U.S. Department of Homeland Security
Region IX
1111 Broadway, Suite 1200
Oakland, CA 94607-4052

FEMA

50-528/529/530

AUG 2 5 2011

Mr. Elmo E. Collins, Jr.
Regional Administrator
U.S. Nuclear Regulatory Commission Region IV
612 E. Lamar Blvd, Suite 400
Arlington, Texas 76011-8064

Dear Mr. Collins:

The Final After Action Report for the Radiological Emergency Preparedness Medical Drill held on July 14, 2010 for the Palo Verde Nuclear Generating Station (PVNGS) is enclosed. The purpose of this exercise was to assess the level of state and local preparedness in responding to a radiological emergency. The final exercise report and improvement plan was prepared in coordination with the PVNGS Offsite Response Organizations subsequent to our After Action Conference on April 28, 2011.

Based on the evaluation of the July 14, 2010 drill, the offsite radiological emergency response plans for the state of Arizona and the affected local jurisdictions site-specific to PVNGS can be implemented, and are adequate to provide reasonable assurance that appropriate measures can be taken off-site to protect the health and safety of the public in the event of a radiological emergency at PVNGS.

Therefore, the Title 44 of the Code of Federal Regulations Part 350 interim approval of the offsite radiological emergency response plans and preparedness for the state of Arizona, site-specific to PVNGS, will remain in effect.

I would also like to take this opportunity to acknowledge the many individuals that participated in this successful exercise. Their dedication to this program was clearly evident.

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If you have any questions or need additional information, please contact me at (510) 627-7100. Your staff may also contact Mr. Scott Hallett, Acting Regional Assistance Committee Chair, at (510) 627-7240.

Sincerely,

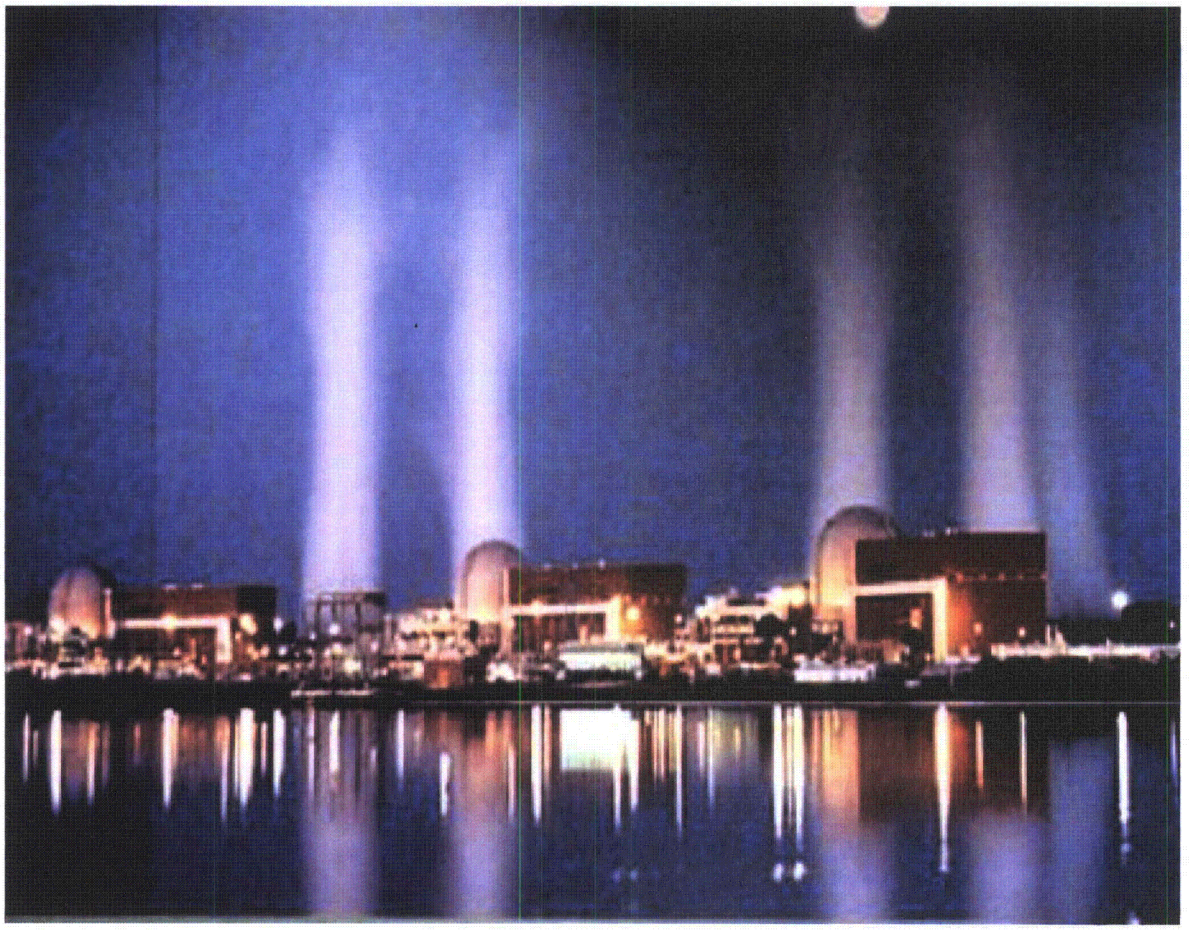
for Nancy Ward
Regional Administrator
FEMA Region IX

Enclosure

cc: NRC Headquarters Document Control Desk
US Nuclear Regulatory Commission
Washington, DC 20555-0001

Vanessa Quinn, Chief
Radiological Emergency Preparedness Branch
FEMA Headquarters

Record file



Palo Verde Nuclear Generating Station

After Action Report/ Improvement Plan

Drill Date - July 14, 2010

Radiological Emergency Preparedness (REP) Program

FEMA

Published June 15, 2011

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Palo Verde Nuclear Generating Station
After Action Report/Improvement Plan

Published June 15, 2011

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EXECUTIVE SUMMARY

The U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) National Preparedness Division (NPD) - Technological Hazards Branch (THB) in Region IX evaluated an off-site medical services drill for the Banner Estrella Medical Center (BEMC) on July 14, 2010 in the Plume Exposure Pathway Emergency Planning Zone (EPZ) around the Palo Verde Nuclear Generating Station (PVNGS). The purpose of the drill was to assess the level of state and local preparedness in response to a radiological emergency. This drill was held in accordance with FEMA's policies and guidance concerning the exercise of state and local Radiological Emergency Response Plans (RERP) and procedures.

The most recent biennial exercise at this site was conducted on March 4-5, 2009. The most recent medical services drill for the BEMC was on November 7, 2008. The qualifying emergency preparedness exercise was conducted on April 1, 1981.

FEMA wishes to acknowledge the efforts of the many individuals from the private organizations who participated in this medical drill.

Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants were evident during this drill.

This report contains the evaluation of the medical services drill. The local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Areas Requiring Corrective Actions (ARCA) identified as a result of this drill. No ARCAs remain uncorrected from previous drills.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
Palo Verde Nuclear Generating Station

Type of Exercise
Drill

Exercise Date
July 14, 2010

Program
Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type
Radiological Emergency

1.2 Exercise Planning Team Leadership

Steve Marshall, Arizona Division of Emergency Management
Michael Clark, Banner Estrella Medical Center
David Crozier, Arizona Public Service/PVNGS
Richard Echavarria, DHS FEMA

1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the Palo Verde Nuclear Generating Station drill:

Private Organizations:

Banner Estrella Medical Center

Air Evac Services, Inc.

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

FEMA NPD - THB in Region IX evaluated an off-site medical services drill for the BEMC on July 14, 2010 in the EPZ around the PVNGS. The purpose of the drill was to assess the level of state and local preparedness in response to a radiological emergency. This drill was held in accordance with FEMA's policies and guidance concerning the exercise of state and local RERPs and procedures.

2.2 Exercise Objectives, Capabilities and Activities

The exercise objective was to test the Off-site Response Organizations (OROs) RERPs and procedures to coordinate with the PVNGS to safely transport and medically treat an injured, radiologically contaminated person.

The exercise was designed to demonstrate ORO capability to respond in accordance with the following criteria:

Criterion 1.e.1. Equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations. (NUREG-0654/FEMA REP-1, H.7, 10; J.10. a, b, e; J.11; K.3.a)

Criterion 3.a.1. The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plans and/or procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG-0654/FEMA REP-1, K.3.a, b)

Criterion 6.d.1 The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG 0654/FEMA REP-1, F.2; H.10; K.5.a, b; L.1, 4)

The ORO activities in this exercise included:

• Air evacuation ambulance responded to PVNGS to pick up and transport the contaminated injured person to BEMC.

• BEMC secured a transportation corridor from the helipad to its trauma room.
• BEMC setup a Radiation Control Area (RCA) to contain radioactive material during the process of decontaminating the patient and to control the radioactive exposure to emergency workers.
• When exiting the RCA, emergency workers demonstrated survey for radioactive contamination, removal of personal protective equipment and the record of radioactive dose received.
• BEMC demonstrated cleanup of the RCA.

2.3 Scenario Summary

A Radiation Protection Technician, transporting a radiological sample, tripped and fell down a stairwell, injuring both legs. The strike caused bruising and a laceration to the right lower leg (anterior lower leg), and bruising and contusions to the left upper leg (lateral thigh). Both legs were contaminated. There were possible fractures to both the right tibula, fibular and the left femur. The worker was initially treated and stabilized by the Palo Verde Fire Department at the accident scene. The worker was then transported to the on-site medical facility where further medical assistance was rendered; additionally an initial decontamination effort took place. The right leg area was mostly decontaminated on the site. A determination was made that the patient would be transported to BEMC for further treatment and decontamination. On-site Medical staff in the Fire Department notified Security that Air Evacuation, Air Ambulance was needed for transporting an injured patient.

Security called Air Evacuation, Air Ambulance and requested transportation. PVNGS Fire Department prepared the landing zone. The patient, as well as the Palo Verde Fire Department personnel, were pre-staged at the Fire Department. Prior to the patient transfer to the Air Evacuation, Air Ambulance, Radiation Protection personnel had determined that no protective clothing or dosimetry were required for the flight crew during the transfer flight to BEMC. This information was passed to the flight crew. At this time, hospital personnel performed the proper dress-out process for the hospital RCA. On arrival at BEMC, the patient was met by medical and security personnel and transported to the Emergency Department (ED) Trauma Room. Hospital Security protected pathways between the landing zone and the Trauma Room. In addition, the pathway area and helicopter were controlled until surveys and decontamination (if necessary) were completed. The Trauma team had prepared the appropriate treatment bay and transferred the patient from the ambulance gurney into the hospital's RCA. The ED Radiation Safety Officer ensured that the trauma team followed safe procedures. Appropriate treatment began with the primary focus directed toward the medical well-being of the patient with the

secondary focus on contamination control. Multiple efforts were made to decontaminate the patient, ultimately resulting in a complete decontamination of the patient. After the attending Physician determined, in conjunction with the Nuclear Medicine personnel, that the patient was medically stable and radiologically clean, the patient was released from the Trauma room and moved to a hospital ward. At this time hospital personnel performed clean-up and decontamination of the hospital RCA. After the exercise was terminated and the participants answered all Evaluator questions, exercise participants adjourned to a predetermined meeting room to conduct a post exercise critique.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Drill Evaluation and Results

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the July 14, 2010 medical services drill to test a portion of the off-site emergency response capabilities in the EPZ surrounding the PVNGS.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in exercise evaluation areas contained in the FEMA Interim REP Program Manual, August 2002. Detailed information on the exercise evaluation area criteria and the EXPLAN used in this drill are found in Appendix D of this report.

3.2 Summary Results of Drill Evaluation

The matrix presented in Table 3.1, on the following page presents the status of all exercise evaluation area criteria which were scheduled for demonstration during this drill by all participating jurisdictions and functional entities. Exercise evaluation area criteria are listed by number and the demonstration status of those evaluation area criteria is indicated by the use of the following letters:

M – Met (No deficiencies or ARCAs assessed and no unresolved ARCAs from prior exercises)

D – Deficiency assessed

A – ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)

P - A planning issue was identified

N – Not Demonstrated (Reason explained in Appendix D, Exercise Plan)

Table 3.1 - Summary of Drill Evaluation

DATE: 2010-07-14 SITE: Palo Verde Nuclear Generating Station, AZ M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		BEMC	Air Evac
Emergency Operations Management			
Mobilization	1a1		
Facilities	1b1		
Direction and Control	1c1		
Communications Equipment	1d1		
Equip & Supplies to support operations	1e1	P	
Protective Action Decision Making			
Emergency Worker Exposure Control	2a1		
Radiological Assessment and PARs	2b1		
Decisions for the Plume Phase -PADs	2b2		
PADs for protection of special populations	2c1		
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1		
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1		
Protective Action Implementation			
Implementation of emergency worker exposure control	3a1	P	
Implementation of KI decision	3b1		
Implementation of protective actions for special populations - EOCs	3c1		
Implementation of protective actions for Schools	3c2		
Implementation of traffic and access control	3d1		
Impediments to evacuation are identified and resolved	3d2		
Implementation of ingestion pathway decisions - availability/use of info	3e1		
Materials for Ingestion Pathway PADs are available	3e2		
Implementation of relocation, re-entry, and return decisions.	3f1		
Field Measurement and Analysis			
Adequate equipment for plume phase field measurements	4a1		
Field Teams obtain sufficient information	4a2		
Field Teams manage sample collection appropriately	4a3		
Post plume phase field measurements and sampling	4b1		
Laboratory operations	4c1		
Emergency Notification and Public Info			
Activation of the prompt alert and notification system	5a1		
Activation of the prompt alert and notification system - Fast Breaker	5a2		
Activation of the prompt alert and notification system - Exception areas	5a3		
Emergency information and instructions for the public and the media	5b1		
Support Operations/Facilities			
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1		
Mon / decon of emergency worker equipment	6b1		
Temporary care of evacuees	6c1		
Transportation and treatment of contaminated injured individuals	6d1	P	M

3.3 Criteria Evaluation Summaries

3.3.1 Private Organizations

3.3.1.1 Banner Estrella Medical Center

a. MET: None
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: 1.e.1, 3.a.1.

ISSUE NO.: 45-10-1e1-P-01

CRITERION: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H7, 10; J.10.a, b, e; J.11; K.3.a)

CONDITION: The response checks performed on the survey instruments provided by PVNGS consist of exposing the instruments to a known radioactive source and observing if the instrument responds. There is no range identified for the response to ensure that the instrument is functioning properly.

POSSIBLE CAUSE: Omission of a requirement for and a procedure to perform operational checks on radiation detection instrumentation using a known source and a defined acceptable instrument response range.

REFERENCE: F.2; H.10; K.5.a, b; L.1; L.4 and the BEMC Procedure, PALO VERDE NUCLEAR GENERATING STATION EMERGENCY RESPONSE PROCEDURE, July 9, 2010.

EFFECT: With no operational checks performed on radiation detection instruments prior to use, there is no assurance that the instruments are operating correctly and producing valid measurements.

RECOMMENDATION: Develop a requirement for and a procedure to perform an operational check on all survey instruments, (including PVNGS instruments at

BEMC) used to measure/identify radiological contamination. This operational check should require a survey instrument's response to a known source to fall within an established interval.

ISSUE NO.: 45-10-3a1-P-02

CRITERION: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG-0654, K.3.a, b)

CONDITION: The procedure does not specify the frequency of reading the electronic dosimeters worn by hospital personnel.

POSSIBLE CAUSE: Failure of the plan to address the frequency of reading electronic dosimeters.

REFERENCE: NUREG-0654, K.3.b

EFFECT: Should the set point on the electronic dosimeters fail to alarm, personnel may exceed established radiation exposure guidelines.

RECOMMENDATION: Revise the procedure to include the frequency of reading electronic dosimeters.

e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: 6.d.1.

ISSUE NO.: 45-08-6d1-P-1

ISSUE: The patient was placed on a decontamination table on top of a pad with cloth covering. She was then monitored and decontaminated on top of the cloth covering.

Contamination was found and decontamination was performed on the face, left arm and left leg. During the decontamination process, the pad, the cloth covering, and the patient's clothing became wet with the wash water used for rinsing the contaminated areas. The water spread under the patient and a large area of the cloth covering under the patient was wet. A large area of the patient's clothing was also wet. Procedures do not include the removal of padding and covering before decontamination.

REASON UNRESOLVED: Although proper contamination control was demonstrated throughout the medical drill, the plans have not been modified to address methods that minimize the spread of contamination.

The following process describes the actions taken by the BEMC staff to minimize the spread of contamination: The pad on the gurney was replaced with a trough designed to channel fluids into a yellow plastic bottle. The patient's clothing and cloth coverings were carefully removed and placed into a waste bin prior to start of the decontamination process. The wash water was diverted from the trough through a hose connected to a yellow plastic bottle as designed.

3.3.1.2 Air Evac Ambulance

a. MET: 6.d.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

SECTION 4: CONCLUSION

FEMA evaluated an off-site medical services drill for the BEMC on July 14, 2010 in the Plume Exposure Pathway EPZ around the PVNGS. The purpose of the drill was to assess the level of state and local preparedness in response to a radiological emergency. This drill was held in accordance with FEMA's policies and guidance concerning the exercise of state and local RERPs and procedures.

The exercise participants demonstrated knowledge of their emergency response plans and procedures and adequately demonstrated the ability to follow those plans to protect the health and safety of the public. There were no Deficiencies and no ARCAs identified during the course of the exercise. One prior planning issue remains open and two additional planning issues were identified during this exercise.

APPENDIX A: IMPROVEMENT PLAN

Issue Number: 45-08-6d1-P-1	**Criterion: 6d1**
ISSUE: The patient was placed on a decontamination table on top of a pad with cloth covering. She was then monitored and decontaminated on top of the cloth covering. Contamination was found and decontamination was performed on the face, left arm and left leg. During the decontamination process, the pad, the cloth covering, and the patient's clothing became wet with the wash water used for rinsing the contaminated areas. The water spread under the patient and a large area of the cloth covering under the patient was wet. A large area of the patient's clothing was also wet. Procedures do not include the removal of padding and covering before decontamination.	
RECOMMENDATION: Revise the SOP to ensure decontamination methods do not result in the spread of further contamination. Training and procedures should include instructions to remove the pad and cloth covering used on the decontamination table, as well as patient's clothing prior to decontamination. A simple backboard could possibly be used during decontamination, or the patient, if possible, could assist in the process.	
CORRECTIVE ACTION DESCRIPTION: A review of the applicable procedures found that contamination issues were adequately addressed and that this was a training issue rather that a procedure issue. Additional training was conducted to better familiarize responders with the procedures.	
CAPABILITY: Weapons of Mass Destruction (WMD) and Hazardous Materials (HazMat) Response and Decontamination	PRIMARY RESPONSIBLE AGENCY: Banner Estrella Medical Center
CAPABILITY ELEMENT: Training	START DATE: 2010-07-15
AGENCY POC: Michael Clark	ESTIMATED COMPLETION DATE: 2010-08-15

Issue Number: 45-10-1e1-P-01	**Criterion: 1e1**
ISSUE: The response checks performed on the survey instruments provided by PVNGS consist of exposing the instruments to a known radioactive source and observing if the instrument responds. There is no range identified for the response to ensure that the instrument is functioning properly.	
RECOMMENDATION: Develop a requirement for and a procedure to perform an operational check on all survey instruments, (including PVNGS instruments at BEMC) used to measure/identify radiological contamination. This operational check should require a survey instrument's response to a known source to fall within an established interval.	
CORRECTIVE ACTION DESCRIPTION: A substitute commercial radiological check source was provided and the acceptable response range posted on the applicable instruments.	
CAPABILITY: Environmental Health	PRIMARY RESPONSIBLE AGENCY: Palo Verde Nuclear Generating Station
CAPABILITY ELEMENT: Systems and Equipment	START DATE: 2010-07-15
AGENCY POC: David Crozier	ESTIMATED COMPLETION DATE: 2010-08-30

Issue Number: 45-10-3a1-P-02	**Criterion: 3a1**
ISSUE: The procedure does not specify the frequency of reading the electronic dosimeters worn by hospital personnel.	
RECOMMENDATION: Revise the procedure to include the frequency of reading electronic dosimeters.	
CORRECTIVE ACTION DESCRIPTION: Procedures were revised to include multiple references to the frequency of reading electronic dosimeters.	
CAPABILITY: Environmental Health	PRIMARY RESPONSIBLE AGENCY: Banner Estrella Medical Center
CAPABILITY ELEMENT: Planning	START DATE: 2010-07-15
AGENCY POC: Michael Clark	ESTIMATED COMPLETION DATE: 2010-07-29

APPENDIX B: DRILL EVALUATORS AND TEAM LEADERS

DATE: 2010-07-14, SITE: Palo Verde Nuclear Generating Station, AZ

LOCATION	EVALUATOR	AGENCY
Banner Estrella Medical Center	*Daryl Thome	ICF
Air Evac Ambulance	Richard Grundstrom	ICF
* Team Leader		

APPENDIX C: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
ARCA	Area Requiring Corrective Actions
BEMC	Banner Estrella Medical Center
ED	Emergency Department
EPZ	Emergency Planning Zone
FEMA	Federal Emergency Management Agency
KI	Potassium Iodide
NPD	National Preparedness Division
ORO	Offsite Response Organization
PVNGS	Palo Verde Nuclear Generating Station
RCA	Radiological Controlled Area
RERP	Radiological Emergency Response Plans
THB	Technological Hazards Branch

APPENDIX D: EXERCISE PLAN

The following Exercise Plan (EXPLAN) including the extent of play, timeline and scenario was presented to FEMA in preparation for the off-site Palo Verde Nuclear Generating Station Medical Services Drill held on July 14, 2010 at the BEMC. The attached EXPLAN was redacted to include only those pages that are relevant for this report. Personal information and information that only pertained to on-site PVNGS evaluation guidance were removed from the attachment.

EVALUATED CONTAMINATED MEDICAL EXERCISE

July 14, 2010

PALO VERDE NUCLEAR GENERATING STATION

BANNER ESTRELLA MEDICAL CENTER

Prepared By: David Crozier
Emergency Preparedness Consultant
09-E-MED-10021

(Not Confidential Post Exercise Date)

TABLE OF CONTENTS

1.0 Introduction

Palo Verde contaminated medical exercises are conducted semi-annually to meet NUREG 0654 commitments. Medical support facilities are identified in the PVNGS Emergency Plan.

1.1 Extent of Play

GENERAL:

All activities described in this drill/exercise scenario will be demonstrated unless agreed upon by the Lead Controller and the Lead Evaluator or described in this Extent of Play. Re-demonstration of activities in which a player has failed to properly execute a portion of a responsibility will be allowed when this action does not impede or alter the flow of the drill/exercise as determined by the Lead Controller. The 'injured patient' will be staged in a mock Radiological Controlled Area (RCA) in the Palo Verde Training Department Building F. The patient will be treated at the injury site by the onsite Fire Department EMT's & RP Techs. The patient will then be transported to the site medical facility for additional treatment and decontamination. The patient will then be transported to the site helipad via a ground ambulance. Air Evac will arrive and the patient will be transferred to the helicopter. Prior to placing the patient with Air Evac helicopter, the patients radiological status is conducted by PV RP personnel and determination made whether the issuance of dosimetry and protective clothing to Air Evac will be necessary (based on if exposure rates are to be >2mR/hr). The patient contaminated areas are cocooned before transport to the helipad. However the dosimetry is available for issue and Radiation Protection is available to show the Evaluator the location of dosimetry for inspection. For the safety and comfort of the participants the post exercise dress-out process will be limited to demonstration by only one player at the ER, with FEMA Evaluators concurrence. The area clean-up/decontamination effort will be verbally described prior/post exercise critique. During transport the patient's condition will remain constant.

1.2 Description of Drill/Exercise Manual Contents

This manual has been prepared to assist drill/exercise Controllers and Evaluators in drill/exercise conduct, evaluation and is organized as follows:

1.0 – Introduction
Provides general information concerning the manual and its contents.

2.0 – Evaluation Criteria
Identifies each area to be evaluated.

3.0 – Guidelines
Establishes guidelines for Player and Controller actions.

4.0 – Participants
Contains lists of Participants and Controllers.

5.0 – Scenario
Provides a description of drill/exercise events. The information is provided in the following sections.

6.0 – Messages
Contains all messages used to support the scenario.

7.0 - Radiological and Medical Data
Contains radiological and medical data to be used during the drill/exercise/exercise.

Continued

8.0 – Appendix
Contains general instructions for Controllers, Evaluators, Participants, and contamination dispersion chart.

9.0 – Supplemental Materials
Contains controller logs and drill/exercise administration information.

2.2 FEMA Evaluation Criteria

Evaluator: _____	**Team Leader:** _____	**Date:** _____
Site: _____	**Assignment:** _____	**Previous ARCA?** _____

EVALUATION AREA 6 **Support Operation/Facilities**

Sub-element 6.d - Transportation and Treatment of Contaminated Injured Individuals

Criterion 6.d.l: **The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2; H.10; K.5.a, b; L.1, 4)**

- Was this criterion adequately demonstrated?

  Yes _____ **No** _____ **N/A** _____

If **No**, identify all exercise issues by addressing the elements listed on the attached **ISSUES FOR CRITERION** form. **Remember, if there is no effect or potential effect, there is no exercise issue.**

- **Reminder:** Provide a complete evaluator packet to the Team Leader with a written narrative summary, timeline of observations, and all forms and information used during the exercise. Cite outstanding performance where observed.

THE FOLLOWING **INTENT** AND **EXTENT-OF-PLAY** INFORMATION IS PROVIDED FOR GENERAL REFERENCE ONLY. CONSULT THE SITE-SPECIFIC EXTENT-OF-PLAY AGREEMENT AND YOUR TEAM LEADER FOR HOW IT APPLIES TO YOUR ASSIGNED LOCATION.

Intent

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (OROs) should have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

Extent-of-play

Monitoring, decontamination, and contamination control efforts will not delay urgent medical care for the victim.

Offsite Response Organizations (OROs) should demonstrate the capability to transport contaminated injured individuals to medical facilities. An ambulance should be used for the response to the victim. However, to avoid taking an ambulance out of service for an extended time, any vehicle (e.g., car, truck, or van) may be utilized to transport the victim to the medical facility. Normal communications between the ambulance/dispatcher and the receiving medical facility should be demonstrated. If a substitute vehicle is used for transport

Evaluator: _____	**Team Leader:** _____	**Date:** _____
Site: _____	**Assignment:** _____	**Previous ARCA?** _____

to the medical facility, this communication must occur before releasing the ambulance from the drill. This communication would include reporting radiation monitoring results, if available. Additionally the ambulance and crew should demonstrate by interview, knowledge of where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.

Monitoring of the victim may be performed before transport, done enroute, or deferred to the medical facility. Before using a monitoring instrument(s), should demonstrate the monitor(s) the process of checking the instrument(s) for proper operation. All monitoring activities should be completed as they would be in an actual emergency. Appropriate contamination control measures before and during and at the receiving should be demonstrated transport medical facility.

The medical facility should demonstrate the capability to activate and setup a radiological emergency area for treatment. Equipment and supplies should be available for the treatment of contaminated injured individuals.

The medical facility should demonstrate the capability to make decisions on the need for decontamination to follow appropriate and to of the individual, decontamination procedures, maintain record so fall survey measurements and samples taken. All procedures for the collection and analysis of samples and the decontamination of the individual should be demonstrated to the evaluator or described to the evaluator.

All activities associated with this criterion must be based on the ORO's plans and procedures And completed as they would be in an actual emergency, unless noted above or other wise indicated in the extent-of-play agreement.

NARRATIVE SUMMARY FOR CRITERION:

(EVALUATOR MUST WRITE A NARRATIVE AND INSERT IT HE.RE.)

Evaluator:_____	**Team Leader:**_____	**Date:**_____
Site:_____	**Assignment:**_____	**Previous ARCA?**_____

ISSUES FOR CRITERION:

(Address the following elements :)

Condition (describe the inadequacy):

Possible Cause (what is responsible)**:**

Reference (cite the specific NUREG-0654 element, regulation, etc.):

Effect (what resulted, or could have resulted, from this issue):

Recommendation (how to correct it):

3.0 GUIDLINES

The following guidelines have been developed to provide basic guidance for the Controllers of contaminated medical drills conducted by the Emergency Planning Department at the Palo Verde Nuclear Generating Station.

3.1 Controller Guidelines

3.1.1 The drill/exercise will commence at the time shown in the master timeline in this manual
3.1.2 Unless other wised denoted participation in this drill/exercise will be limited to the departments and individuals listed in this manual.
3.1.3 All Controllers should be at their assign locations at least 15 minutes prior to drill/exercise start.
3.1.4 The drill/exercise patient will be pre-staged as determined by the Lead Controller.
3.1.5 Participation by all participants should be carried out to the fullest extent possible by this guideline and as determined by the Lead Controller.
3.1.6 Controllers should ensure all communication begin and end with "THIS IS A DRILL/EXERCISE"
3.1.7 Communications between Controllers will be as determined by the Lead Controller.
3.1.8 A critique will always follow the termination of the drill/exercise. Location will be determined by the Lead Controller.
3.1.9 Controllers should complete all evaluation documentation as ledge ably as possible. Any questions should be directed to the Lead Controller.

3.2 Participant Guidelines

3 .2.1 These guidelines will be issued to participants prior to the drill/exercise.
3.2.2 Emergency responders will be notified of the simulated event through normal communications channels.
3.3.3 Offsite communications are to be limited to Air Evac Air Ambulance and Banner Estrella Medical Center. No other off-site agency notifications shall be made as the result of this drill/exercise. **DO NOT USE 911.** Call BEMC directly per the drill/exercise messages.
3.3.4 All communications shall begin and end with the notice: **"THIS IS A DRILL."**
3.3.5 Participants should only communicate with Controllers to obtain or clarify data
3.3.6 Participants should only communicate with Evaluators to provide information requested.
3.3.7 Participants are encouraged to be demonstrative and vocal in the conduct of their emergency responsibilities/activities.
3.3.8 Simulation should only be used to the extent necessary and agreed upon. (Ask a Controller)
3.3.9 If you have questions regarding simulation, ask a Controller.
3.3.10 Following the drill/exercise, a critique will be held. All Participants, Controllers, and Evaluators are expected to attend. It is expected that you participants when requested and are vocal about any concerns you may have.
3.3.11 If an actual emergency occurs during the exercise, Hospital Administrators and Air Evac Air Ambulance will determine the disposition of the exercise and take appropriate action.

5.0 SCENARIO

The scenario is a set of parameters including dates, times, individuals, and circumstances designed to provide a simulated event. The event is typically created to present an opportunity for selected individuals, programs, and/or facilities to demonstrate a set of intergrated skills for evaluation.

5.1 SCENARIO DESCRIPTION

As a Radiation Protection Tech transporting a radiological sample in the 100' Radwaste Building. The RP Tech trips and falls down a stairwell and injures both legs. The strike causes bruising and a laceration to the right lower leg (anterior lower leg) and bruising and contusions to the left upper leg (lateral thigh). Both legs are contaminated. There are possible fractures to both the right tib/fib and the left femur. The worker is initially treated and stabilized by the Palo Verde Fire Department at the accident scene. The worker is then transported to the on-site Medical facility where further medical assistance was rendered; additionally an initial decontamination effort took place. The right leg area was mostly decontaminated on site. A determination is made that the patient would be transported to Banner Estrella hospital for further treatment and decontamination. Onsite Medical / Fire Department will notify Security that Air Evac Air Ambulance is needed for transporting an injured patient.

Security makes call to Air Evac Air Ambulance and request transportation. PVNGS Fire Department prepares the landing zone (LZ). The patient, as well as the PV Fire Department personnel will be pre-staged at the Fire Department. Prior to the patient transfer to the Air Evac Air Ambulance, Radiation Protection personnel will have determined that no PCs or dosimetry will be required for the flight crew during the transfer flight to Banner Estrella hospital. This information will be passed to the flight crew. (At this time hospital personnel will perform the proper dress-out process for the hospital RCA). On arrival at Banner Estrella Hospital, the patient will be met by medical and security personnel and transported to the Trauma Room. Hospital Security will protect pathways between the LZ and the Trauma Room. In addition to the pathway area and helicopter will also be controlled until surveys and decontamination (if necessary) are completed. The Trauma team will have prepared the appropriate treatment bay and will then transfer the patient from the ambulance gurney into the hospital's RCA. Appropriate treatment will begin with the primary focus directed towards the medical well-being of the patient and the secondary focus on contamination control. Multiple efforts will be made to decontaminate the patient, ultimately resulting in a complete decontamination of the patient. After the attending Physician determines in conjunction with the Nuclear Medicine personnel that the patient is medically stable and radiologically clean the patient will be released from the Trauma room and moved to a hospital ward. (At this time hospital personnel will perform clean-up and decontamination of the hospital RCA). After the exercise is terminated and the participants have answered all Evaluator questions, exercise participants will adjourn to a pre-determined meeting room to conduct a post exercise critique.

5.2 Initiating condition

As a Radiation Protection Tech is transporting a radiological sample container in the 100' Radwaste Building, the RP Tech trips down a stairwell falling approximately 12 feet. The RP Tech sustains injuries to both legs. The strike causes bruising; lacerations and contaminates both legs. There is possible broken right leg.

ne		Event Description	Comments	Elapse Time
0600	Pre-Event	Patient is prepared near the RP dress-out island (Training are in Building F). All paperwork is verified.	(Dispersion chart)	MINS
0705	Pre- Event	Patient is delivered to the predetermined staging area at the RCA training area.	RCA Training area is located at Building F, 2nd floor.	0
0710	Initiating Event	Fire Department is contacted via 4444. They respond and begin initial treatment.	Security x6473 Unit 1 x4444	10
0730	Event	Fire Department transports the patient to the PVNGS medical facility.	Medical facility is contacted	25
0735	Event	Request for air support from Air Evac Air Ambulance is made by the site medical department or the site fire department.	LZ is at the new Helipad located at the south east corner of the site.	35
0805	Event	Air Evac Air Ambulance arrives at PVNGS – Fire Dept. briefs air crew on patient condition and radiological status.	Ensure body map goes with patient, and that the Evaluator sees paper suits and dosimetry.	60
0820	Event	Patient leaves PVNGS for Banner Estrella Medical Center.	Air Evac contacts the hospital.	75
0825	Event	Participants will perform dress-out for Hospital RCA.	Patient Arrives at BEMC	80
0835	Event	Patient arrives at Banner Estrella Medical Center and is transported to the Trauma Room.	Helicopter and pathways are checked for contamination.	90
35- 0915	Event	Patient is medically stabilized and radiologically decontaminated.	ER bay is an established RA	90-120
0915	Event	Participants will perform RCA clean up process.		120
0935	Event	Exercise terminated.		140

:5		Palo Verde Medical / Fire Department contacts Security CAS and requests Air Evac Air Ambulance. No mention of radioactive materials.	**MSG#**	M-1	**COMMENTS:** Ensure Security and Unit one control room are notified
			LOCATION	PVNGS	
	EXP ACT	Palo Verde Security CAS will call Air Evac Air Ambulance for support.	**CONTROLLER**	On-site Controller	
:0		Security makes initial notification to Air Evac Air Ambulance by phone. And advises of an accident. No mention of radioactive materials.	**MSG#**	M-1A	**COMMENTS:** Ensure Security and Unit one control room are notified
			LOCATION	PVNGS	
	EXP ACT	Air Evac Air Ambulance dispatch asks pertinent questions.	**CONTROLLER**	On-site Controller	
:0	32	Air Evac Air Ambulance receives dispatch call to PVNGS.	**MSG#**	N/A	**COMMENTS:** Air Evac Air Ambulance should follow all appropriate department procedures and processes
			LOCATION	Air Evac Air Ambulance	
	EXP ACT	Normal flight response.	**CONTROLLER**	Info	
:5		Air Evac Air Ambulance arrives on scene.	**MSG#**	N/A	**COMMENTS:**
			LOCATION	PVNGS	
	EXP ACT	Air crew makes approach from the west over Wintersburg Rd.	**CONTROLLER**	Info	

5		PVFD communicates patient conditions and radiological/medical concerns to the air crew.	**MSG#**	M-2	**COMMENTS:**
			LOCATION	PVNGS	Ensure Evaluator sees the E-Kit in the fire truck, to include protective coveralls and dosimerty.
	EXP ACT	Body map is transferred with the patient.	**CONTROLLER**	On-site Controller	

5		Air Evac Air Ambulance departs PV and notifies Banner Estrella of incoming contaminated patient	**MSG#**	N/A	**COMMENTS:**
			LOCATION	Air Evac Air Ambulance	Call Hospital Controller and inform him when Native American Air Ambulance departs site
	EXP ACT	Should expect to hear approximate flight and arrival time.	**CONTROLLER**	Info	

0		BEMC makes appropriate overhead announcements to activate the Trauma Room radiological team.	**MSG#**	N/A	**COMMENTS:**
			LOCATION	BEMC	
	EXP ACT	Participants should begin arriving in the Trauma Room and set-up should begin. Security should begin to block off pathways from the helipad to the Trauma Room and limit access to the Trauma Room.	**CONTROLLER**	Info	

0		Air Evac Air Ambulance makes secondary notification to BEMC advising that they are apx. 10 minutes out.	**MSG#**	N/A	**COMMENTS:**
			LOCATION	BEMC	
	EXP ACT	Helicopter arrival information is relayed to the Trauma team and a tail board meeting is conducted in preparation for the patient.	**CONTROLLER**	Info	

0		RCA participants should perform the dress-out process until the Evaluators are satisfied.	**MSG#**	N/A	**COMMENTS:**
			LOCATION	BEMC	
	EXP ACT		**CONTROLLER**	Info	

0		Air Evac Air Ambulance arrives at BEMC helipad.	**MSG#**	N/A	**COMMENTS:**
			LOCATION	BEMC	
	EXP ACT	Medical and Security staff meet the helicopter. Medical staff travel with the patient to the Trauma Room and Security maintain control of the helicopter and pilot.	**CONTROLLER**	Info	

5		Patient arrives at the BEMC Trauma Room.	**MSG#**	M-3	**COMMENTS:** Check to ensure body map is present. Provide alternate if necessary.
			LOCATION	BEMC Trauma Room	
	EXP ACT	Security is controlling access, participants are dressed out and ready, tailboard has been conducted, EPDs are issued and documented.	**CONTROLLER**	Medical Controller	

0		Initial survey reading by the Nuclear Medicine Tech.	**MSG#**	M-4	**COMMENTS:** RP Med Tech takes initial mR reading on patient arrival and takes the body map.
			LOCATION	BEMC Trauma Room	
	EXP ACT	If more than one Nuclear Medicine Tech is available the second should be actively addressing contamination control outside of the RCA. Surveying the helicopter crew and beginning the survey process of the pathways and the helicopter and pilot.	**CONTROLLER**	RP Controller	

:0		Ongoing treatment by the medical staff focuses on the medical well being of the patient with a secondary focus on contamination control.	**MSG#**	M-5	**COMMENTS:**
			LOCATION	BEMC Trauma Room	
	EXP ACT	Medical staff will call for several sets of vital signs during the medical assessment and treatment of the patient.	**CONTROLLER**	Medical Controller	

)0		Continuing medical treatment of the patient including an X-Ray of the patient's legs.	**MSG#**	N/A	**COMMENTS:**
			LOCATION	BEMC Trauma Room	
	EXP ACT	This activity provides an opportunity for the hospital to demonstrate how to move material into and out of the RCA while controlling the spread of contamination.	**CONTROLLER**	Info	

)5		First decontamination of the patient.	**MSG#**	M-6	**COMMENTS:** See page 25
	35		**LOCATION**	BEMC Trauma Room	
	EXP ACT	Should be communicating / coordinating with the Doctor to begin this activity and only when it does not impact the medical treatment. (See Chart on page 25)	**CONTROLLER**	RP Controller	

0		Second decontamination of the patient. (See Chart on page 25)	**MSG#**	M-6	**COMMENTS:** See Page 25
			LOCATION	BEMC Trauma Room	
	EXP ACT	Should be communicating / coordinating with the Doctor to begin this activity and only when it does not impact the medical treatment.	**CONTROLLER**	RP Controller	

5		Third decontamination of the patient. (See Chart on page 25)	**MSG#**	M-6	**COMMENTS:** See page 25
			LOCATION	BEMC Trauma Room	
	EXP ACT	Should be communicating / coordinating with the Doctor to begin this activity and only when it does not impact the medical treatment.	**CONTROLLER**	RP Controller	

:0		Fourth decontamination of the patient. (See Chart on page 25)	**MSG#**	M-6	**COMMENTS:** See page 25
			LOCATION	BEMC Trauma Room	
	EXP ACT	Should be communicating / coordinating with the Doctor to begin this activity and only when it does not impact the medical treatment.	**CONTROLLER**	RP Controller	

:5		Fifth decontamination of the patient. (See Chart on page 25)	**MSG#**	M-6	**COMMENTS:** See page 25
			LOCATION	BEMC Trauma Room	
	EXP ACT	Should be communicating / coordinating with the Doctor to begin this activity and only when it does not impact the medical treatment.	**CONTROLLER**	RP Controller	

:0		RCA participants should perform the clean up process until the FEMA Evaluators are satisfied.	**MSG#**	N/A	**COMMENTS:**
			LOCATION	BEMC Trauma Room	
	EXP ACT		**CONTROLLER**	Info	

5		Termination of exercise once all objectives have been satisfied	**MSG#**	M-7	**COMMENTS:** Check with Lead Evaluator to ensure he has seen everything he needs to see and if he wants anything re-demonstrated.
			LOCATION	TBD	
	EXP ACT	Determined by Lead Controller and Lead Evaluator	**CONTROLLER**	Lead Controller	

0		Debrief and critique of exercise	**MSG#**	N/A	**COMMENTS:**
			LOCATION	BEMC	
	EXP ACT		**CONTROLLER**	Info	

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BANNER ESTRELLA EXERCISE MESSAGE

6.0 Messages M-1

Message From: Palo Verde Medical / Fire Department
Message To: Palo Verde Security CAS
Message Time: 0735

Special Instructions: Message should be delivered with as much realism as possible. Answer any questions the dispatcher might have.

THIS IS A DRILL/EXERCISE

Palo Verde Medical / Fire Department contacts Security CAS and request Air Evac Air Ambulance. There has been an accident at the Palo Verde Nuclear Generating Station and we will need a helicopter transport one patient to Banner Estrella Hospital.

THIS IS A DRILL/EXERCISE

Comments

BANNER ESTRELLA EXERCISE MESSAGE

6.0 Messages M-1A

Message From: Palo Verde Security CAS
Message To: Air Evac Air Ambulance Dispatch
Message Time: 0740

Special Instructions: Message should be delivered with as much realism as possible. Answer any questions the dispatcher might have.

THIS IS A DRILL/EXERCISE

Palo Verde Security CAS will call Air Evac Air Ambulance for support. There has been an accident at the Palo Verde Nuclear Generating Station and we will need a helicopter transport one patient to Banner Estrella Hospital.

CALL AIR EVAC # State "THIS IS A DRILL"

THIS IS A DRILL/EXERCISE

Comments

BANNER GOOD SAMARITAN EXERCISE MESSAGE

6.0 **M-2**

Message From: On-site Controller
Message To: Air Evac Air Ambulance Crew
Message Time: ~ 0805-0825

Special Instructions: Give Medical/Contamination Information to the Air Evac Air Ambulance crew

THIS IS A DRILL/EXERCISE

B/P..... 150 / 95
Eyes..... Equal
Pulse..... 120
Skin..... Moist and Cool
Alert and Oriented x1 Deteriorating -

THIS IS A DRILL/EXERCISE

Comments

Initial contamination information on patient (See chart on page 25)

Should the PV Fire Department forget to attach the body map to the patient the Controller should ensure the transfer occurs

BANNER ESTRELLA EXERCISE MESSAGE

6.0 **M-3**

Message From: Medical Controller
Message To: BEMC Staff
Message Time: 0850 or upon arrival at ER

Special Instructions: Give Medical Information when requested to do so

THIS IS A DRILL/EXERCISE

B/P..... 150 / 90
Eyes..... Equal
Pulse..... 100
Skin..... Cool and moist
Nausea, disoriented, A&O x2

THIS IS A DRILL/EXERCISE

Comments

See Chart on page 25

BANNER ESTRELLA EXERCISE MESSAGE

6.0 **M-4**

Message From: RP Controller
Message To: Banner Estrella Nuclear Medicine Tech
Message Time: 0900

Special Instructions: Give Nuclear Med Tech Information when requested to do so (on arrival at BEMC)

THIS IS A DRILL/EXERCISE

Right lower leg.	Leg.....	50,000	cpm

THIS IS A DRILL/EXERCISE

Comments
Initial contamination readings (See chart on page 25)

BANNER ESTRELLA EXERCISE MESSAGE

6.0 **M-5**

Message From: Medical Controller
Message To: Banner Estrella Medical staff
Message Time: 0830

Special Instructions: Give Medical staff information when requested to do so

THIS IS A DRILL/EXERCISE

B/P.....	125 / 75
Eyes.....	Equal
Pulse.....	86
Skin.....	Clammy, pale

THIS IS A DRILL/EXERCISE

Comments
Should additional medical vital signs be requested use the chart on page 25
Messages 5A1
Messages 5A2

BANNER ESTRELLA EXERCISE MESSAGE

6.0 **M-6**

Message From: RP Controller
Message To: Nuclear Med Tech
Message Time: 0900 - 0930

Special Instructions: Give RP Information when requested to do so

THIS IS A DRILL/EXERCISE

After first decon	Legs.....	35,000 cpm
After second decon	Legs.....	20,000 cpm
After third decon	Legs.....	10,000 cpm
After fourth decon	Legs.....	0 cpm (above background)
Follow-up	Legs.....	Background

THIS IS A DRILL/EXERCISE

Comments

BANNER ESTRELLA EXERCISE MESSAGE

6.0 **M-7**

Message From: Lead Controller
Message To: All Drill Participants
Message Time: 0935

Special Instructions: Drill Termination

THIS IS A DRILL/EXERCISE

Drill Termination

7.0 RADIOLOGICAL AND MEDICAL DATA

For off-site events this section will contain information about the area of the accident including data such as, background readings at the accident scene, items and or structures in the vicinity. Additionally section 7.2 will contain all the pertinent radiological data on the patient. Such as areas of the body that area contaminated and at what level. Data to indicate changes in counts per minute (CPM) after those areas have been decontaminated. Contamination that may be found on or in vehicles or the participants in those vehicles. Also found in this section is Medical data (section 7.3) for the scenario. This section will contain data from initial discovery to a description of the patient wounds.

7.1 Area Information

For off-site events this section would contain a description of the areas boarding the accident scene. Such things as roadways, retail or commercial buildings information describing access in and out of the area. Anything that could affect the play of the scenario. This scenario only moves between the Palo Verde nuclear power plant and Banner Estrella Medical Center. There are no scenario locations outside of these two areas so the area information section is not germane to this exercise.

8.0 SUPPLEMENTAL INFORMATION

Appendix A - Body Survey Map

Appendix B – Controller Instructions

Appendix C – Evaluator Instructions

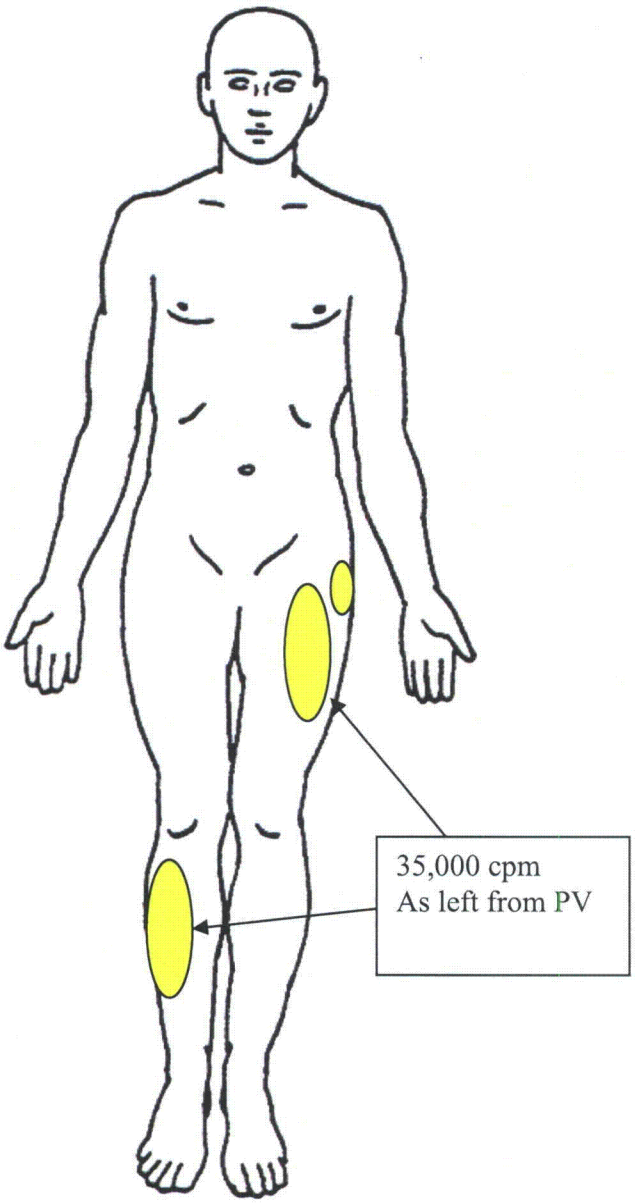
Appendix D – Participant Briefing Sheet

Appendix E – Exercise Checklist

Appendix F – Training Documentation

Appendix G – Procedures

APPENDIX A
CONTAMINATION DISPURSION CHART



	Both Legs
Initial	35,000 cpm
First	20,000 cpm
Second	10,000 cpm
Third	0,000 cpm
Fourth	Background
Fifth	As Read

APPENDIX B
CONTROLLER INSTRUCTIONS

- Be on location in the appropriate emergency response facility at least 30 minutes before commencement of the exercise. For Controllers not assigned to any specific facility, be in place to meet the emergency responders at least 15 minutes before the activation of the facility in which you are located.

- Obtain or locate necessary telecommunications equipment and test it to ensure satisfactory communications exists between you, the Exercise Lead Controller, and the Control Organization. Ensure personal pagers respond adequately.

- Wear Controller/Evaluator identification such as arm bands and/or label badges.

- All Controllers should synchronize their watches with the Exercise Lead Controller to ensure the exercise timeline and Controller log entries remain consistent.

- Review the exercise objectives for your area of responsibility.

- Each Controller should review the specific messages for which they will be responsible to deliver during the exercise scenario.

- As necessary, distribute briefings, forms, rules, scenario initial conditions, etc. to each exercise participant. This may include exercise limitations, meteorology, and other instructions.

- Do not converse with exercise participants unless absolutely required.

- Deliver the messages you have been assigned to deliver at the time indicated.

  CAUTION: If the information to be delivered is dependent on some action to be taken by an exercise participant, do not deliver the message until the appropriate action has been taken.

- When messages are delivered, notify the Exercise Lead Controller of the message number and time delivered.

- All exercise communications over the radio and telephone should begin and end with "THIS IS A DRILL/EXERCISE". This is required to preclude inadvertently mistaking exercise performance for an actual emergency event.

- If you are to deliver specific data, deliver it as directed per the message instructions. *(EXAMPLES: Do not deliver vital signs of an accident patient until the responder attempts the appropriate actions to obtain these; do not volunteer radiation readings until the technician has turned on the detection instrument and has it ranged correctly.)*

- Record all activities and times in your logs. Do not write opinions - write observational actions only.

- If your team/participant does not perform as expected and a contingency message is not provided, Controllers should notify your Facility Lead Controller immediately and ask for direction. Unplanned simulations are not allowed without the Facility Lead Controller's approval. This differs from free-play, which is action taken by a participant as appropriate to the situation to solve the problem in a unique way.

APPENDIX B
CONTROLLER INSTRUCTIONS

- A Controller must not prompt a participant for a specific response unless a contingency message directs the Controller to do so. Controllers may clarify information as long as it is not coaching.

- Ensure that all observers remain out of the way of exercise activity. If you need assistance, notify your Facility Lead Controller.

- Controllers should not provide information to the participants regarding scenario event progress or resolution of problems the participant encounters. Participants are expected to obtain information via their own means. Evaluators should be silent.

- Controllers/Evaluators may not provide direction or information to the exercise participant that has not been included in the exercise data without specific approval of the Exercise Lead Controller.

- Controllers/Evaluators shall collect all participant timelines, logs, and pertinent documentation at the post-exercise facility / scene debriefing/critique and provide them to the Facility Lead Controller.

- Controllers/Evaluators will be notified by their Facility Lead Controller when the exercise has been terminated. The exercise shall be terminated when the Exercise Lead Controller, in conjunction with the Facility Lead Controllers, determine all exercise objectives have been demonstrated or adequate time has elapsed for the objectives to be demonstrated.

- At exercise termination, summarize your notes and prepare for the on-scene critique. Have the summary ready to turn over to your Facility Lead Controller, who will provide this documentation to the Exercise Lead Controller. In addition, exercise manuals and Controller/Evaluator documentation should be provided to the Facility Lead Controller following briefings.

- All Controllers/Evaluators will ensure that safety and compliance have priority before anything else. In the event that safety and/or compliance are jeopardized, immediate notification to the Exercise Lead Controller shall be made and an attempt to correct the disarray will be made at the time. In the unlikely event that an actual emergency occurs, Controller communications will state the occurrence, with exercise performance taking a "back seat" to the emergency. In most cases, exercise performance will halt.

APPENDIX C
EVALUATOR INSTRUCTIONS

- Evaluate – Objectives
- Evaluate - Interaction between Controllers/Evaluators and Participants. Controllers/Evaluators should be invisible with respect to the success path of the Player. In other words, no coaching is provided and scenario information is not provided until earned.
- Evaluate - Control of confidential scenario information.
- Evaluate - If Participants demonstrate adequate drillmanship for those portions of the scenario requiring simulation.
- Evaluate - If designated facility leaders demonstrate proper command and control of their assigned facility.
- Evaluate - If sufficient Participants are present to fill all positions necessary for the drill/exercise/exercise scenario to operate as designed in an actual event. Ensure no pre-staging of individuals or equipment in the facilities, except as predetermined.
- Evaluate - If communications and notifications were adequate to support an actual event.
- Evaluate – If staff is familiar with their assigned duties, responsibilities and authorities. Do they perform their functions capably and use procedures and good communications?
- Evaluate – If selected evaluation criteria are met to determine if objectives are met. Document on Evaluation forms and disposition as directed by Lead Controller.

APPENDIX D
PLAYER BRIEFING SHEET

PARTICIPANT BRIEFING SHEET

WHAT: Radiologically Contaminated Injury Exercise (Palo Verde Nuclear Generating Station- PVNGS)

WHEN: DARE

WHERE: Banner Estrella Medical Center

HOW:

- First responders will be notified of the simulated event through normal communications channels.
- Exercise communications are to be limited to Banner Estrella Samaritan Medical Center. No other agency notifications shall be made as the result of this exercise.
- All communications shall begin and end with the notice: **"THIS IS A DRILL."**
- Participants should only communicate with Controllers to obtain or clarify information and to Evaluators to provide information that was requested.
- Participants are encouraged to be demonstrative and vocal in the conduct of their emergency responsibilities.
- Simulation should only be used to the extent necessary and agreed upon. (Ask a Controller)
- If you have questions regarding simulation, ask a Controller.
- Let Evaluators know how you are responding to the scenario events, what procedures you are using, and the expected results.
- Following the exercise, a critique/debrief will be held at BEMC. All Participants, Controllers, and Evaluators are expected to attend if at all possible. When called upon vocal participation is expected regarding any concerns (good or bad).
- If an actual emergency occurs during the drill/exercise, Hospital Administrators, or SFD Leadership will determine the disposition of the exercise and take appropriate action.

APPENDIX E
EXERCISE CHECKLIST

Contaminated Injured Individual Exercise
Pre - Checklist

Banner Estrella Medical Center July 14, 2010	**Date Completed**
Determine type of exercise or drill/exercise (on-site or off-site) BOTH	
Determine which hospital will be exercised ESTRELLA	
Determine most acceptable dates for exercise / drill/exercise based on site events / scheduling	
Contact hospital and determine exercise date based on their events	
Contact patient transport service (ground or air) get buy in on exercise date	
Contact any other participants and get buy in on exercise date (including RP Training, patient)	
Acquire controllers for the exercise	
Notify FEMA of exercise dates	
Notify E-Plan management and scheduler of exercise date	
Notify State and County of the exercise date	
Notify on-site scheduler (Phyllis) of exercise date (obtain permission for helicopter landing)	

Develop exercise scenario (see scenario considerations attached)	
Obtain copies of participants procedures (review and suggest revisions if necessary)	
Develop briefing sheet to address any previous exercise issues	
Schedule training dates for all participants	
Conduct training (sign off sheets are needed)	
Hospital	
Air Evac Air Ambulance Service	
PV Fire Dept	

Mail copy of scenario to FEMA for distribution to evaluators	
Determine location and time of pre-exercise FEMA briefing	
Produce copies of participant's procedures for Evaluators	
Ensure hospital kit and associated inventory sheets are complete and current	

Post Exercise

Produce and distribute exercise report	
Place all appropriate documentation in E-Plan files	

APPENDIX F
TRAINING DOCUMENTATION

Banner Estrella Briefing/Training
Contaminated Injured Individual Exercise

Preparation

Set-up personnel are briefed	☐
Procedures are correct and available	☐
Instruments are calibrated and charged	☐
Security in place and briefed	☐

Communications

Clear and repeat back (This is a Drill/exercise)	☐
Proper internal notifications are made	☐
Initial notification and follow-up	☐
Call ARRA for Support (If Needed)	☐

Documentation

Dosimetry logs are maintained	☐
Scribe of actions in the RCA	☐
Inventory sheets are current	☐

Patient Handling

Medical Concerns always come first	☐
Nasal smears discussed / documented	☐
Patient into the REA without delay	☐

Contamination Control

250 counts above background	☐
Security properly control the area	☐
Double gloves	☐
Frisking techniques	☐
Expanded REA if necessary	☐

Issuance and documenting of dosimetry	☐
Moving items in and out of the REA	☐
Removing the patient from the REA	☐
Surveys of the ambulance and Firefighters	☐
Waste removal	☐

Miscellaneous Items

Basic radiation training	☐
Interface with ERO	☐
Emergency response	☐

Comments

Signed and dated _____

APPENDIX F
TRAINING DOCUMENTATION

Air Evac Air Ambulance Briefing/Training
Contaminated Injured Individual Exercise

Preparation

Entrance to Site	☐
Procedure available	☐
Dispatch advised of PV exercise	☐

Communications

Clear and repeat back	☐
Advise hospital on lift off	☐
Advise hospital at 5 minutes out	☐

Documentation

Department logs completed	☐
Body Map passed on to hospital	☐

Patient Handling

Medical Concerns always come first	☐
Vital Signs will not change in-route	☐

Contamination Control

100 counts above background	☐
PVNGS provides dosimetry and protective clothing if necessary	☐
Waste removal	☐
Double gloves	☐
Surveys of the ambulance and crew done by ARRA, PVNGS or Good Sam before departure except in case of an actual emergency	☐

Miscellaneous Items

Basic radiation training	☐
Interface with ERO	☐
Emergency response	☐

Comments:

Signed and dated _____

APPENDIX F
TRAINING DOCUMENTATION

PVNGS FD Briefing/Training
Contaminated Injured Individual Exercise

Preparation

Prepare LZ	☐
Procedure available	☐
Patient prepared / Cocooned	☐

Communications

Clear and repeat back (three legged)	☐
Notification of Unit 1 Control Room	☐
Security	☐

Documentation

Department logs completed	☐
Body Map passed on	☐

Patient Handling

Medical Concerns always come first	☐
Vital Signs given to Native American Air Ambulance crew	☐

Contamination Control

100 counts above background	☐
PVNGS provides dosimetry and protective clothing if necessary	☐
Double gloves	☐

Miscellaneous Items

Basic radiation training	☐
Interface with ERO	☐
Emergency response	☐

Comments:

Signed and dated _____