat to a safe distance for cover from explosion.

Charge detonates (a special controller will deploy a flash bang into a drum).

- Adversaries A1 and A2 moves on foot to interior vehicle gate.
- A1 will place an explosive breaching charge (backpack will be used to simulate the explosive charge) on the **interior** gate while A2 provides cover. After the charge is placed both adversaries will retreat back for cover from explosion.

Charge detonates (a special controller will deploy a flash bang into a drum).

- Once the adversary role players have penetrated the gates, A1 and A2 will proceed on foot through the vehicle gates towards the east (front) side of the simulated MSA.

- A1 will place an explosive breaching charge on the east exterior pedestrian door while A2 provides cover. After charge is placed, both adversaries will retreat back for cover from explosion.

Charge detonates (a special controller will deploy a flash bang into a drum).

- A1 and A2 will proceed through the east pedestrian door.
- A1 and A2 enter the Entry Control Point of the simulated MSA.
- A1 will place an explosive breaching charge on the simulated MSA door while A2 provides cover. After charge is placed both adversaries will retreat back for cover from explosion.

Charge detonates (a special controller will deploy a flash bang into a drum on the outside of the building by the roll-up door).

- A1 and A2 enter the simulated MSA.
- A1 sets charge on simulated Vault door while A2 provides cover.

Charge detonates (a special controller will deploy a flash bang into a drum on the outside of the building by the roll-up door).

- A1 enters simulated Vault and takes simulated material (place in backpack) while A2 provides cover.
- A1 and A2 leave the simulated MSA via front east pedestrian door heading back to the perimeter vehicle gate sector 3.

Note: On-site Guard/Responders and Adversary role players will have assigned **simulated weapons (inert replica) and equipment** for all activities.

TEST METHODOLOGY

The events of this ELSPT will be purposely conducted, directed and executed by the Planning Team in order to achieve certain demonstration exercise goals **(See Diagram Attachment pg. 6).**

One team of three (3) on-site guard/ response force will simulate being tested.

- Simulated Security Operations: This ELSPT demonstration exercise will be conducted during day-light hours simulating non-operational hours.
- Scenario Type: Containment.
- On-site Guard/Response Force Staging: Inside simulated Guard House.
- Response Point: Designated response positions located near the vicinity of the simulated MSA, then respond to exterior of the simulated MSA. Controllers will be positioned to control the responders.

- CAS Communications: Simulated by role player. CAS controller will provide an inject card to CAS operator and monitor situation **(see CAS MESSAGE CARD #1 - 4, Pgs. 7 - 10).**

Conditions

- The on-site guard/response force will respond in a simulated duty equipment configuration, under simulated security operations, and under normal environmental conditions.
- The on-site guard/response force will respond to a simulated threat scenario (simulated theft) in a controlled environment that simulates a response to a simulated adversary attack initiated via CAS inject.
- The on-site guard/response force officers will communicate over the radio their action and adjust to the situation as directed.

Artificialities

- Pre-staging role players
- CAS Injects
- Simulated weapons and equipment (Flash bangs used for explosive breaching simulation)
- Enforcing safety requirements
- Area Boundary (Training Facility/Buildings)

EVALUATION CRITERIA

The ELSPT demonstration exercise is designed to demonstrate response to establish containment of the simulated MSA. Additionally the following areas will be evaluated:

- Assessment
- Response
- Communications

TEST CONTROLS

All participants (controllers, evaluators, players, observers) involved in the demonstration exercise are responsible for ensuring the ELSPT demonstration exercise is conducted in a

safe and orderly manner. It is the ultimate responsibility of each participant to ensure the Safety Plan is understood and followed.

- Controllers will attend a Safety Briefing scheduled prior to the demonstration. The Safety Briefing will be conducted by the Senior Controller (or designee).
- If an emergency situation arises, the demonstration will be terminated and rescheduled as necessary.
- Safety personnel review plans and documentation and will be available to address any safety concerns.

CONTROLS	
Safety Controls	Identified in the Safety Plan and Risk Analysis.
Controllers	Listed under *Resource Requirements* of this plan

Prior to the start of the ELSPT demonstration exercise the Senior Controller will brief all controllers on their duties and responsibilities. The Senior Controller will instruct the CAS Controller to conduct a radio check with all controllers ensuring definitive radio communication between all personnel. Upon completion of the radio check the CAS controller will notify the Senior Controller with the results of the communication check. Once communication is established with all controllers the Senior Controller will officially open the demonstration exercise window to initiate the demonstration.

RESOURCES REQUIREMENTS

Control Personnel

Key Positions

- Senior Controller
- CAS Controller
- Other Controllers as determined by the Senior Controller.
- A controller briefing will be scheduled prior to the start of the demonstration exercise.
- Safety Controller

Controller/Evaluator

- Demonstration controllers/evaluators will be assigned position(s) to evaluate their areas of responsibility.

Adversaries

- A limited number of role players will be utilized as Adversaries to stimulate the reaction of the response force. Interaction between the adversaries and the on-site

guard response force will be by visual and radio communications only. There will be only simulated weapon engagement. Any engagement will be made by specific controller calls.

Logistical Requirements

Role Player personnel

- Three on-site guard/response force,
- One CAS Operator
- Two Adversaries

Controllers

- One senior controller
- One CAS controller
- Three response controllers
- One observer Controller
- One Adversary controller

Specific Equipment

- Controller/player radios (8 - provided by TA-V site personnel)
- Identification vests (Safety Controller, Controller / Evaluator, and Senior Controller.)
- 3 red guns (inert replica weapons)
- 4 adversary back packs
- Flash Bang Drums

TEST COORDINATION

The demonstration Planning Team will coordinate with the appropriate facility personnel.

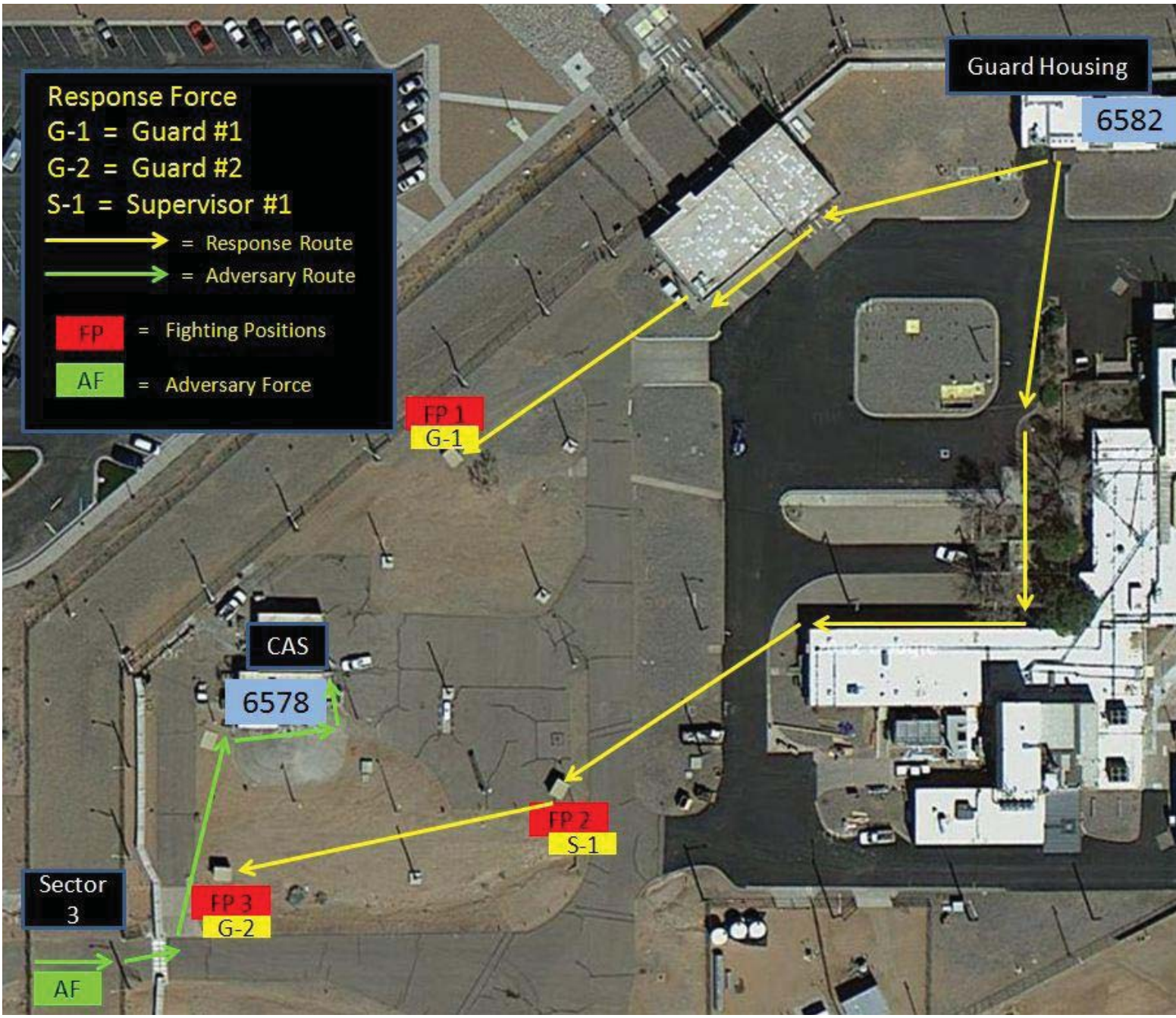
OPERATIONAL IMPACTS

The Demonstration Exercise Planning Team does not anticipate any negative impact on any operation in or around the training facility as a result of this demonstration. The Demonstration Exercise Planning Team for the demonstration will notify facility personnel of the date and time, and will provide guidelines so that facility personnel will not interfere with the demonstration. Overtime and staffing issues have been successfully addressed.

SCHEDULE OF EVENTS

Event	Date	Time	Location
Finalize Plans	10/15/2012	1600-1700	Don Funk Office
All Player Walkthrough	10/17/2012	0800-0930	Training Facility
Confirm Resources	10/18/2012	End of Day	
Finalize Scenario Injects	10/18/2012	1600-1700	Mike Pooler Office
Full Dress Rehearsal	10/24/2012	1630-1830	Training Facility
Demonstration Exercise	10/31/2012	1300-1600	Training Facility

Diagram Attachment



(CAS MESSAGE CARD #1)

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

CAS TO ALL RESPONSE FORCE

THIS IS AN ENHANCE LIMITED SCOPE PERFORMANCE TEST DEMONSTRATION

FOR CONTAINMENT

OF THE SPRINGFIELD NUCLEAR INSTITUE RESEARCH FACILITY MATERIAL STORAGE AREA.

THIS IS DEMONSTRATION EXERCISE TRANSMISSION

SAND2014-0917P

(CAS MESSAGE CARD #2)

CAS TO ALL RESPONSE FORCE

THERE HAS BEEN A LARGE EXPLOSION AT SECTOR 3 VEHICLE GATE

TWO (2) ARMED INDIVIDUALS ARE ATTEMPTING TO BREACH THROUGH SECTOR 3 VEHICLE GATE

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

(CAS MESSAGE CARD #3)

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

TWO (2) ARMED INDIVIDUALS HAVE JUST BREACHED THROUGH SECTOR 3 VEHICLE GATE AND ARE MOVING ON FOOT TOWARDS THE EAST SIDE OF THE MATERIAL STORAGE AREA

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

(CAS MESSAGE CARD #4)

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

THERE HAS BEEN A LARGE EXPLOSION AT THE PEDESTRIAN DOOR ON THE EAST SIDE OF THE MATERIAL STORAGE AREA.

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

(CAS MESSAGE CARD #5)

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

THERE HAS BEEN A LARGE EXPLOSION ON THE DOUBLE DOORS IN THE MATERIAL STORAGE AREA.

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

(CAS MESSAGE CARD #6)

THIS IS A DEMONSTRATION TRANSMISSION

TERMINATE TERMINATE

ENHANCE LIMITED SCOPE PERFORMANCE TEST DEMONSTRATION EXERCISE FOR THE MATERIAL STORAGE AREA.

ALL RESPONDING GUARD/RESPONSE FORCE ROLE PLAYERS REMAIN IN PLACE WITH EQUIPMENT UNTIL RELEASED BY A CONTROLLER/EVALUATOR.

THIS IS A DEMONSTRATION EXERCISE TRANSMISSION

IPT
PROCEDURES

SAND2014-0917P

Springfield Processing Plant	NUCLEAR MATERIAL PHYSICAL INVENTORY DISCREPANCY PROCEDURE		
	Version	Approved Date	Approved By

Purpose:
This plan documents the process used when nuclear material inventory discrepancies or defects are identified. This procedure addresses only Material Control and Accountability anomalies. It is possible that anomalies may occur in areas outside Material Control and Accountability's scope, in which case the response should follow the responsible program/organization's instructions.

Scope:
Categories I, II, III, and IV material inventory within storage locations at the Springfield Processing Plant

Definitions:
Defect : A serious anomaly that questions whether an item is missing or the quantity of NM in an item is incorrect. A defect causes failure of a statistical sample of the inventory population and requires either additional sampling of the inventory population or a 100% inventory as determined by the Safeguards Manager.

Examples of defects are:

- item cannot be located
- item is in an unauthorized material location
- item has been processed without proper accounting updates
- item that has obvious tampering with the container or the TID
- verification measurement fails to validate the stated inventory value.

Responsible Person(s):
Material Control and Accountability Project Lead
Material Balance Area Custodian
Nuclear Material Inventory Coordinator
Operations Supervisor

Reference(s):
None

Procedure:

1. Once a discrepancy is identified, the Material Control and Accountability inventory personnel shall immediately notify the Material Balance Area Custodian, the Nuclear Material Inventory Coordinator, and the Operations Supervisor.

2. The Operations Supervisor shall suspend MBA activities and instruct the Material Balance Area Custodian to conduct a preliminary investigation to determine if the item has been misplaced, or if there is the potential that special nuclear material has been tampered with, diverted, or stolen.
3. If the item in question is located, Material Control and Accountability Nuclear Material Inventory Coordinator notifies the designated Material Balance Area custodian by telephone when the inventory has been reconciled and the Material Balance Area has been released from its suspended state. A Material Balance Area Inventory Release Form shall be completed by the Material Inventory Coordinator and sent to the Material Balance Area custodian, along with a signed copy of the Item Location Report used during the inventory.
4. If evidence of tampering, diversion, or theft is found or suspected, report it as an anomaly of security concern and report to the Operations Manager and Guard Force Supervisor within two hours of the discovery.

Springfield Processing Plant	NUCLEAR MATERIAL PHYSICAL INVENTORY PLAN		
	Version	Approved Date	Approved By

Purpose:
This plan documents the inventory process for nuclear material. An inventory consists of a comparison between the Material Control and Accountability database records and identified items/locations. Inventories are performed using either a paper inventory listing or barcode reader. An inventory should compare an appropriate sample or 100 percent of the special nuclear material items within the selected Material Balance Area.

Scope:
Categories I, II, III, and IV material inventory within storage locations at the Springfield Processing Plant

Definitions:
Discrepancy: An anomaly that indicates a potential problem with items in inventory, but by themselves, are not indicative of a loss of material.

Examples of discrepancies include:

- item is in a different MBA, but supporting transfer records are available
- item is found within the MBA, but not in its assigned location
- additional item is found in the MBA that is not on the inventory listing
- incorrect information (i.e., account number, material type, or Lot-ID, on the container label or in custodian records). Discrepancies are investigated and, if there is indication of tampering with the information, then the discrepancy is upgraded to a defect
- damaged container or TID, or an incorrect TID number, or a TID applied incorrectly without evidence of tampering until subsequent measurements do not verify the inventory values; then upgraded to a defect
- mathematical error has occurred in determining the inventory value; the book value is adjusted to the proper value
- confirmation measurement of a nuclear material attribute is not present or the instrument response is not within the accepted range for that item

Responsible Person(s):
Material Control and Accountability Project Lead
Material Balance Area Custodian
Nuclear Material Handler

Reference(s):
None

Procedure:

1. Material inventory shall be conducted by the Material Balance Area Custodian and a Nuclear Material and witnessed by the Material Control and Accountability Project Lead.
2. The Material Balance Area Custodian shall download (or print) the inventory information for the Material Balance Area being inventoried from the Material Control and Accountability database.
3. At the entrance of the Material Balance Areas, document (or scan) the barcode number located on the side of the doorway.
4. In the designated Material Balance Area, inspect all identified items, verifying that the information (item control numbers, descriptions, identifiers, tamper indication device numbers (where applicable), and location (Material Balance Area, building, shelf position/location, and room number)) matches the accountability database records.
    a. Barcode reader: Scan the barcodes of all located containers
    b. Paper inventory: Check off located items on the printed listing
5. At the conclusion of either a paper-based inventory or an inventory performed using a barcode reader, conduct a final computerized match between items/locations found during the inventory and accountable items in the Material Balance Area as recorded in the Material Control and Accountability database.
6. Identify and document any discrepancies between the conducted inventory and the Material Control and Accountability database.
7. Report all results to the Nuclear Material Inventory Coordinator.

Springfield Processing Plant	MATERIAL TRANSFER (RESPONSE)		
	Version	Approved Date	Approved By

Purpose:
This procedure documents the process used to maintain appropriate control of nuclear material and personnel while exiting the Processing Facility (PF).

Scope:
Prevent unauthorized removal of nuclear material by verifying items being moved against the transfer documentation; detain material movement personnel, quarantine transfers with anomalies, and report anomalies to appropriate personnel (MC&A, Security, and Operations management).

Definitions:
None

Responsible Person(s):
Guard 1
Guard Supervisor

Reference(s):
None

Procedures: When nuclear material is being transferred out of the PF, the following procedures must be immediately implemented:

Guard 1 located inside the Entry Control Point ECP of the PF

- Continue to maintain control of access leading into the PF.
- When authorized personnel attempts to exit the ECP with authorized nuclear material, verify that all identification numbers of the nuclear material items and Tamper Indicating Devices (TID) numbers match the material transfer form.
- Ensure the material transfer form is signed by authorized personnel.
- Ensure personnel do not have additional nuclear material in possession not on the approved material transfer form.
- Conduct an SNM check on all personnel leaving the ECP.
- If there are no discrepancies on the material transfer form or signs of unauthorized removal of nuclear material, resume normal duties.
- If there are discrepancies found on the material transfer form or signs of unauthorized movement of nuclear material, notify CAS to send a supervisor.
- Secure the nuclear material.
- Detain personnel.
- Wait for the Guard Supervisor to address the concern.

Supervisor 1 is located inside the CAS.

- Respond to the PF and link up with Guard 1 to address the situation.
- Work with appropriate personnel to address the anomaly
- Ensure nuclear material is secured
- Question material transfer personnel and the MC&A Custodian to resolve anomaly.
- Ensure that the PF is secure until MC&A resolves the anomaly by conducting a physical inventory of all items in the processing area.

Springfield Processing Plant	MATERIAL TRANSFERS		
	Version	Approved Date	Approved By

Purpose:

The receipt, movement, and transfers of nuclear material are managed through a system of administrative and physical controls. Records of Material Control and Accounting transactions are generated, monitored, approved, maintained, and reported by the Material Control and Accounting staff.

Scope:
Categories I, II, III, and IV, material inventory within storage locations at the Springfield Processing Plant

Definitions:
None

Responsible Person(s):
Material Balance Area Custodian
Operations Supervisor
Nuclear Material Representative (Material Control and Accountability Department)

Reference(s):
None

External Transfer Procedure:

1. The Nuclear Material Representative shall initiate the transfer or shipment of accountable nuclear materials.
2. The Nuclear Material Representative shall complete the necessary documentation and obtain prior approval from the destination site's Nuclear Material Representative, and arrange for special packaging, containerization, and tamper indicating devices, as needed.
3. The Material Balance Area Custodian shall prepare and package the material for shipment and ensure that the inventory database is updated and the material listings are recorded for packaged and containerized nuclear material prior to application of a tamper-indicating device (TID).
4. The Material Balance Area Custodian shall verify the transfer paperwork and perform transfer checks of the packaged nuclear material.
5. The Material Balance Area Custodian will witness the loading of the material unto an authorized transportation vehicle and obtain signature from the driver.

External Material Receipt Procedure:

1. Receipt of nuclear material shall be coordinated in advanced through the Nuclear Material Representative.

2. Upon receipt of the material, the receiving Material Balance Area Custodian shall verify the material passport (documentation), check shipping container and TID, perform confirmation measurement (if greater than Category IV).
3. If all is in order, the Material Balance Area Custodian shall enter the material into the inventory database and move the material into a material storage vault.

Internal Transfer Procedure:

1. The Material Balance Area Custodian of the Interim Storage Building shall initiate the transfer of accountable nuclear materials with the Material Balance Area Custodian from the Processing Facility. The sending Custodian will complete a Nuclear Material Transfer form.
2. The Interim Storage Building Material Balance Area Custodian shall prepare and package the material for shipment and ensure that the inventory database is updated and the material listings are recorded for packaged and containerized nuclear material prior to application of a tamper-indicating device (TID).
3. Materials shall be moved by authorized personnel from the Material Control and Accountability group and supervised by a member from the Response Force.
4. Upon receipt of the materials, the receiving custodian shall verify the information on the Nuclear Material Transfer form, verify the TID numbers and integrity of the TIDs, and perform a confirmatory measurement of the material within their container, acknowledge that the transfer was complete, and updates the inventory database.

   (Note: This is the same process used to transfer material from the Processing Facility to the Interim Storage Building.)

Springfield Processing Plant	EMERGENCY EVACUATION		
	Version	Approved Date	Approved By

Purpose:
This plan documents the process used when Material Balance Areas or areas in which special nuclear material is being handled must be evacuated under emergency conditions.

Scope:
Categories I, II, III, and IV material inventory within storage locations at the Springfield Processing Plant

Definitions:
None

Responsible Person(s):
Material Control and Accountability Project Lead
Material Balance Area Custodian
Nuclear Material Inventory Coordinator
Operations Supervisor

Reference(s):
None

Procedure:

1. If an emergency situation requires evacuation of the Material Balance Area without the proper securing of nuclear materials, the Material Balance Area Custodian should, upon return, conduct a 100% inventory of the materials not secured at the time of the emergency event. If one of the material vaults were left unsecured, all materials must be inventoried. If the vault was secured, only the materials located in the processing area shall be inventoried.
2. The Material Balance Area and material should be inspected to determine whether or not there are signs of potential or actual tampering, diversion, or theft of special nuclear material, or forced entry into the Material Balance Area. If such activities are found or suspected, report it as an anomaly of security concern and report to the Operations Manager and Guard Force Supervisor within two hours of the discovery.

Springfield Processing Plant	EMERGENCY EVACUATION (RESPONSE)		
	Version	Approved Date	Approved By

Purpose:
This procedure documents the process used to maintain control of nuclear material and personnel exiting the Processing Facility (PF) during an emergency evacuation (fire alarm).

Scope:
Ensure that personnel exiting the PF cannot readily hide nuclear material either on their person or within the Protected Area (PA) during an emergency evacuation and cannot exit the PA during the evacuation.

Definitions:
None

Responsible Person(s):
Guard 1
Guard 2
Guard 3
CAS

Reference(s):
None

Procedures: If an emergency situation requires evacuation of the PF without the proper securing of nuclear materials at the PF, the following procedures must be immediately implemented:

CAS Operator

- Immediately notify the emergency preparedness personnel (fire, medical, hazmat) of the emergency situation, and to respond to the PF.
- Immediately notify all appropriate guards (Guards 1, 2, and 3) of the emergency situation, to respond, and set up containment at the two entries/exits at the PF.
- Remain vigilant and constantly maintain video assessment/surveillance inside and near the vicinity of the PF.
- Report current status updates and other anomalies of concern to the Guards, 1, 2, 3 throughout the evacuation.

Guard 1 located inside the PA

- As soon CAS dispatches information of the alarm, immediately respond to the east side of the PF and set up containment at the above-grade stairwell.

- Contact CAS when arriving on scene and when containment is established.
- Ensure all operating personnel, observers, and escorts evacuated the stairwell.
- Communicate to Guard 3, the numbers of personnel walking to the Evacuation Building.
- Prevent unauthorized access into the PF.

Guard 2 located inside the Entry Control Point ECP of the PF

- As soon CAS dispatches information of the alarm, ensure all personnel inside the PF evacuated the area.
- Secure the ECP and Material Balance Area.
- Maneuver outside of the PF and set up a containment of the exterior roll-up door.
- Contact CAS when containment is established.
- Ensure all operating personnel, observers, and escorts evacuated the facility.
- Communicate to Guard 3, the numbers of personnel walking to the Evacuation Building.
- Prevent unauthorized access into the PF.

Guard 3 located inside the PA

- As soon CAS dispatches information of the alarm, respond outside of the Evacuation Building and wait for operating personnel until they arrive to the building.
- Keep all personnel outside of the Evacuation Building.
- Ensure all personnel are sequestered at the Evacuation gathering point.
- Standby until the Processing Facility has been cleared and secured.
- Ensure all personnel are inspected for unauthorized removal of nuclear material prior to leaving the evacuation point. Ensure that personnel cannot readily hide nuclear material either on their person or in an authorized container.
- If unauthorized removal of nuclear material is detected, immediately notify CAS for back-up, secure the material, detain the individual, and wait for back-up.

Emergency Evacuation Route (Green) and Guard Containment Strategy (Blue)