October 23, 2012

Mr. Elmo E. Collins, Jr.
Regional Administrator, U.S. NRC, Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-4005

Dear Mr. Collins:

Enclosed is a copy of the radiological emergency preparedness final report for the South Texas Project Medical Service and Emergency Worker Monitoring and Decontamination/Reception Center drills evaluated on September 12 and 13, 2012, by the U.S. Department of Homeland Security/Federal Emergency Management Agency Region 6. My staff evaluated the plume exposure pathway emergency planning zone (EPZ) around the South Texas Project (STP) located near Wadsworth, Matagorda County, Texas. There were no Deficiencies, one Area Requiring Corrective Action (ARCA) corrected during the drill, and no Plan Issues identified during this exercise.

Based on the results of the exercise, the offsite radiological emergency response plans and preparedness for the CPNPP and the affected local jurisdictions are deemed adequate to provide reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological emergency. Therefore, 44 CFR Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of Texas site-specific to STP will remain in effect.

A copy of this report was provided to Ms. Lisa Gibney at NRC Headquarters as well as the NRC Headquarters Document Control Desk. Should you have questions, please contact me at (940) 898-5199, or Brad DeKorte, Radiological Emergency Preparedness Site Specialist, at (940) 383-7304.

Sincerely,

Lisa R. Hammond
RAC Chair

Enclosure

cc: DHS/FEMA Headquarters - Vanessa Quinn, Renae Connell
TDEM - W. Nim Kidd, CEM
TX DSHS, Radiation Control Program - Dr. David Lakey
STP Manager of Emergency Preparedness – Joseph Enoch
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South Texas Project

After Action Report/Improvement Plan

Published October 24, 2012

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EXECUTIVE SUMMARY

On September 12 and 13, 2012, out-of-sequence medical, reception center, and emergency worker monitoring and decontamination drills were conducted for the South Texas Project (STP) located near Wadsworth, Matagorda County, Texas. Personnel from the U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA), Region VI, evaluated the drills. The purpose was to assess the level of preparedness of state and local responders to react to a simulated radiological emergency at STP.

Personnel from the Texas Department of State Health Services, STP, Matagorda County Emergency Medical Services, and Palacious Medical Center participated in the drill. Evaluation Areas demonstrated included: Emergency Operations Management, Protective Action Implementation, and Support Operations/Facilities. Cooperation and teamwork of all the participants was evident during this drill, and DHS/FEMA wishes to acknowledge these efforts.

This report contains the final written evaluation of this out-of-sequence drill. The participants demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Deficiencies, one Area Requiring Corrective Actions (ARCA) that was corrected on the spot, and no Plan Issues identified as a result of this drill.
SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name
South Texas Project

Type of Exercise
Drill

Exercise Date
September 12, 2012

Program
Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type
Radiological Emergency

1.2 Exercise Planning Team Leadership

Lisa Hammond
RAC Chair
FEMA Region VI
Technological Hazards Branch Chief
800 North Loop 288
Denton, Texas, 76209
940-898-5199
lisa.hammond@dhs.gov

Brad DeKorte
Federal Planning Team Lead
FEMA Region VI
Technological Hazards Program Specialist
800 North Loop 288
1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the South Texas Project drill:

State Jurisdictions
- Texas Department of State Health Services

Risk Jurisdictions
- Matagorda County Emergency Management
- Bay City Fire Department
- Bay City Police Department
- Matagorda County Animal Control
Matagorda County Emergency Medical Services

Support Jurisdictions

American Red Cross

Palacios Community Medical Center

Matagorda County Volunteers
SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The DHS/FEMA Region VI Office evaluated the drills on September 12 and 13, 2012 to assess the capabilities of local emergency preparedness organizations in implementing their Radiological Emergency Response Plans and procedures to protect the public health and safety during a radiological emergency involving the South Texas Project (STP). The purpose of this report is to present the results and findings on the performance of the offsite response organizations during a simulated radiological emergency.

2.2 Exercise Objectives, Capabilities and Activities

Exercise objectives and identified Capabilities/REP Criteria selected to be exercised are discussed in the Exercise Plan (EXPLAN), Appendix E.

2.3 Scenario Summary

The medical drill scenario was developed to evaluate the response of drill participants to an incident at the South Texas Project requiring the transportation, treatment and decontamination of a radiologically contaminated injured individual. The drill scenario provided for the evaluation of the Matagorda County Emergency Medical Services and Palcious Medical Center staff.

The Reception Center and Emergency Worker Monitoring and Decontamination drill scenario was developed to evaluate the response of drill participants to an incident at the South Texas Project requiring the monitoring and decontamination of members of the general public along with Emergency Workers.
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 September 12 and 13, 2012 drills to test the offsite emergency response capabilities of state and local governments in the 10-mile emergency planning zone (EPZ) surrounding the South Texas Project (STP).

Each jurisdiction and functional entity was evaluated on its demonstration of criteria contained in the exercise evaluation areas as outlined in the Federal Register, Vol. 67, No. 80, "FEMA-Radiological Emergency Preparedness: Evaluation Methodology" (April 25, 2002). Detailed information on the exercise evaluation area criteria and the extent of play agreements used in this drill is included as an appendix to 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 that were scheduled for demonstration during the drill by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status is indicated by the use of the following letters:

M - Met (No Deficiency or Areas Requiring Corrective Actions [ARCA(s)] assessed and no unresolved ARCA(s) from prior exercises)

D - Deficiency assessed

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

N - Not Demonstrated

P - Plan Issue
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<td>RRR Decisions</td>
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<td></td>
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<tr>
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<tr>
<td>Congregate Care</td>
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<tr>
<td>Contaminated Injured Transport &amp; Care</td>
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<td>M</td>
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</tbody>
</table>

Table 3.1 - Summary of Drill Evaluation

DATE: 2012-09-12
SITE: South Texas Project, TX

M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated
3.3 Criteria Evaluation Summaries

3.3.1 Support Jurisdictions

3.3.1.1 McAllister Reception Center and Emergency Worker Monitoring/Decontamination Station

In summary, the status of DHS/FEMA criteria for this location is as follows:

a. MET: 1.e.1, 3.a.1, 6.a.1, 6.b.1, 6.c.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

3.3.2 Private Organizations

3.3.2.1 Matagorda County EMS

In summary, the status of DHS/FEMA criteria for this location is as follows:

a. MET: 1.e.1, 3.a.1, 6.d.1.

ISSUE NO.: 60-12-6d1-A-01

CRITERION: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

CONDITION: Contamination was found on the head area of the gurney, the RPP Monitor did not notice that the swipe came in contact with the pancake probe and proceeded without replacing the plastic covering, potentially spreading contamination. In the ambulance, contamination was found on the jump seat. The jump seat was wiped with a towel that was discarded on the floor and not in the proper container. While the RC Supervisor was surveying the ambulance, the
pancake probe was more than 1" from the surface and moved too fast to identify contamination.

POSSIBLE CAUSE: Training and/or inconsistency in technique.

REFERENCE: NUREG-0654, K.5.a. b; Matagorda County Annex W Implementing Procedures and Matagorda Regional Medical Center Radiological Emergency Plan.

EFFECT: Potential spreading of contamination in the ambulance and ground bay area which could have been tracked into the hospital, and contaminated staff and/or patients.

CORRECTIVE ACTION DEMONSTRATED: The controller called a timeout, reaffirmed training and restarted the drill. Both the RPP Monitor and RC Supervisor demonstrated proper technique during the re-surveying of the gurney and ambulance, and made sure all contaminated materials were properly disposed of.

c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None
f. PRIOR ISSUES - RESOLVED: None
g. PRIOR ISSUES - UNRESOLVED: None

3.3.2.2 Palacios Community Medical Center

In summary, the status of DHS/FEMA criteria for this location is as follows:

a. MET: 1.e.1, 3.a.1, 6.d.1.
b. AREAS REQUIRING CORRECTIVE ACTION: None
c. DEFICIENCY: None
d. PLAN ISSUES: None
e. NOT DEMONSTRATED: None

ISSUE NO.: 60-10-6d1-A-01

ISSUE: There was no physician present during the drill as is required by DHS-
FEMA REP Program guidance. A physician was in contact with the Palacios Community Medical Center but was not physically present to supervise or assist as required.

CORRECTIVE ACTION DEMONSTRATED: A physician was present in the Buffer Zone to supervise treatment of the patient, and a physician’s assistant performed treatment of the patient in the REA.

g. PRIOR ISSUES - UNRESOLVED: None
SECTION 4: CONCLUSION

Based on the results of the drill, the offsite radiological emergency response plans and preparedness for the State of Texas and the affected local jurisdictions are deemed adequate to provide reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological emergency. Therefore, 44 CFR Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of Texas site-specific to STP will remain in effect.
APPENDIX A: DRILL EVALUATORS AND TEAM LEADERS

DATE: 2012-09-12, SITE: South Texas Project, TX

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>EVALUATOR</th>
<th>AGENCY</th>
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<tr>
<td>McAllister Reception Center and Emergency Worker Monitoring/Decontamination Station</td>
<td>Bill Bischof, *Elsa Lopez, Timothy Pflieger</td>
<td>FEMA RVI, FEMA RVI</td>
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<td>Matagorda County EMS</td>
<td>Elsa Lopez</td>
<td>FEMA RVI</td>
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<td>Palacios Community Medical Center</td>
<td>Bill Bischof, Timothy Pflieger</td>
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APPENDIX B: ACRONYMS AND ABBREVIATIONS

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<tr>
<th>Acronym</th>
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<td>ARCA</td>
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<td>EW</td>
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<td>MCEMS</td>
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<td>PCMC</td>
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<td>REA</td>
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<td>STP</td>
<td>South Texas Project</td>
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</table>
APPENDIX C: EXERCISE PLAN
2012 RECEPTION CENTER EXERCISE SCENARIO

SOUTH TEXAS PROJECT

IN CONJUNCTION WITH

MATAGORDA COUNTY

and

RIO COLORADO CHAPTER OF

THE AMERICAN RED CROSS

and

TEXAS DEPARTMENT OF STATE HEALTH SERVICES,

RADIATION CONTROL PROGRAM

FOR EVALUATION BY

FEDERAL EMERGENCY MANAGEMENT AGENCY

September 13, 2012

Prepared by: Vivian Wagnon Date: 07/09/2012
Reviewed by: Rae Walker Date: 07/10/2012
Approved by: Joseph D. Enoch Date: 07/12/2012
1.0 Scope and Participants

The 2012 McAllister Reception Center exercise will test and provide the opportunity to evaluate the plans and procedures utilized to respond to evacuated site employees and the general public. It will demonstrate the utilization of the McAllister Reception Center.

Whenever practical, the exercise incorporates provisions for free play by the participants. The scenario simulates a sequence of events, which results in a need to evacuate site employees as well as members of the public.

The scenario is sufficiently difficult to challenge all participants; however, responses will be controlled to ensure the safety of personnel and equipment.

The exercise will be conducted with the following participants:

Exercise Participants

- Matagorda County Emergency Staff
- Matagorda County, Environmental Health Department
- Rio Colorado Chapter of the American Red Cross
- South Texas Project (STP)
- Texas Department of State Health Services, Radiation Control Program
2.0 Objectives and Extent of Play

The Evaluation Area applicable to this Exercise is taken from the Federal Emergency Management Agency (FEMA) Evaluation Area Criterion for a Reception Center. The Extent of Play follows the criterion in these documents. Any exception with the Evaluation Area and Extent of Play is noted below.

EVALUATION AREA 1.e – Equipment and Supplies to Support Operations

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; I.7, 8, 9, J.10.a, b, e; J.11, 12; K.3.a; K.5.b)

Instruments are operationally checked before use. Instruments are calibrated in accordance with manufacturer’s recommendations. A label indicating calibration is on each instrument. Sufficient quantities of appropriate electronic personal dosimeters and permanent record dosimetry are available for issuance to all categories of emergency workers deployed by that facility.

Extent of Play

To minimize the impact on the neighborhood, signs, stanchions, barricades and displays will only be setup in the back of the building. In addition, signs, stanchions, barricades and displays will only be setup in that part of the facility utilized to support the exercise.

EVALUATION AREA 3.a – IMPLEMENTATION OF EMERGENCY WORKER EXPOSURE CONTROL

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/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. OROs maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA-REP-1, J.10.e; K.3.a, b; K.4)

The Offsite Response Organizations (OROs) issue appropriate dosimetry and procedures and manage radiological exposure. Emergency Workers periodically and at the end of each mission read their dosimetry and record the readings on the appropriate exposure record or chart.
Extent of Play

KI is not required.

Correction on the spot is permitted with issues related to the evaluation area. Correction on the spot is requested.

EVALUATION AREA 6.a.1 – MONITORING, AND REGISTRATION OF EVACUEES

Criterion 6.a.1: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees. (NUREG-0654/FEMA-REP-1, A.3; C.4; J.10.h; J.12)

The Reception Center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers.

Extent of Play

All positions at the Reception Center will be staffed and rosters will be available to demonstrate personnel depth for subsequent shifts. However, to streamline operations and to minimize the impact on the number of Controllers and Evaluators, only the women’s locker room will be used during the evaluated exercise. When a male/female evacuee processes through Station 3, a male/female will demonstrate proper techniques for collecting clothes, valuables, and decontamination and monitoring as required.

There will be 6 simulated evacuees and 2 simulated emergency workers processing through the facility. Of the 8, 1 man and 1 woman (1 evacuee and 1 emergency worker) will be simulated to be contaminated and require decontamination. No actual decontamination of individuals will occur, however, the team will work with the contaminated persons on collection of clothing and personal items, and return of non-contaminated clothing and personal items. One simulated contaminated person (hand contaminated) will be chosen to walk through the decontamination process. Wearing modesty clothing, the contaminated person will process through the shower area, demonstrating decontamination techniques by turning on the water and simulating taking a shower. Even though decontamination techniques of individuals will be handled through limited demonstration, the team will demonstrate monitoring and decontamination of the shower area, following use.

In the event of possible air conditioning complications, fans may be used at stations 2 and 3 to allow better ventilation to exercise participants.
The emergency vehicle and bus pick-up area will not be setup and demonstrated due to minimizing the impact on the neighborhood. No evacuees will be transported to the congregate care facility. American Red Cross staff will be available to discuss the emergency vehicle (ambulances, police cars, etc.) and evacuee bus pick-up process.

During the exercise, all 8 evacuees will be registered by the American Red Cross and volunteers and the two emergency workers will be released.

The players will pre-stage at the Matagorda County Annex Building in order to expedite activation of the Reception Center.

Correction on the spot is permitted with issues related to the evaluation area. Correction on the spot is requested.

EVALUATION AREA 6.b – MONITORING AND DECONTAMINATION OF EMERGENCY WORKER EQUIPMENT

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles.

The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles.

Extent of Play

Emergency worker equipment decontamination techniques will be conducted via discussion and actual hands on decontamination. All contamination levels will be via Controller inject(s). Free play of this activity is not permitted. One emergency worker vehicle will be decontaminated during the exercise.

Correction on the spot is permitted with issues related to the evaluation area. Correction on the spot is requested.
EVALUATION AREA 6.c.1 – TEMPORARY CARE OF EVACUEES

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG-0654/FEMA-REP-1, J.10.h, J.12)

Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. Managers demonstrate the procedures to assure evacuees have been monitored for contamination and have been decontaminated as required prior to entering congregate care facilities.

Extent of Play

American Red Cross personnel will demonstrate congregate care via rosters, interview and other resource documents. A tour of the First Baptist Church will be offered to the Evaluator during a time agreed upon by FEMA, the Controller, and ARC officials.

3.0 Conduct and Evaluation

The exercise will simulate an emergency situation at the South Texas Project which will demonstrate the effectiveness of participating organizations, personnel, and activities to support the Emergency Plan and associated procedures.

Controllers are not permitted to coach or otherwise assist participants responding to the simulated conditions, except to provide clarification that may be necessary for participants to understand the intent of the message given by the Controller or on a message sheet.

The organization for this exercise will consist of the Drill Coordinator, Controllers, Evaluators, Participants, and Observers, as follows:

- The **Drill Coordinator** is responsible for the coordination and the safe conduct of the exercise. This individual will provide resolution to scenario-related questions and ensure the conduct of the exercise does not adversely impact the operation of the station and/or offsite agencies’ actual emergency response activities.

- The **Controllers** will deliver event condition messages to designated participants at specified times and places during the exercise, including contingency messages, as required, to keep the exercise moving according to the scenario.
Controllers will also observe the scenario actions and prepare written evaluations of the Participants' performances. Controllers will be identified by wearing red badges labeled CONTROLLER.

- The Evaluators will judge the effectiveness of participating organizations, personnel, and activities. Federal Evaluators from FEMA will be evaluating this exercise. Federal Evaluators will be identified by wearing FEMA badges. Other Evaluators will be identified by wearing blue EVALUATOR badges.

- The Observers are authorized, on a limited basis, to watch exercise activities for the purpose of personal education. Observers will be identified by wearing white OBSERVER badges.

In the event of an actual emergency during the conduct of the exercise, all exercise activities will be immediately halted and response directed to the actual event.

The Controller is responsible for immediately intervening and terminating any action during the conduct of the exercise that would place either an individual or a component in an unsafe condition.

All telephone communications, radio transmissions and public address announcements related to the exercise will begin and end with the statement 'THIS IS A DRILL'.

While participants are expected to inject as much realism into their response actions as possible, safety of personnel and plant equipment shall not be jeopardized.

After the exercise is complete, the Drill Coordinator will conduct a critique session. Potential issues with the emergency plans, procedures, training program, facilities, equipment, and/or other areas will be identified through the critique and evaluation process. The issues will be documented by the Drill Coordinator and corrected by the individuals/organizations that have responsibility for the area of the identified deficiency(s).

4.0 Definitions and References

Definitions:

Controller: A member of the exercise organization assigned to one or more activities for the purpose of keeping the action going according to a scenario, resolving scenario discrepancies, and ensuring the safe deliberation of actions by the participants.
Evaluator: A member of the exercise organization assigned to one or more activities to evaluate and make recommendations for improvement or recognition of above average performance.

Exercise: An event which tests and provides the opportunity to evaluate the plans and procedures utilized to respond to evacuated site employees and the general public. It will demonstrate the utilization of the McAllister Reception Center.

Observer: Any individual who is authorized to observe the exercise, but is not authorized to interact with the participants.

Participants: All individuals assigned to perform functions of the emergency response organization as a participant in the exercise.

References:
1. Title 10, Code of Federal Regulations, Part 50, Appendix E
2. STP Emergency Plan
3. Matagorda County/Bay City/Palacios Annex W, Radiological Emergency Plan and Procedures
4. NUREG-0654/FEMA-REP-1, Criteria For The Preparation And Evaluation Of Radiological Emergency Response Plans And Preparedness In Support Of Nuclear Power Plants
5. FEMA Program Manual, Radiological Emergency Preparedness, April 2012
6. Federal Emergency Management Agency (FEMA) Evaluation Area Criterion for a Reception Center

5.0 Narrative Summary and Event Timeline

An Alert is declared by STP based on the failure of the reactor to automatically shut down; however, a manual shutdown was successful. Matagorda County contacts Emergency Operations Center (EOC) emergency workers to respond immediately to the EOC. The Radiological Director and the Director of the Rio Colorado Chapter of the American Red Cross (ARC) are included in this call out. The Radiological Director and the ARC Director place the Reception Center staffs on standby.

Conditions further degrade at the Station, and a Site Area Emergency is declared by STP due to a loss of both fuel clad and the reactor coolant system. The County officials discuss the potential need to open a Reception Center to receive the evacuated non-essential Station employees for
monitoring. It is determined the McAllister Reception Center will be opened as a precautionary measure. The Radiological Director and the ARC Director request the Environmental Health Department and ARC staff and activate the McAllister Reception Center.

County and Station officials discuss the potential need to send Station employees to the Reception Center for monitoring and decontamination purposes. The Station determines this is not required and Station non-essential employees will be evacuated to their homes. County officials decide to continue the activation of the Reception Center as a precautionary measure.

Conditions continue to degrade, and the Station declares a General Emergency based on the loss of all three fission product barriers with a release of radioactive material via the main steam line. A Protective Action Recommendation is communicated to the Emergency Director, and the decision is made by the county to evacuate all residents 10-miles down-wind of the plant. Eventually, plant personnel are successful in ending the offsite radiological release.

<table>
<thead>
<tr>
<th>TIME</th>
<th>SEQUENCE OF EVENTS</th>
<th>MESSAGE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30</td>
<td>Alert declared. Call comes from Matagorda County Sheriff Dispatch Office for the Radiological Director and Red Cross Director to respond to the EOC.</td>
<td>1</td>
</tr>
<tr>
<td>7:50</td>
<td>Site Area Emergency is declared. Station evacuates non-essential personnel to their homes.</td>
<td>2</td>
</tr>
<tr>
<td>8:00</td>
<td>Setup of the McAllister Reception Center begins.</td>
<td></td>
</tr>
<tr>
<td>8:25</td>
<td>General Emergency is declared. Matagorda County officials recommend to the public that residents living 10 miles down-wind of the plant evacuate to the McAllister Reception Center.</td>
<td>3</td>
</tr>
<tr>
<td>8:50</td>
<td>The first evacuees begin to arrive at the McAllister Reception Center. Monitoring, decontamination, and registration of evacuees continue until all are complete</td>
<td>4, 5, 6</td>
</tr>
<tr>
<td>10:30</td>
<td>Exercise ends and facility is deactivated.</td>
<td>7</td>
</tr>
<tr>
<td>11:00</td>
<td>Exercise critique begins.</td>
<td></td>
</tr>
</tbody>
</table>
2012 MEDICAL SERVICES EXERCISE SCENARIO

STATE OF TEXAS
MATAGORDA COUNTY
MATAGORDA COUNTY EMERGENCY MEDICAL SERVICES
PALACIOS COMMUNITY MEDICAL CENTER

FOR EVALUATION BY
FEDERAL EMERGENCY MANAGEMENT AGENCY
SEPTEMBER 12, 2012

Prepared by: Vivian Wagnon Date: 7/26/12
Reviewed by: Rae Walker Date: 7/26/12
Approved by: Joseph D. Enoch Date: 7/31/12
Scope and Participants

The 2012 Palacios Community Medical Center MS-1 Exercise will test and provide the opportunity to evaluate the plans and procedures utilized to respond to contaminated injuries. It will demonstrate the utilization of hospital, ambulance, and procedures supporting emergency medical services.

Whenever practical, the exercise incorporates provisions for free play by the participants. The scenario simulates a sequence of events, which results in a medical accident with a contaminated injuries. The degree of the simulated injuries requires immediate response by offsite emergency medical teams including offsite hospital support.

The scenario is sufficiently difficult to challenge participants; however, responses will be controlled to ensure the safety of all players and equipment.

The exercise will be conducted with the following participants:

**Exercise Participants**

- Matagorda County EOC (simulated via phone cell)
- Matagorda County
- Matagorda County Emergency Medical Services (MCEMS)
- Palacios Community Medical Center (PCMC)
- STP Emergency Response Division
Exercise Evaluation Areas and Extent of Play

The Evaluation Areas applicable to this exercise are taken from the Federal Emergency Management Agency (FEMA) Evaluation Area Criterion for Medical Exercises. The extent of play follows the criterion in these documents. Any exception to the Evaluation Area is noted with the Evaluation Area and extent of play.

EVALUATION AREA 1.e.1 – EQUIPMENT, MAPS, DISPLAYS, DOSIMETRY, POTASSIUM IODIDE (KI), AND OTHER SUPPLIES ARE SUFFICIENT TO SUPPORT EMERGENCY OPERATIONS. (NUREG-0654/FEMA-REP-1, H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b)

Instruments are operationally checked before use. Instruments are calibrated in accordance with manufacturer's recommendations.

A label indicating calibration is on each instrument. Sufficient quantities of appropriate electronic personal dosimeters and permanent record dosimetry are available for issuance to all categories of emergency workers deployed by that facility.

Sufficient supplies, equipment, displays, and personal protective equipment are available.

Extent of Play

Donning and doffing of personal protective equipment will be demonstrated by one player.

Correction on the spot is requested.

EVALUATION AREA 3.a.1 – IMPLEMENTATION OF EMERGENCY WORKER EXPOSURE CONTROL (NUREG-0654/FEMA-REP-1, J.10.e; K.3.a, b; K.4)

The Offsite Response Organizations (OROs) issue appropriate dosimetry and procedures and manage radiological exposure. Emergency Workers periodically and at the end of each mission read their dosimetry and record the readings on the appropriate exposure record or chart.

Extent of Play

Correction on the spot is permitted with issues related to dosimetry use, reading dosimetry, alarm set points and record keeping. Administration and record-keeping of Potassium Iodide (KI) will not be demonstrated at this exercise. Correction on the spot is requested.
EVALUATION AREA 6.d.1 – TRANSPORTATION AND TREATMENT OF CONTAMINATED INJURED INDIVIDUALS (NUREG-0654/FEMA-REP-1, F.2; H.10; K.5.a, b; L.1, 4)

The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated, injured individuals.

Extent of Play

Correction on the spot is permitted with issues related to the adequacy of vehicles, equipment, and procedures, decontamination techniques, cross contamination issues for personnel transporting and treating contaminated injured or exposed individuals. Correction on the spot is requested.

Conduct and Evaluation

The Exercise will simulate a medical emergency at the McAllister Reception Center, which will demonstrate the effectiveness of communications with offsite organizations, personnel, and activities to support the Matagorda County Hospital District Radiological Emergency Preparedness Plan, Matagorda County Annex W Radiological Emergency Preparedness and associated procedures.

Controllers may provide clarification necessary for participants to understand the intent of the message given by the controller or on a message sheet.

The medical emergency at the McAllister Reception Center will be at a simulated location. Matagorda County EMS is contacted to respond to the Reception Center for patient transfer to an offsite hospital.

A controller will be on the ambulance to provide patient performance paths (vital signs) and contamination levels during the trip to the hospital.

The organization for this Exercise will consist of the Lead Controller, Controllers, Participants, and Observers, as follows:

- The Lead Controller is responsible for the coordination and the safe conduct of the exercise. This individual will provide resolution to scenario-related questions and ensure the conduct of the exercise does not adversely impact the operation of the station and/or offsite agencies’ actual emergency response activities.
The Controllers will deliver event condition messages to designated participants at specified times and places during the Exercise, including contingency messages, as required, to keep the exercise moving according to the scenario timeline.

Controllers will also observe the scenario actions and prepare written evaluations of the participants' performance. Controllers will be identified by wearing red badges labeled CONTROLLER.

The Observers will be authorized, on a limited basis, to watch exercise activities for the purpose of personal education. Observers will be identified by wearing white OBSERVER badges.

In the event of an actual emergency during the conduct of the exercise, all exercise activities will be immediately halted and response directed to the actual event.

The Controller is responsible for immediately intervening and terminating any action during the conduct of the exercise that would place either an individual or response equipment in an unsafe condition.

All telephone communications and radio transmissions related to the exercise will begin and end with the statement “THIS IS A DRILL.”

While participants are expected to inject as much realism into their response actions as possible, safety of participants and response equipment shall not be jeopardized.

After the exercise is complete, the Lead Controller will conduct a critique session. Potential issues with the emergency plan, procedures, training program, facilities, equipment, and/or other areas will be identified through the critique and evaluation process. The issues will be documented by the Lead Controller and corrected by the individuals/organizations having responsibility for the area of the identified issue(s).

Definitions

Controller: A member of the exercise organization assigned to one or more activities for the purpose of keeping the action going according to a scenario, resolving scenario discrepancies, and ensuring the safe deliberation of actions by the participants.

Evaluator: A member of the exercise organization assigned to one or more activities to evaluate and make recommendations for improvement or recognition of above average performance.
Exercise: An event which tests and provides the opportunity to evaluate the plans and procedures utilized to respond to contaminated injuries. It will demonstrate the utilization of hospital, ambulance, and station procedures supporting emergency medical services.

Observer: An individual who is authorized to observe the exercise, but is not authorized to interact with the participants.

Participants: All individuals assigned to perform functions of the emergency response organization as a participant in the exercise.

References

1. Title 44, Code of Federal Regulations, Part 350
2. Matagorda County Hospital District Radiological Emergency Plan
3. Matagorda County Annex W, REP Plan and Procedures
4. NUREG-0654/FEMA-REP-1, Criteria For The Preparation And Evaluation Of Radiological Emergency Response Plans And Preparedness In Support Of Nuclear Power Plants
5. FEMA Evaluation Area Criterion for Medical Exercises
6. FEMA REP Program Manual, April 2012

Controller Instructions

Instructions:

Each Controller should be familiar with the following:

1. The applicable evaluation area and extent of play of the exercise.
2. The exercise conduct and evaluation guidelines and precautions.
3. The exercise scenario, including initiating events and expected course of action.
4. The facilities and locations that will be involved and the specific actions to be observed.
5. The evaluation checklists provided to document participant actions.
Controllers should be positioned at assigned locations at least 15 minutes prior to the activation of the facility or location.

Message sheet information should be delivered in sequence and as written, unless the Lead Controller authorizes change.

Controllers may provide information to the participants regarding scenario progression or the resolution of problems encountered in the course of the simulated emergency.

Each Controller shall take detailed notes regarding the progress of the exercise (i.e., chronology) and the response of the participants.

The Lead Controller in conjunction with the FEMA Evaluator may delay, suspend or cancel the exercise if an emergency situation requires use of the ambulance, hospital ER, or participants.

Controllers should carefully note the arrival and departure times of participants. Controllers should carefully note problem areas encountered and good practices observed. The chronology can be used to corroborate critique items questioned by participants. Refer to Attachment A for the Controller Forms.

Controllers for this Exercise shall include:

- Lead Controller
- Matagorda County EOC Controller (Phone Cell)
- McAllister Reception Center Controller
- Palacios Community Medical Center Controller – Hospital REA
- Palacios Community Medical Center Controller – Hospital Buffer Zone
- Matagorda County EMS Controller – Ambulance
Schedule of Events

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>LOCATION</th>
<th>EVENT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/21/12</td>
<td>10:00 AM – 1:00 PM</td>
<td>PCMC</td>
<td>Training for PCMC staff</td>
</tr>
<tr>
<td>08/23/12</td>
<td>12:30 PM – 2:30 PM</td>
<td>MCEMS</td>
<td>Training for MCEMS staff</td>
</tr>
<tr>
<td>08/22/12</td>
<td>07:00 AM to 11 AM</td>
<td>STP EOF</td>
<td>Training for Radiological Monitors</td>
</tr>
<tr>
<td>09/11/12</td>
<td>3:30 PM - 5:00 PM</td>
<td>N4106</td>
<td>MS-1 Controller Briefing</td>
</tr>
<tr>
<td>09/12/12</td>
<td>10:00 AM - 1:00 PM</td>
<td>MCEMS/PCMC</td>
<td>FEMA Evaluated Exercise</td>
</tr>
</tbody>
</table>

FEMA = Federal Emergency Management Agency  
MCEMS = Matagorda County Emergency Medical Services  
N4106 = Nuclear Support Center Conference Room 4106 located on the north side of the building  
PCMC = Palacios Community Medical Center  
STP EOF = South Texas Project Emergency Operations Facility

Narrative Summary and Event Timeline

An Alert is declared by STP based on the failure of the reactor to automatically shut down; however, a manual shutdown was successful. Matagorda County Sheriff Dispatch contacts the Emergency Operations Center (EOC) emergency workers to respond immediately to the EOC. The Radiological Director and the Matagorda County Hospital District representative are included in this call-out.

Conditions further degrade at the Station, and a Site Area Emergency is declared by STP due to a loss of both fuel clad and the reactor coolant system. The County officials discuss the potential need to open a Reception Center to receive the evacuated non-essential Station employees for monitoring. It is determined the McAllister Reception Center will be opened as a precautionary measure. The Radiological Director and the American Red Cross (ARC) Director request the Environmental Health Department, DSHS, and ARC staff respond and activate the McAllister Reception Center.

County and Station officials discuss the potential need to send Station employees to the Reception Center for monitoring and decontamination purposes. The Station determines this is not required and Station non-essential employees will be evacuated to their homes. County officials decide to continue the activation of the Reception Center as a precautionary measure.
Conditions continue to degrade, and the Station declares a General Emergency based on the loss of all three fission product barriers with a release of radioactive material via the main steam line. A Protective Action Recommendation is communicated to the Emergency Director, and the decision is made by the county to evacuate all residents 10-miles down-wind of the plant. Eventually, plant personnel are successful in ending the offsite radiological release.

A 10-mile Emergency Planning Zone resident who resides in Collegeport hears the siren sounding and turns on the radio to listen to KMKS for additional emergency instructions. The resident is directed to evacuate her residence utilizing a specific evacuation route to the McAllister Reception Center in Bay City, TX. Upon arrival at the Reception Center, the evacuee is involved in a one car accident and receives a cut to her forehead.

The Environmental Health Director requests the Monitoring and Decontamination Supervisor to contact the Matagorda County EOC for an ambulance. When the Matagorda County EMTs arrive, they evaluate medical conditions and determine the individual needs to be transported to an offsite medical facility, as she is disoriented and has a bleeding gash on her forehead. The EMTs contact the Matagorda Regional Medical Center Emergency Room that a potential contaminated patient is being transported to the hospital. Matagorda County Regional Medical Center is on drive-by status; therefore, MCEMS is redirected to the Palacios Community Medical Center (PCMC).

A radiological monitor located at the Reception Center is assigned to monitoring the evacuee. Once surveyed by radiological monitor, the injured evacuee is found to have 500 - 1000 cpm on clothing and exposed skin (refer to Figure 10.0-1.) If the patient's contaminated clothing is removed, skin contamination remains (refer to Figure 10.0-2.).

Upon arrival of the ambulance, the radiological monitor and nurse/EMT provides a briefing to Matagorda County Emergency Medical Services (MCEMS) crew regarding patient condition. A Reception Center radiological monitor accompanies the patient and provides radiological information and contamination control. Matagorda County requests additional monitors. These individuals are called out and directed to report to the PCMC. The Matagorda County EOC Radiological Officer assigns a local monitor and request another monitor be assigned from the Department State Health Services (DSHS) representative in the EOC. The DSHS representative contacts the staging area to request a radiological monitor be sent to the Palacios Community Medical Center.

In route, the hospital is appraised of the patient's physical and radiological condition.

Upon hospital arrival, the Reception Center radiological monitor and ambulance attendants brief the emergency room staff. Upon completion of the briefing, the attendants turn the injured patient over to emergency room staff care. The Reception Center radiological monitor who travels with the ambulance stays with the vehicle to monitor, and decontaminate, if required. Prior to the release of
the ambulance, the Reception Center radiological monitor will survey the crew and their equipment.

Results of the survey are in accordance with Figure 10.0-5, Matagorda County EMS Radiological Survey. A brief decontamination demonstration will be performed prior to releasing the ambulance.

An assigned participant monitors the decontamination room, as well as performs contamination control duties and supports decontamination, as necessary. (Refer to Figure 10.0-4 for Palacios Community Medical Center Radiological Survey and Layout).

The hospital staff provides initial treatment and decontamination. Medical treatment will take priority over contamination. Decontamination techniques will be demonstrated. Once the patient is stabilized, treated, and decontaminated, the patient will be transferred out of the decontamination area using recognized transfer techniques for standard admittance to the hospital.

Once the patient is transferred, the hospital staff inside the decontamination area will carefully remove their protective clothing ensuring control of contamination.
<table>
<thead>
<tr>
<th>TIME</th>
<th>SEQUENCE OF EVENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30</td>
<td>Initial conditions established.</td>
</tr>
<tr>
<td>9:35</td>
<td>The telephone cell implements storyboard information.</td>
</tr>
<tr>
<td></td>
<td><strong>CONTROLLER NOTE</strong></td>
</tr>
<tr>
<td></td>
<td>Communications with offsite for support will be made to Matagorda County Emergency Medical Services (MCEMS).</td>
</tr>
<tr>
<td>9:40</td>
<td>The Matagorda County EOC (simulated phone cell) contacts Matagorda County Emergency Medical Services at (979) 323-9020 and requests they respond to the McAllister Reception Center.</td>
</tr>
<tr>
<td></td>
<td><strong>CONTROLLER NOTE</strong></td>
</tr>
<tr>
<td></td>
<td>For more information on the injured evacuee’s vital signs, refer to Table 10.0-1, Patient Performance Paths.</td>
</tr>
<tr>
<td></td>
<td>For more information on the injured evacuee’s radiological conditions, refer to Figures 10.0-1, Patient’s Contamination-with Clothing, and 10.0-2, Patient’s Skin Contamination.</td>
</tr>
<tr>
<td>10:10</td>
<td>Reception Center Monitoring and Decontamination Supervisor and ARC First Aid provide patient status and turn over care to Matagorda County EMS. A monitoring staff member provides radiological status of the patient and accompanies the ambulance to the hospital.</td>
</tr>
<tr>
<td>10:15</td>
<td>MCEMS contacts PCMC with known patient information</td>
</tr>
<tr>
<td>10:35</td>
<td>MCEMS arrives at PCMC with the patient.</td>
</tr>
</tbody>
</table>
10:38 Patient is met by medical staff and radiological monitor (local/state) at the unloading area for radiological status, medical briefing, initial treatment and decontamination.

10:45 Stabilization and decontamination of patient begins.

CONTROLLER NOTE
For more information on patient contamination, refer to Figure 10.0-3, Patient’s Skin Contamination After Decontamination.

11:05 Matagorda County Emergency Medical Services personnel, vehicle, and equipment are monitored, decontaminated as needed, and released.

CONTROLLER NOTE
For more information on ambulance radiological conditions, refer to Figure 10.0-5, Matagorda County EMS Radiological Survey.

11:15 Patient decontamination is complete.

11:20 Patient is moved from emergency room area for final treatment and hospital admittance.

CONTROLLER NOTE
For more information on hospital radiological conditions, refer to Figure 10.0-4, Palacios Community Medical Center Radiological Survey and Layout.
<table>
<thead>
<tr>
<th>TIME</th>
<th>SEQUENCE OF EVENTS</th>
<th>MESSAGE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30</td>
<td>Hospital personnel exit decontamination room. Medical Exercise is terminated.</td>
<td>5</td>
</tr>
<tr>
<td>11:50</td>
<td>Critique begins.</td>
<td></td>
</tr>
</tbody>
</table>
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