
**ABERDEEN COMMUNITY CSEPP EXERCISE 2004
(APG CSEPP EX 04)**

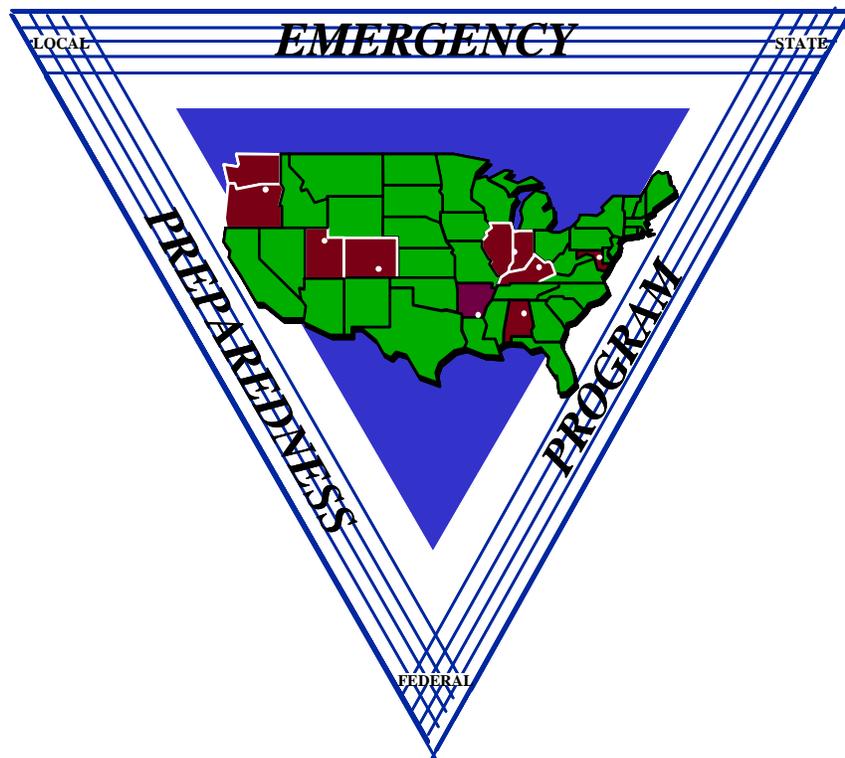


FEMA

AUGUST 4, 2004



CHEMICAL STOCKPILE



**EXERCISE REPORT
FINAL**

DECEMBER 10, 2004

**CHEMICAL STOCKPILE EMERGENCY PREPAREDNESS
PROGRAM (CSEPP)**

**ABERDEEN COMMUNITY CSEPP EXERCISE 2004
(APG CSEPP EX 04)**

August 4, 2004

EXERCISE REPORT

Report Date:

November 29, 2004

INSTALLATION:

Aberdeen Proving Ground/Edgewood Arsenal, Maryland

RESPONSE ORGANIZATIONS:

**Aberdeen Proving Ground/Edgewood Arsenal, Maryland
State of Maryland
Harford County
Baltimore County
Kent County**

APPROVED BY:



Landton D. Malone
FEMA Exercise Co-Director
FEMA Region III



Richard W. Brletich
CMA CSEPP Office

This Page Intentionally Left Blank

**ABERDEEN COMMUNITY CSEPP EXERCISE 2004
(Aberdeen CSEPP EX 04)**

EXERCISE REPORT

Table of Contents

<u>Section</u>	<u>Page</u>
SECTION 1: INTRODUCTION	1-1
EXERCISE SCENARIO	1-2
SIGNIFICANT EVENTS TIMELINE	1-2
SECTION 2: COMMUNITY ANALYSIS.....	2-1
EMERGENCY ASSESSMENT	2-1
ACCIDENT SITE HAZARD MITIGATION	2-1
EMERGENCY MANAGEMENT	2-2
PROTECTION.....	2-3
VICTIM CARE.....	2-3
EVACUEE SUPPORT	2-3
SECTION 3: JURISDICTIONAL ANALYSES	3-1
ABERDEEN PROVING GROUND	3-1
BALTIMORE COUNTY.....	3-13
HARFORD COUNTY	3-15
KENT COUNTY	3-21
STATE OF MARYLAND.....	3-23
NEAR-SITE MEDIA CENTER	3-25
SECTION 4: FRCAs AND ACTION PLANS	4-1
LIST OF FRCAs.....	4-1
ACTION PLANS.....	4-3
APPENDIX 1: COMMUNITY PROFILE	App. 1-1
APPENDIX 2: ANNUAL EXERCISE RECAP.....	App. 2-1
APPENDIX 3: OUT-OF-SEQUENCE MEDICAL PLAY	App. 3-1
APPENDIX 4: ACRONYMS AND ABBREVIATIONS	App. 4-1
APPENDIX 5: DISTRIBUTION.....	App. 5-1

This Page Intentionally Left Blank

ABERDEEN COMMUNITY CSEPP EXERCISE 2004 (Aberdeen CSEPP EX 04)

EXERCISE REPORT

SECTION 1. INTRODUCTION

The Aberdeen Community Chemical Stockpile Emergency Preparedness Program (CSEPP) Exercise 2004 (Aberdeen CSEPP EX 04) was conducted on August 4, 2004, to demonstrate the emergency response capabilities of the Aberdeen CSEPP Community and to validate correction of findings identified during past CSEPP exercises.

The requirement for conducting CSEPP exercises was established in the August 1998 Memorandum of Understanding (MOU) between the Federal Emergency Management Agency (FEMA) and the U.S. Army (DA). Exercise design, planning, evaluation, and reporting guidance is contained in the *Chemical Stockpile Emergency Preparedness Program Exercises* document, dated May 1, 2003.

Exercise design and planning for the Aberdeen Community CSEPP EX 04 was accomplished by the Army Co-Director, the FEMA Co-Director, and representatives from the Edgewood Chemical Activity (ECA), Aberdeen Proving Ground (APG), the State of Maryland, Harford County, Baltimore County, and Kent County.

The exercise was evaluated using the Integrated Performance Evaluation methodology. Evaluation comments are organized according to an evaluation method based upon six Response Operating Systems (ROS).

- 1 Emergency Assessment
- 2 Accident Site Hazard Mitigation
- 3 Emergency Management
- 4 Protection
- 5 Victim Care
- 6 Evacuee Support

The scope and substance of play for the Army and off-post jurisdictions are described in individual Extent of Play Agreements and are summarized in the Exercise Plan. By virtue of the Extent of Play Agreements, the State of Maryland and the counties of Harford, Baltimore, and Kent, primarily served as remote Simulation Cell (SIMCELL) locations to support other exercise participants. These jurisdictions demonstrated ROS capabilities at the Near-Site Media Center (NSMC) and two local hospitals. Off-post Emergency Operations Center (EOC) activity was not demonstrated per the Extent of Play agreements.

EXERCISE SCENARIO

On August 4 at approximately 0830, Technical Escort Unit (TEU) personnel started moving ton containers from the Chemical Agent Storage Yard (CASYS) to the Aberdeen Chemical Disposal Facility (ABCDF). At approximately 0845, when the crane lifted a ton container from row 15, the container bumped containers in row 17. The impact dislodged the bonnet and a valve on the container being moved. The M1 lifting beam disengaged from the ton container that then fell to the ground. Mustard agent leaked from the damaged container onto the chime area of two adjacent containers as it fell. Leaking agent created a puddle on the gravel surface of the ground.

Exercise Scenario design called for eight simulated injuries. However six “real-world” injuries occurred during the exercise. Care and treatment of the “real-world” injured was observed, and the number of simulated injuries was reduced to five.

Meteorological data for this exercise was simulated for response, plume projection, and hazard analysis. Real-world weather was used for Personal Protective Equipment (PPE) stay times.

SIGNIFICANT EVENTS TIMELINE

Actual Time	Jurisdiction	Activities	ROS
0909	All	STARTEX. A ton container fell and began to leak.	
0910	Installation	Workers at the site recognized the event as a chemical accident and were capable of reporting the event.	2
0914	Installation	APG EOC receives first call concerning the event at Chemical Agent Storage Yard (CASYS) including the injury of two workers.	2
0915	Installation	Initial Response Force (IRF) Commander/On-Scene Commander (OSC) was notified.	3
0915	Installation	EOC staffing was sufficient to make a hazard analysis and decide off-post Protective Action Recommendation (PAR) and on-post Protective Action Decision (PAD).	3
0915	Installation	Hazard analysis determined the on-post areas at risk based on the maximum credible event (MCE) of one quarter of a ton container leaking.	1
0916	UCMC	Notification of first patient with an exposure to sodium hydroxide by EMS.	5
0917	HMH	EMS notification of an event at APG involving mustard agent with several injuries.	5
0917	Installation	Fire Department (FD) decided the PAD for the post population. The PAD was to evacuate ABCDF and take shelter in two other buildings.	4
0917	Installation	Fire Department decided the PAR for off-post communities. The PAR was to evacuate boats off the Bush River.	1

Actual Time	Jurisdiction	Activities	ROS
0918	Installation	A M12 Decontamination Apparatus arrived at the Forward Command Post.	2
0921	Installation	Fire Department activated CAIRA Net via radio.	
0923	Installation	TEU made initial entry party situation report from the accident site. The agent puddle size was reported.	2
0925	Installation	FD activated the APG Chemical Accident or Incident Response and Assistance (CAIRA) Net. APG EOC was included in the notification.	1
0928	HMH	Radio communication received from APG FD with notification of two patients from APG EA contaminated with mustard agent one patient in route to UCMC and one patient to HMH.	5
0928	Installation	FD classified the event as a Community Emergency.	1
0933	Installation	Off-post 24-hour warning points were notified of a mustard agent accident in the CASY. Notification did not include chemical event notification level (CENL), wind direction, or PAR.	1
0928	Installation	Initial D2PCw plume plot was broadcast off-post.	1
0930	Installation	Security perimeter was established around the accident site.	2
0934	UCMC	First patient arrived at hospital via APG ambulance. The decision was made not to decontaminate patient.	5
0934	Installation	APG EOC sent a fax to the off-post warning points confirming a mustard agent accident in the CASY. The fax included the CENL (Community Emergency) and wind direction. No PAR was made.	1
0944	Installation	First victim from the accident site was processed through the FD emergency personnel decontamination station (EPDS).	5
0946	Installation	Headquarters Department of the Army (HQDA) Army Operations Center (AOC) was notified of a chemical accident in the APG CASY. Leak of mustard; details to follow.	1
0947	Installation	Responders at the site covered the spill area.	2
0948	Installation	Northeast region office of Installation Management Agency (APG's higher command) notified of a chemical accident in the CASY. Leak of mustard; details to follow.	1
0950	Installation	E-mail sent to on-post residents, contractors, and visitors said that an accident occurred but there was no danger.	4
0950	Installation	Confirmation received that ABCDF and other non-essential installation personnel were protected.	4
0957	Installation	National Response Center (NRC) was notified of the accident and was given all required information. NRC was told that two were injured and there was a possible plume off post.	1
1004	UCMC	Patient #2 arrived at hospital. Patient had mustard (HD) exposure to left eye.	5
1007	Installation	Off-post EOCs notified of updated CENL, wind direction and PAR.	1

Actual Time	Jurisdiction	Activities	ROS
1010	Installation	APG EOC called the NRC to report that the spill was contained.	1
1016	UCMC	Patient #2 was decontaminated.	5
1025	NSMC	NSMC opened.	3
1030	HMH	First patient (#8) arrived in the parking lot outside of the decontamination area via EMS.	5
1045	HMH	Patient # 8 entered internal decontamination room accompanied by non-PPE clad responders.	5
1050	HMH	Patient #8 exits decontamination room (after simulated decontamination) and is placed in exam room 1 in the emergency department (ED).	5
1100	HMH	Patient # 3 arrived in ED via EMS and was placed in a treatment area.	5
1120	Installation	First next-of-kin (NOK) notification was made concerning worker with knee injury, now at HMH.	3
1121	Installation	Chief of Security and Chief of Chemical Security Defense Force (CSDF) began recall of personnel to relieve on-duty personnel.	3
1125	HMH	Patient # 6 arrived in ED via EMS.	5
1125	Installation	Second NOK notification made.	3
1130	HMH	Patient # 6 was placed in treatment room in ED.	5
1130	Installation	Protective action at ABCDF ended.	4
1137	HMH	ENDEX for HMH.	5
1137	Installation	Post population provided updated protective action information.	4
1138	UCMC	ENDEX for UCMC.	5
1158	Installation	SIMCELL mock media received first Army news release.	3
1210	NSMC	News conference began.	3
1217	Installation	Third NOK notification made.	3
1245	NSMC	News conference ended.	3
1350	All	ENDEX.	

SECTION 2. COMMUNITY ANALYSIS

RESPONSE OPERATING SYSTEM 1 - EMERGENCY ASSESSMENT

Emergency Assessment includes all tasks associated with identifying the hazard, classifying and providing notifications of the hazard and appropriate Protective Action Recommendations (PARs) to offsite agencies, and coordinating and conducting monitoring and sampling operations to further specify the hazard.

Hazard analysts considered the seriousness of the chemical accident and produced initial and subsequent hazard assessments and predictions. Hazard area plots showed risk areas and a predicted hazard envelope, populations at risk, protective action options, and projected plume behavior. There were problems with this process and the products it produced. The Initial Response Force (IRF) Commander's designated representative decided the optimum Protective Action Recommendation (PAR) for off-post, and announced the recommendation for implementation. The off-post warning points were notified of the Chemical Event Notification Level (CENL) and PAR, but the notification was not timely. Monitoring and sampling equipment was operational and ready for deployment when needed. Monitoring and sampling teams were deployed only to the accident site area where they collected and reported authentic, credible information about chemical agent hazards at that location.

In accordance with the Aberdeen Community Extent of Play Agreements for this exercise, off-post jurisdictions did not demonstrate Emergency Assessment capabilities.

RESPONSE OPERATING SYSTEM 2 - ACCIDENT SITE HAZARD MITIGATION

Accident Site Hazard Mitigation, conducted primarily on-post, includes all response tasks at the accident scene to contain the source and limit the magnitude of the hazard's impact. It includes all tasks at the accident scene except for those specifically associated with the Victim Care Response Operating System (ROS).

A security cordon was established around the accident site, and an emergency access control point was operated for all responders entering the Bush River area and the Chemical Agent Storage Yard (CASY). Personnel working within and around the CASY were accounted for by security and evacuated safely outside the predicted hazard area (wedge).

Responders took appropriate action to rescue victims, secure chemical agent, contain the release, and document their actions. The leaking container was plugged by first responders to halt the spill of liquid agent. The spill was further confined by the use of absorbent socks and a gravel dike, applying high-test hypochlorite as a decontaminant, and covering the complete spill area with plastic to mitigate the vapor release. Additional work crews monitored other areas within the CASY and the Contamination Control Line (CCL) to determine if levels of contamination

were present, and documented the results. All work crews processed through the CCL and personal decontamination stations (PDS) upon exiting the accident site.

In accordance with CSEPP exercise guidance, off-post jurisdictions are not required to demonstrate Accident Site Hazard Mitigation capabilities.

RESPONSE OPERATING SYSTEM 3 - EMERGENCY MANAGEMENT

Emergency Management Response includes all top-level decision-making, coordination, and direction and control of the response, including mobilization and operation of the emergency operations center (EOC); providing information to outside officials; public information and media relations; and management-level logistics coordination.

Aberdeen Proving Ground (APG) alerted and mobilized emergency operations and response staff, activated the EOC, and made notifications concerning the event. The APG EOC achieved operational status promptly, conducted regular staff briefings, and maintained operations for the duration of the response. Effective command and control of response activities were demonstrated using a combination of telecommunications, radio technologies, and automated information management tools.

A Community Emergency was declared based on a projected off-post plume into the Bush River. Protective actions were implemented by APG only for the Aberdeen Chemical Disposal Facility (ABCDF) and two nearby support buildings. The APG EOC effectively tracked the status and location of the numerous exercise and actual medical emergencies.

A Near-Site Media Center (NSMC) was established jointly by the Army and off-post jurisdictions. Prior to the opening of the NSMC, Army public affairs activities were conducted from the APG EOC and the installation public affairs office. The NSMC monitored media activity, interacted with the media, disseminated news releases received from participant jurisdictions, and organized a news conference. Staff from each jurisdiction (the Army, the State of Maryland, Harford County, Kent County, and Baltimore County) worked together to perform these functions in a coordinated manner. Some areas for improvement in document review procedures and news conference content were noted, but the level of participation from the community's jurisdictions and agencies was outstanding. The NSMC staff operated in a professional and dedicated manner.

In accordance with the Aberdeen Community Extent of Play Agreements for this exercise, off-post jurisdictions did not demonstrate Emergency Management capabilities except for the operation of a Near-Site Media Center.

RESPONSE OPERATING SYSTEM 4 - PROTECTION

Protection includes all activities related to ensuring protection of on-post and off-post general and special populations through making appropriate protective action decisions (PADs), using sirens and other warning methods, disseminating warning messages, providing access control and security, and providing screening and decontamination.

Accurate recommendations for the initial CENL and optimum PARs and PADs were developed and disseminated by the Army. There were no people in the predicted hazard area on post; however, three nearby locations were advised to either shelter-in-place or to evacuate as a precaution. Access to hazardous areas was prevented. The on-post population was advised of the event and that there was no need to screen non-response personnel for agent exposure.

In accordance with the Aberdeen Community Extent of Play Agreements for this exercise, off-post jurisdictions did not demonstrate Protection capabilities.

RESPONSE OPERATING SYSTEM 5 – VICTIM CARE

Victim Care includes all activities related to treating on-post chemically contaminated casualties. This includes the proper treatment of casualties during transport and at medical treatment facilities as well as the handling of human remains.

Six real-world victims were evaluated and treated in addition to the exercise victims. Three patients required emergency care and were transported to local medical facilities. These additional patients exceeded the maximum probable event for medical support without adversely affecting exercise operations. The organization and utilization of all on-post medical resources to achieve this level of capacity was extraordinary.

Off-post exercise play was initiated by the APG Fire Department (APG FD). The play demonstrated by Upper Chesapeake Medical Center (UCMC) and Harford Memorial Hospital (HMH) involved receipt of patients from APG-Edgewood Area (APG-EA), partial decontamination, and treatment of patients.

Due to lack of uniform communication and understanding, the hospitals initially exhibited confusion and chaos. Clarity was gleaned with arrival of the patients. Differences in terminology among responders were problematic throughout the exercise. However, despite these communications glitches, patient care was not compromised.

RESPONSE OPERATING SYSTEM 6 - EVACUEE SUPPORT

Evacuee support includes all tasks following the protective action decision through opening, operating and supporting reception centers and shelters. In accordance with the Aberdeen Community Extent of Play Agreements, no jurisdictions demonstrated evacuee support capabilities.

This Page Intentionally Left Blank

SECTION 3. JURISDICTIONAL ANALYSIS

ABERDEEN PROVING GROUND

Response Operating System 1 – Emergency Assessment

Emergency Operations Center (EOC)

Hazard analysts considered the seriousness of the chemical accident, and produced initial and subsequent hazard assessments and predictions. Hazard area plots showed risk areas and a predicted hazard envelope, populations at risk, protective action options, and projected plume behavior. There were problems with this process and the products it produced. The Initial Response Force (IRF) Commander's designated representative decided the optimum Protective Action Recommendation (PAR) for off-post and announced the recommendation for implementation. The off-post warning points were notified of the Chemical Event Notification Level (CENL) and PAR, but the notification was not timely. Army reporting requirements were not fully satisfied, though other Federal, state, and local notification requirements were met. The governor, local government officials, and local congressional offices were informed about the chemical event and significant changes to the situation before the media and the public.

Field

Monitoring and sampling equipment was operational and ready for deployment when needed. Monitoring and sampling teams were deployed only to the accident site area where they collected and reported authentic, credible information about chemical agent hazards.

Finding Requiring Corrective Action AP04.1.1

Subject: Problems With Hazard Assessment

Discussion: A combination of (1) inaccurate data inputs into the Emergency Management Information System (EMIS)/D2PCw model, (2) a lack of familiarity with the EMIS/D2PCw, (3) a lack of consideration for critical data, and (4) a lack of understanding of the EMIS/D2PCw model outputs, resulted in hazard assessment products that were incorrect and not useful.

Inaccurate data inputs included the inappropriate change of release times from one run to the next (the start time of the release was before 0915 and did not change), and the duration of the observed release as 26 minutes instead of a value somewhere between 36 to 41 minutes according to the available scenario information. The analyst did not use the "vapor depletion" option correctly, and did not broadcast the event until Run003. There was no observed effort to obtain puddle size information and model it. Neither the hazard analyst nor the decision makers understood the meaning of the displayed "no effects dosage" plot, in that they expected the dosage plot would go away after the plume dissipated. Neither plume tail time nor any other technique was used to decide when the hazard was no longer present in any given area.

As a scenario unfolds, a hazard analyst needs the best information possible about the release. Once gathered, a hazard analyst should correctly input the data into the EMIS/D2PCw model, interpret it, and present relevant model outputs to decision makers for consideration. Because of these problems with hazard assessments, decision makers did not have the best scientifically reliable, accurate, and up-to-date information. For example, at the 1000 EOC update, it was briefed that the plume was gone. There was no justification for this statement. Determination of the parameters that describe the extent and duration of the hazard from a chemical release should be based upon the dispersion model outputs that consider the most reliable input information about the release. The decision maker used his own judgment on the extent and duration of the hazard rather than working with the hazard analyst to produce accurate and reliable EMIS/D2PCw model results.

Reference: DA PAM 50-6, "Chemical Accident or Incident Response and Assistance (CAIRA) Operations," March 26, 2003, page 25, paragraph 3-5c(3)(b)2.

Recommendations: (1) Ensure that hazard analysts have and consider initial and updated information from the accident site. (2) Provide in-depth training for a sufficient number of hazard analysts to cover all periods when chemical operations are ongoing. (3) Use hazard analysis expertise that already exists on site (i.e., Chemical Materials Agency [CMA] has a Service Response Force roster with resident hazard analysts).

Finding Requiring Corrective Action AP04.1.2

Subject: Failure to Satisfy Army Reporting Requirements

Discussion: After the Army Operations Center (AOC) was told that an accident occurred in the Chemical Agent Storage Yard (CASY) at Aberdeen Proving Ground (APG), the APG EOC staff did not give the AOC additional details. When the AOC staff (portrayed by the SIMCELL) asked the APG EOC staff for additional information and updates, they were told "we gave you the initial information at the start, and now we have 24 hours to follow up with a chemical report". The AOC then informed the APG EOC that it had information from outside sources (news media reports and a Senator's office) that conflicted with the initial report provided by APG EOC. Even then the APG EOC staff gave the AOC staff more information about the event begrudgingly, and only after the AOC caller persisted.

References: DA Pam 50-6, "Chemical Accident/Incident Response and Assistance (CAIRA) Operations," March 26, 2003, page 8, paragraph 2-10b(1)(k) and Annex C (Chemical Accident or Incident Response and Assistance [CAIRA] Plan) to the Aberdeen Proving Ground Disaster Control Plan (APG-DCP), March 7, 2002, with change 10, page 31, Appendix 3, paragraphs 1a and 2a.

Recommendations: (1) The APG EOC staff should give the AOC all of the information they have initially, and provide clarification and updates immediately as additional information becomes available. (2) Ensuring prompt and complete reports to the AOC concerning a chemical event at APG should be a personal priority for the IRF Commander, and local plans adjusted accordingly to reflect this. (3) Practice the proper, timely, and complete reporting to higher headquarters during every installation CAIRA exercise. Include a critique of the process in the reports of these exercises.

Finding Requiring Corrective Action AP04.1.3

Subject: Initial Notification of On-Post and Off-Post Warning Points

Discussion: When the initial telephonic notification call was made from the APG EOC to off-post and on-post response agencies, the prepared notification form was not read in its entirety. Among other facts, the notifier neglected to read the critical information that this event was categorized as a Community Emergency. This fact was not disseminated until the APG EOC staff distributed a copy of the notification form by fax to the various response agencies five minutes after the call.

Reference: APG Disaster Control Plan, Annex C, “Chemical Accident or Incident Response and Assistance Plan,” March 7, 2002, with change 10, page 31, paragraphs 1a and 2a.

Recommendations: (1) APG EOC staff should be trained on the importance of the information and the need to read all of the information on the notification form. (2) Confirmation of notification to on-post and off-post warning points concerning a chemical event at APG should be a personal priority for the IRF Commander, and local plans should be adjusted accordingly to reflect this. (3) Practice the proper, timely, and complete notification of on-post and off-post warning points during every installation CAIRA exercise. Include a critique of the process in the reports of these exercises.

Finding Requiring Corrective Action AP04.1.4

Subject: Off-Post Notification Procedures

Discussion: The APG procedures for identifying a chemical event and notifying off-post warning points are cumbersome and inefficient. The key to the procedures is an APG 911 call when an actual or suspected chemical event is observed. This call rings in the APG EOC and the Fire Department (FD). However, before chemical event notifications are made to on-post and off-post warning points using the CSEPP Accident Notification Telephone System (CANTS), the Fire Department must classify the chemical event, and then activate the CAIRA Net. Only when the event classification is disseminated over the CAIRA Net can the EOC staff notify the warning points. During this exercise, 25 minutes elapsed from the time that the chemical accident was observed until the off-post warning point in Harford County was notified about a community emergency.

Key events:

- 0909 – Ton container accident occurred. Mustard leak witnessed by workers.
- 0910 – Workers reported the event.
- 0914 – The first radio call declaring a chemical event in the CASY with two injuries was received at the APG EOC.
- 0921 – The APG FD declared activation of the CAIRA Net via radio.
- 0925 – The CAIRA Net activated on post.
- 0928 – APG FD classified the event as a Community Emergency.
- 0933 – CANTS used to alert and notify off-post response agencies (as noted elsewhere in this report, the telephonic notification failed to report a Community Emergency)
- 0934 – Fax copy of alert and notification received at Harford County EOC (the first official notification that the event was a Community Emergency)

Army Policy:

1. AR 50-6 states that: “Responsible commanders will report any chemical event declared a community emergency by the fastest, most efficient means available to State and local emergency response officials responsible for the affected areas.”
2. DA PAM 50-6 states that the Army: “Notifies local and State authorities in a timely manner as specified in the Planning Guidance for the Chemical Stockpile Emergency Preparedness Program (CSEPP) or as stated in MOAs with the off-post organization, whichever is stricter.”
3. The CSEPP Planning Guidance states that chemical depots shall: “Within 5 minutes from initial detection of an actual or likely chemical agent release at APG, ANAD, BGAD, NAAP, and PBA, and within 10 minutes from initial detection of an actual or likely release at PUDA, TEAD, and UMDA, the Army installation will notify the designated off-post point(s) of contact of the actual or likely occurrence, its chemical event emergency notification level, and recommended protective actions.”

Local Policy:

1. APG entered into and signed a Memorandum of Understanding (MOU) with the APG Community that states: “Per agreement, within ten (10) minutes upon completion of the Chemical Accident or Incident Response and Assistance (CAIRA) Net or within (5) minutes of a fire at the Chemical Agent Storage Yard, the installation will notify the designated off-post warning points of the actual or likely occurrence, its chemical event emergency notification level, and recommended protective actions.” In part this is predicated upon the Joint Memorandum Maryland Chemical Stockpile Emergency Preparedness Program (CSEPP), Maryland Initial Notification Protocol that approved the deviation to ten minutes in the event of a chemical agent spill or leak.
2. The APG response is again stated in the standard operating procedure (SOP) for CAIRA Notifications where it states: “The purpose of this procedure is provide a protocol to insure rapid and correct initial notification in the event of a chemical

emergency occurring at the Aberdeen Proving Ground (APG). It is APG's stated goal that the initial notification be completed within ten (10) minutes upon completion of the CAIRA Net and within five (5) minutes upon declaration of a catastrophic event such as a fire at CASY."

APG met the local MOU provisions on alert and notification; that is, the CAIRA Net was activated at 0925; and at 0934, a message was faxed to the off-post warning points to give them the PAR. There is no document authorizing APG to maintain an emergency response posture less strict than required by both Army regulation and joint Army/FEMA agreement. In fact, the local MOU allows the Army an unspecified and unlimited time between the observation of the occurrence of a chemical event and the completion of the off-post notification. The MOU is, in all probability, invalid as a contravention of Army regulation without compensatory measures.

References: AR 50-6, "Chemical Surety," June 26, 2001, page 39, paragraph 11-4a; DA PAM 50-6, "Chemical Accident/Incident Response and Assistance (CAIRA) Operations," March 26, 2003, page 8, paragraph 2-8c(2)(b); "Planning Guidance for the Chemical Stockpile Emergency Preparedness Program," May 17, 1996, page 8-13, paragraph 8.4.1; Joint Memorandum "Maryland Chemical Stockpile Emergency Preparedness Program (CSEPP) Maryland Initial Notification Protocol" April 6, 2000; and "Aberdeen Proving Ground Community, Subject: Initial Notification of a Chemical Accident or Incident, Memorandum of Understanding, November 2002"; SOP on CAIRA Notifications for CASY, Ton Container Movement, and ABCDF Aberdeen Proving Ground, Maryland; undated, CANTS Procedures, 1.

Recommendations: (1) Use the APG 911 system as the primary notification to the EOC, security, and police as a method to expedite the APG response. According to APG employees, the current 911 system does not allow for all parties to be on the line if the EOC picks up the line first. Perhaps a simple technological fix could solve this issue. (2) Use the nighttime initial alert and notification procedures during duty hours as well as at night. (3) Practice the proper, timely, and complete notification of on-post and off-post warning points during every installation CAIRA exercise. Include a critique of the process in the reports of these exercises.

Status of Previous Finding

Finding: AP03A01.1

Subject: Chemical Event Emergency Notification

Resolved: Yes

Response Operating System 2 – Accident Site Hazard Mitigation

A security cordon was established around the accident site, and an emergency access control point was operated for all responders entering the Bush River area and the CASY. Personnel working within and around the CASY were accounted for by security and evacuated safely outside the predicted hazard area (wedge). However, several Chemical Site Defense Force (CSDF) guards located within the security cordon did not don respiratory protection.

Responders took appropriate action to rescue victims, secure chemical agent, contain the release, and document their actions. They also avoided disturbing equipment, materials, and conditions at the site to facilitate subsequent accident investigations. Firefighters were directed to help with emergency assistance to injured workers, but those who entered the contamination control area in CASY failed to wear appropriate personal protective equipment (PPE).

The leaking container was plugged by first responders to halt the spill of liquid agent. The spill was further confined by the use of absorbent socks and a gravel dike, applying high-test hypochlorite as a decontaminant, and covering the complete spill area with plastic to mitigate the vapor release. Additional work crews monitored other areas within the CASY and the Contamination Control Line (CCL) to determine if levels of contamination were present, and documented their results. All work crews processed through the CCL and personal decontamination stations (PDS) upon exiting from the accident site.

Observation

Subject: PDS Equipment Failure

Discussion: During setup of the PDS the water pump used to heat the water was not functioning properly. A nozzle was not present on the hose, allowing excessive waste water to accumulate for later disposal into the liquid hazardous waste barrel located at stations two through seven. The hose end at the hot side of the PDS should have had a nozzle attached prior to the start of the pump. Although the nozzle was later attached, water had already accumulated in the containment sump. This means excess contaminated waste would have to be handled and could have caused cross-contamination to PDS workers at that station.

Reference: USA TEU SOP No TU-0000-M-051, April, 2004, Appendix A, pages 23 and 24

Recommendation: Identify a step in the SOP to attach the nozzle prior to activating the water supply.

Observation

Subject: Security Guard Communications Problems

Discussion: On several occasions, security guards at the accident site could not communicate on the security radio net because they received a busy signal when keying their radio(s). These busy signals affected the passing of essential elements of information because information was delayed until the system was able to process the traffic. Apparently, perhaps due to the age of the system and the shortage of radio frequencies, the security net cannot effectively handle large volumes of traffic.

Reference: Army Regulation 190-59, "Chemical Agent Security Program," July 1, 1998, page 19, paragraph 6-4c.

Recommendation: Security guards should maintain communications discipline during emergencies to permit the rapid exchange of information and practice this discipline during day-to-day and exercise operations.

Finding Requiring Corrective Action AP04.2.1

Subject: Ineffective Heat-Stress Management

Discussion: The Technical Escort Unit (TEU) response team did not follow an appropriate work/rest regimen. The first team member donned Level A PPE at 0918 and remained in Level A PPE for 43 minutes. At 0950 the "wet-bulb" reading was 80 degrees, which obligated the wearers of this PPE to a 15-minute work/45-minute rest cycle. Otherwise, entry to and exit from the accident site and actions by the TEU response team at the site were proper and effective.

The TEU response team that set up the PDS was then tasked to support continue to operate the PDS. This was a very labor intensive set of tasks. Failure to implement an appropriate work/rest cycle for these responders delayed the setup of the PDS and risked their exposure to heat-related injuries. In turn, this caused other responders to remain on the hot side of the PDS in full protective equipment longer than expected.

Any chemical operation must consider the consequences of weather conditions on operator work/rest cycles. Even though TEU responders were skilled and efficient, they were unable to complete their response mission as planned without risk of heat-related injuries.

References: "TEU Chemical Accident/Incident, Response and Assistance (CAIRA) Procedures," June 15, 2004, Appendix D, page 54, Table 3, and DA PAM 385-61, "Toxic Chemical Agent Safety Standards," page 15, paragraph 4-3.

Recommendations: (1) Plan response team activities in accordance with an appropriate work/rest cycle to protect workers from heat-related injuries. Divide workload and ensure adequate personnel and backups are available to comply with the heat stress plan. (2) Reconsider conducting operations during hot and humid weather that might prevent responders from completing their mission safely.

Finding Requiring Corrective Action AP04.2.2

Subject: CSDF Protective Masks

Discussion: CSDF guards patrolled the CASY without wearing chemical protective masks before the safety restricted areas' protective measures were relaxed.

Reference: Army Regulation 385-61, "The Army Chemical Agent Safety Program," October 12, 2001, page 9, paragraph 2-5n.

Recommendation: Develop procedures to ensure that the safety restricted area around an accident site is defined in all directions from the site, that the perimeter of the safety restricted area is announced to all concerned, that all personnel required to operate in the safety restricted area are informed of the boundaries of this area, and that the discipline to take protective measures in this area is enforced.

Status of Previous Findings:

Finding: AP03A13.1

Subject: Command and Control of Downrange Operations

Resolved: Yes

Status of Previous Findings:

Finding: AP03A13.2

Subject: Fire Department Protective Clothing for Chemical Response

Resolved: No. New Finding Requiring Corrective Action **AP04.2.3**

Response Operating System 3 – Emergency Management

APG alerted and mobilized emergency operations and response staff, activated the EOC, and made notifications concerning the event. The APG EOC achieved operational status promptly, conducted regular staff briefings, and maintained operations for the duration of the response. Effective command and control of response activities were demonstrated using a combination of

telecommunications, radio technologies, and automated information management tools. The Army chain of command was informed that the IRF was activated. The next-of-kin (NOK) of injured and exposed persons were notified, though not expeditiously.

A Community Emergency was declared based on a projected off-post plume into the Bush River. Protective actions were implemented by APG only for the Aberdeen Chemical Disposal Facility (ABCDF) and two nearby support buildings. The APG EOC effectively tracked the status and location of the numerous exercise and actual medical emergencies.

A Near-Site Media Center (NSMC) was established jointly with off-post jurisdictions. Prior to the opening of the NSMC, Army public affairs activities were conducted from the APG EOC and installation public affairs office.

Observation

Subject: Ineffective Information Exchange in the EOC

Discussion: The EOC Chief announced briefing times regularly. However, most EOC staff were not prepared to provide updated information, and little attention was given to the person speaking. The noise level was very high because phones continued to ring and be answered, and side conversations were not halted. Additionally, a written log that was started in the front of the EOC was rarely updated. Because of this, conflicting information about important facts concerning the accident (e.g., number and status of injured persons) were never resolved.

Reference: DA PAM 50-6, "Chemical Accident or Incident Response and Assistance (CAIRA) Operations," March 26, 2003, page 23, paragraph 3-5.

Recommendation: Senior managers in the EOC should establish noise level discipline during update briefings. EOC staff needs to place emphasis on the importance of briefings, and give attention to these events. Consider using a microphone, turning off ringers and installing lights on phones, taking phones off of hooks and/or using headsets during briefings, and keeping all logs up to date.

Observation

Subject: Errors in News Releases

Discussion: Generally, the PAO staff did a good job of preparing, clearing and distributing news releases. However, initial draft news releases were not marked as such, which could have caused confusion and the release of erroneous information. This shortcoming was caught and corrected after the second news release. The initial news release did not include a time. This was corrected with the second news release. Also, the first news release speculated on the presence of mustard at the accident site, although its presence was known. While this did not present a threat to health and safety of those

on the installation or in the civilian community, it could damage the credibility of the installation and the Army, or at least embarrass both. After the exercise, the public affairs officer (PAO) confirmed that the conditional character of the initial news release resulted from use of a template for an accident in which the presence of agent has not been confirmed. Templates are a good tool in the preparation and dissemination of timely information, but the actual news release developed from the template must be reviewed carefully to ensure it is correct in all particulars. Finally, the second news release announced, "Aberdeen Proving Ground and its partners...are activating a near site (sic) media center..." In fact, the NSMC had been open for 33 minutes when the news release went out (at 1058). It would have been preferable for the news release to state clearly that the NSMC was open for business.

Reference: AR 360-1, Annex J to APG DCP

Response Operating System 4 – Protection

EOC

Accurate recommendations for the initial CENL and optimum PARs and PADs were developed. The IRF Commander's designated representative decided the optimum PAD for on-post and announced the decision for implementation. There were no people in the predicted hazard area; three nearby locations were advised to either shelter-in-place or to evacuate as a precaution.

FIELD

Access to hazardous areas was prevented. The on-post population was advised of the event, and that there was no need to screen non-response personnel for agent exposure. Contaminated protective clothing was prevented from leaving the accident scene. Personnel in the clean area were protected from contamination. Tools and equipment used inside the contamination control line were prevented from leaving the accident site until decontamination was assured.

In accordance with the Extent of Play Agreement, tasks associated with Finding AP03A03.1 from Aberdeen CSEPP EX 03 were not demonstrated. Therefore, the finding remains open.

Finding Requiring Corrective Action AP04.4.1

Subject: Administrative Record Under the National Contingency Plan (NCP)

Discussion: The APG EOC telephone recording system does not functionally include the CANTS. As a result, the Army as the lead federal agency for the response under the NCP, failed to fully document critical information.

Reference: 40 CFR (National Contingency Plan), paragraphs 300.800 and 300.810.

Recommendation: APG should ensure critical modes of communication are recorded.

Status of Previous Findings:

Finding: AP03A03.1

Subject: Protective Actions for the Edgewood Area Population

Resolved: No. New Finding Requiring Corrective Action AP04.4.2

Response Operating System 5 – Victim Care

Six real-world victims were evaluated and treated in addition to the exercise victims. Three patients required emergency care and were transported to local medical facilities. These additional patients exceeded the maximum probable event for medical support without adversely affecting exercise operations. The organization and utilization of all on-post medical resources to achieve this level of capacity was extraordinary.

Response Operating System 6 – Evacuee Support

Evacuee support includes all tasks from the protective action decision through opening, operating and supporting reception centers and shelters. In accordance with the Army's Extent of Play Agreement, tasks in this ROS were not demonstrated.

This Page Intentionally Left Blank

BALTIMORE COUNTY

Based on the extent-of-play agreement, Baltimore County primarily served as a remote SIMCELL location to support exercise activities at the Aberdeen Proving Ground (APG) and the Near-Site Media Center (NSMC). Baltimore County demonstrated ROS 3: Emergency Management through their participation at the NSMC. ROS 5: Victim Care was demonstrated in the August 14, 2004, exercise at Franklin Square Medical Center. This evaluation is in Appendix 3 of this document. No other at ROS activities were demonstrated.

Response Operating System 1 – Emergency Assessment

Not Applicable.

Response Operating System 2 – Accident Site Hazard Mitigation

Not Applicable.

Response Operating System 3 – Emergency Management

The evaluation of this Baltimore County activity is described as part of the NSMC jurisdiction.

Response Operating System 4 – Protection

Not Applicable.

Response Operating System 5 – Victim Care

The evaluation of this Baltimore County activity is described in Appendix 3.

Response Operating System 6 – Evacuee Support

Not Applicable.

This Page Intentionally Left Blank

HARFORD COUNTY

Based on the extent-of-play agreement, Harford County primarily served as a remote SIMCELL location to support exercise activities at the Aberdeen Proving Ground (APG) and the Near-Site Media Center (NSMC). Harford County demonstrated ROS 3: Emergency Management through their participation at the NSMC and ROS 5: Victim Care through their activity at Harford Memorial Hospital (HMH) and Upper Chesapeake Medical Center (UCMC). No other at ROS activities were demonstrated.

Response Operating System 1 – Emergency Assessment

Not Applicable.

Response Operating System 2 – Accident Site Hazard Mitigation

Not Applicable.

Response Operating System 3 – Emergency Management

The evaluation of this Harford County activity is described as part of the NSMC jurisdiction.

Response Operating System 4 – Protection

Not Applicable.

Response Operating System 5 – Victim Care

Harford Memorial Hospital

HMH partially demonstrated the processing, decontamination, and treatment of chemical agent casualties. At 0915, approximately six minutes into the exercise, HMH heard (over the emergency medical services [EMS] radio scanner) about an accident involving a sodium hydroxide spill on the Edgewood Area of APG (APG-EA). One person was exposed. The patient was being transported to UCMC. Approximately two minutes later, the HMH emergency department (ED) heard (via the EMS scanner) about a chemical accident at the Chemical Agent Storage Yard (CASY) on APG-EA involving several patients. No specific casualty information was provided. At 0928, the APG Fire Department (APG FD) contacted the HMH ED, stating that two mustard-exposed patients were being transported, one to UCMC and one to HMH, and that the previously described sodium hydroxide-exposed patient had arrived at UCMC. The charge nurse and the other nurses in the ED were confused as to whether the patients being

transported were exposed to sodium hydroxide or mustard agent. The nurses did not attempt to clarify the situation by contacting APG FD, the installation (APG), or the APG EOC.

At 1018, a second exercise message was received over the EMS scanner, indicating that a patient with a tibia/fibula fracture of the right leg and liquid mustard exposure to the left arm, was en route to HMH. The patient was estimated to arrive in 15 minutes. The APG FD also stated that the patient had received gross decontamination on the installation and was certified as “clean” by the APD 2000 Chemical Agent Detector. After a short discussion among the staff, the charge nurse directed that the patient be taken to the decontamination room and receive full decontamination prior to entry into the hospital.

At 1027, three staff members (including one security person who had no prior training on decontamination or use of PPE) were told to dress out to receive the contaminated patient outside of the decontamination room. Rudimentary attempts were made to screen decontamination team members for pulse and blood pressure. They were not screened for body weights, temperatures, skin condition, medications or current illnesses. At 1030, a patient (tibia/fibula fracture, liquid HD exposure left arm) arrived by ambulance at the decontamination area at the south end of the hospital.

There was a small parking area where several vehicles were parked. The vehicles had to be moved so that the ambulance could enter. One member of the decontamination team went upstairs to assist the APG FD paramedics in bringing the patient down an elevator to the patient decontamination room. The lack of a key for the elevator delayed this process for eight minutes. A loose metal plate on the decontamination ramp almost upended the gurney as it was pushed up the ramp towards the elevator. At 1045, the patient arrived at the decontamination room. No attempts were made to restrict other patients or employees from access to the decontamination area in the basement or from entry into the elevator foyer on the first floor of the building. At 1055, the patient was transported to the ED, and the ED was notified via Facilities Resources Emergency Database of the mustard accident at the CASY at APG-EA.

At 1100 hours, a patient with sunburn, a sprained ankle, and hypertension arrived at the HMH ED. He was reported to have sustained no mustard agent exposure and did not require any decontamination. He was admitted directly to the ED, and the assessment and treatment of this patient was appropriate to his injuries. At 1105, the ED received a call from Joppa Fire Service that they were en route with a patient with a left ankle fracture, a left ulna fracture, and sunburn of the face and arms. He reportedly had no mustard exposure and had received low level monitoring to verify the absence of mustard.

At 1125, another patient admitted directly to the ED; the assessment and treatment of this patient was appropriate to his injuries. Medical play at HMH ended at 1137 hours.

Observation

Subject: Decontamination Area

Discussion: The use of the loading dock area for initial patient unloading and triage for decontamination might cause difficulty when dealing with a large number of patients or a significant number of patients arriving by ambulance. Vehicles parked in the area restricted access to the loading dock. HMH has the resources to remove parked vehicles, but significant delay is likely, and the entrance may become clogged before obstructions can be removed. With the obstructions, turning ambulances around quickly to return to an accident scene would be problematic.

Recommendation:

1. Keep the patient unloading area free from vehicles and obstructions to unloading and triaging patients.
2. Repair trip hazards on the ramp to the elevator that leads to the decontamination room.
3. Restrict access to the loading dock, elevator, and decontamination areas when processing potentially contaminated patients.

Observation

Subject: Medical Screening of Decontamination Team Members

Discussion: None of the personnel performing decontamination in the hospital received proper pre-entry and post-entry screening for the wearing of PPE. No attempts were made to assess levels of hydration, skin condition, weight loss, body temperature, presence of current illnesses, etc. This poses a potential health and safety risk to responders donning PPE.

Reference: American College of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value

- Recommendation:**
1. Institute a biological pre- and post-entry monitoring program for decontamination team members wearing PPE, in accordance with the ACGIH TLV for Heat Stress/Heat Strain.
 2. Ensure that stay time of members in PPE is monitored, and that work/rest cycles are adjusted based upon the physiologic response to the heat.

Observation

Subject: Confusing Terminology

Discussion: HMH staff members were confused about the meaning of some terms used during radio and face-to-face interactions with APG FD. For example: “APD 2000 Chemical Agent Detector,” “mini cam,” “certified clean” or “monitored”. Lack of

knowledge of terminology might lead to inappropriate assessment and treatment resulting in harm to both patients and healthcare workers.

Reference: Medical Standard of Practice

Recommendation: HMH chemical responder staff should have training so that they clearly understand terminology that might be used during a chemical event at APG. All responders must speak a common language for a safe, coordinated, effective emergency response.

Finding Requiring Corrective Action HA04.5.1

Subject: Inadequate Preparation Donning PPE

Discussion: None of the HMH personnel performing decontamination had received of OSHA operations level training, as required by Standard Title 29 Code of Federal Registry (CFR) 1910.120 (q). One of the three decontamination team members had never worn PPE prior to this exercise.

Reference: Standard Title 29 Code of Federal Registry (CFR) 1910.120 (q); OSHA Pamphlet- 3152, 1997, “Hospital and Community Emergency Response- What You Need to Know”.

Recommendation: Provide OSHA First Responder Operations Level training: (a minimum of eight hours of training or demonstrated competencies and an annual refresher) to all members of the HMH chemical response team.

Upper Chesapeake Medical Center

At approximately 0916, the EMS ambulance personnel from APG-EA notified the UCMC ED that they were en route with a patient who sustained a sodium-hydroxide burn to his lower left leg at the ABCDF. They also were informed by EMS via radio approximately seven minutes later that an accident had occurred at the CASY and that casualties were expected. The UCMC ED Incident Commander (IC) then activated the emergency response plan. This included assigning personnel to such positions as Safety Officer, Buffer Zone Nurse, etc., activating the call roster, and checking for bed type and availability in the hospital.

The ED received a call from EMS at 0927 with information regarding a mustard (HD) agent casualty being transported from CASY. The exact scenario was not known to the hospital at that time. At 0934, the first patient (sodium hydroxide exposure) arrived at the hospital. EMS stated that the ED was to receive a patient that sustained a HD exposure to his left eye. He was decontaminated at the site; however, there was confusion as to the level of decontamination and subsequent monitoring performed. Standard receipt of this patient at the hospital through the EMS crew was not followed. Per the hospital’s Emergency Response Plan, the patient should have been triaged outside, and a decision made as to whether to decontaminate at that time. The

EMS crew escorted the patient through the first set of doors before being stopped by the IC and ED physician to evaluate the situation and make a determination on the patient. After discussion with EMS personnel, it was decided that the patient did not need decontamination and was taken into the ED for evaluation.

The decontamination team donned PPE, and preparations were made to receive the HD casualty. The decision also was made to set up the decontamination tent in the event this was a mass casualty event. The second patient arrived around 1000, at which time security informed the ambulance crew to remain in the ambulance until the decontamination team had fully donned their protective gear. Fifteen minutes later, the triage nurse and medical technician brought the patient into the decontamination room via stretcher. They promptly simulated decontamination of the patient who was triaged by the ED physician. Further follow-up care was discussed with the ED physician by the evaluator at that time.

The mock media arrived at UCMC and filmed near the ambulance entrance. Security intervened to find out who authorized that activity. Security personnel entered the ED to get direction from the IC. The IC decided to bring the media into the ED and place them in a room to await the Public Information Officer (PIO). The mock media waited for approximately 25 minutes before leaving the hospital. The PIO did not arrive at UCMC until the hot wash, after the end of the exercise. The exercise at the hospital was terminated at 1138 hours.

Observation

Subject: Lack of Patient Treatment Documentation

Discussion: Ambulance personnel did not provide any written documentation to ED personnel. However, they did communicate orally to the triage nurse and physician the patient's signs, symptoms, and whatever treatment was performed en route to the hospital. This can impact patient care, outcomes, and record keeping.

Reference: Medical Standard of Practice

Recommendation: Present to the hospital all written documentation (ambulance run report) of pre-hospital signs, symptoms, evaluation, and treatment of patients.

Observation

Subject: Absence of Public Information Officer

Discussion: There was no Public Information representative present at UCMC to field media inquiries.

Recommendation: A plan needs to be in place in which a PIO representative is at the hospital to ensure media are met upon their arrival. In an emergency that includes hospital activity, the presence of media should be expected and anticipated. Non-public

information hospital staff should also be trained on how to appropriately handle the media.

Finding Requiring Corrective Action HA04.5.2

Subject: Inadequate Preparation Donning PPE

Discussion: Three members of the UCMC decontamination team (doctor, nurse, medical technician) donned PPE in response to the HD accident at CASY. However, the decontamination team had not received the required OSHA Operations-level training necessary to safely and effectively don this equipment. Members of the team had some claustrophobia issues that were quickly resolved. This slowed down the donning process while the ambulance crew and patient waited in the ambulance.

Reference: Standard title 29, Code of Federal Regulations (CFR) 1910.120 subpart (q), and OSHA 3152 Pamphlet, “Hospital and Community Emergency Response – What You Need to Know” – 1997, states that each member of the decontamination team receives the required Operations level training (“First Responder Operations Level: minimal 8 hours of training or demonstrated competence and an annual refresher).

Recommendation: Provide the opportunity for the decontamination team to attend the required Operations course. Provide documentation of this training. Also recommend training and using other hospital personnel to provide decontamination to patients to help maintain the required medical staff needed for the treatment of patients once inside the ED.

Response Operating System 6 – Evacuee Support

Not Applicable.

KENT COUNTY

Based on the extent-of-play agreement, Kent County primarily served as a remote SIMCELL location to support exercise activities at the Aberdeen Proving Ground (APG) and the Near-Site Media Center (NSMC). Kent County demonstrated ROS 3: Emergency Management through their participation at the NSMC. No other evaluated ROS activities were demonstrated.

Response Operating System 1 – Emergency Assessment

Not Applicable.

Response Operating System 2 – Accident Site Hazard Mitigation

Not Applicable.

Response Operating System 3 – Emergency Management

The evaluation of this Kent County activity is described as part of the NSMC jurisdiction.

Response Operating System 4 – Protection

Not Applicable.

Response Operating System 5 – Victim Care

Not Applicable.

Response Operating System 6 – Evacuee Support

Not Applicable.

This Page Intentionally Left Blank

STATE OF MARYLAND

Based on the extent-of-play agreement, Maryland Emergency Management Agency (MEMA) primarily served as a remote SIMCELL location to support exercise activities at the Aberdeen Proving Ground (APG) and the Near-Site Media Center (NSMC). MEMA demonstrated ROS 3: Emergency Management through their participation at the NSMC. No other evaluated ROS activities were demonstrated.

Response Operating System 1 – Emergency Assessment

Not Applicable.

Response Operating System 2 – Accident Site Hazard Mitigation

Not Applicable.

Response Operating System 3 – Emergency Management

The evaluation of this MEMA activity is described as part of the NSMC jurisdiction.

Response Operating System 4 – Protection

Not Applicable.

Response Operating System 5 – Victim Care

Not Applicable.

Response Operating System 6 – Evacuee Support

Not Applicable.

This Page Intentionally Left Blank

NEAR-SITE MEDIA CENTER

Response Operating System 1 – Emergency Assessment

Not Applicable.

Response Operating System 2 – Accident Site Hazard Mitigation

Not Applicable.

Response Operating System 3 – Emergency Assessment

The exercise plan provided for a decision by the Army and the State of Maryland to open a Near-Site Media Center (NSMC). Because of the location of this facility and travel distance for some of the staff from agencies that operate it, the NSMC began the exercise with a warm start, i.e., most staff and equipment was in place before STARTEX. The NSMC opened at 1025. At 1035 calls were made to media outlets to advise that the NSMC was open and to provide contact numbers for the public and the media. Public Information Officers (PIOs) and support staff from Aberdeen Proving Ground (APG), the Edgewood Chemical Activity (ECA), the State of Maryland, Harford County, Kent County, and Baltimore County performed the majority of the NSMC functions.

The NSMC monitored media activity, interacted with the media, disseminated news releases received from participant jurisdictions, and organized a news conference. The news conference, which began at 1210, allowed spokespersons from APG, ECA, the State of Maryland, Harford County, Kent County, and Baltimore County to speak with media representatives. These spokespersons remained available for additional interaction with the media after the news conference. Following the news conference, the NSMC staff provided a concise, complete, and accurate briefing to the phone team and other NSMC team members. This briefing included follow-up assignments. Also, it was observed that the mock media were given good follow-up on questions pending from the news conference.

The individuals within the NSMC worked well with each other and displayed teamwork to receive and distribute information internally and externally. The NSMC team worked together to detect and correct discrepancies in news releases. The NSMC room was set up to facilitate flow of information; signs were used to designate teams and individuals. Status boards were regularly updated, and players used them. The news conference area was well situated with displays and tables to accommodate the panel of speakers. Activity at the NSMC concluded at 1351.

Observation

Subject: Non-Secure Pre-Briefing Location

Discussion: NSMC staff conducted a briefing for senior official spokespersons prior to the news conference in the same room where the news conference was to be held. Mock media were nearby and were able to listen to spokespersons discussing sensitive information such as unconfirmed or incomplete reports about the accident, confidential patient information, and information not yet coordinated with all participating jurisdictions. This compromise of sensitive information was unacceptable.

Recommendation: Use a separate entrance to the NSMC for senior officials and spokespersons, and conduct pre-briefings and strategy sessions in a secure area.

Observation

Subject: Inaccurate Information in News Releases

Discussion: Some news releases were confusing or contained inaccurate information. Incoming information should be evaluated to ensure that inaccurate information is not disseminated. For example:

- **Harford County:** The 1008 Harford County news release told media where the “Joint Information Center (JIC)” would be located. The news release directed the media to the “JIC” at both the Chesapeake Club at Aberdeen Proving Ground and the “JIC” at Vitali’s Restaurant in Edgewood. Vitali’s was the actual NSMC location.
- **Aberdeen Proving Ground:** The APG news release at 1103 notified the media of the time and location of the news conference planned for noon at the NSMC. Contact numbers listed on the news releases were not numbers designated for media calls. Those number had been released to the media at 1035. The telephone numbers on this news release were the direct lines to a county PIO.

Recommendation: All information, including template information, should be reviewed for accuracy before dissemination to the public.

Observation

Subject: News Conference Presentations

Discussion: Army spokespersons spoke with confidence and authority during the simulated nationally-televised news conference. However, spokespersons provided conflicting information about injured workers, and expressed no

empathy for the injured workers or their families. Based on the information available to spokespersons at the time of the news conference, they inappropriately speculated on the cause of the accident and prematurely committed to the resumption of chemical agent movements to the ABCDF before the investigations into the cause of the accident would be complete.

The Kent County PIO was unaware of the Army's control over the Bush River while explaining the actions being taken with regard to boaters on the Bush River. Army spokespersons did not provide any immediate clarification on jurisdictional responsibilities for the Bush River.

Spokespersons at news conferences need to be prepared to address basic information about the accident and the response, and anticipate media questions with plausible, complete, coordinated answers.

Recommendations: Spokespersons from all jurisdictions should practice the development and presentation of information in a news conference environment during every local CAIRA exercise.

Response Operating System 4 – Protection

Not Applicable.

Response Operating System 5 – Victim Care

Not Applicable.

Response Operating System 6 – Evacuee Support

Not Applicable.

This Page Intentionally Left Blank

SECTION 4. FRCAs AND ACTION PLANS

LIST OF FINDINGS REQUIRING CORRECTIVE ACTION

The Findings Requiring Corrective Action (FRCAs) identified during the Aberdeen Community CSEPP EX 04 (Aberdeen Community CSEPP EX 04) are presented in the following table. Findings are grouped by the responsible jurisdiction. Findings Requiring Corrective Action have been assigned an identifying number used throughout the report to identify the FRCA. The identifying number should be used in action plans.

The number is structured as follows: XX04.Y.1. The “XX” is a two-letter identification of the response organization to which the FRCA applies [e.g., AC for Aberdeen Community (two or more jurisdictions and includes the Near-Site Media Center), AP for APG/EA, MD for State of Maryland, BA for Baltimore County, HA for Harford County, and KE for Kent County]; “04” represents the year of the exercise; “Y” indicates the Response Operating System (ROS) where the finding requiring corrective action was found (this will be an Arabic number representing the appropriate ROS [e.g., 1 for Emergency Assessment, 2 for Accident Site Hazard Mitigation, 3 for Emergency Management, 4 for Protection, 5 for Victim Care, and 6 for Evacuee Support]); and “1” is the sequence number of the corrective action. Action plans follow.

FRCA Identification	Subject	Page
AP04.1.1	Problems with Hazard Assessment	3-1
AP04.1.2	Failure to Satisfy Army Reporting Requirements	3-2
AP04.1.3	Initial Notification of On-Post and Off-Post Warning Points	3-3
AP04.1.4	Off-Post Notification Procedures	3-3
AP04.2.1	Ineffective Heat-Stress Management	3-7
AP04.2.2	CSDF Protective Masks	3-8
AP03A13.2 AP04.2.3	Fire Department Protective Clothing for Chemical Response	3-8
AP04.4.1	Administrative Record Under the National Contingency Plan (NCP)	3-10
AP03A03.1 AP04.4.2	Protective Actions for the Edgewood Area Population	3-11
HC04.5.1	Inadequate Preparation Donning PPE (HMH)	3-18
HC04.5.2	Inadequate Preparation Donning PPE (UCMC)	3-20

ACTION PLANS

This section contains the action plans of the Aberdeen Community jurisdictions for corrective actions identified during the Aberdeen CSEPP EX 04 and/or the resolution of findings from previous Aberdeen CSEPP exercises.

Aberdeen Proving Ground	4-3
Harford County	4-9

ACTION PLAN for ABERDEEN PROVING GROUND
Aberdeen Community CSEPP Exercise 2004
(August 4, 2004)

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
AP04.1.1	Problems with Hazard Assessment	APG Garrison	August 25, 2004																
<p>CORRECTIVE ACTION/COMMENT: Additional hazard training was conducted for five EOC responders on August 25, 2004. An ongoing training program has been coordinated with the CMA meteorologist.</p> <p>Areas needing improvement (check all that apply):</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 50%;">Training</td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;">Staffing</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Equipment</td> <td><input type="checkbox"/></td> <td>Plan(s)</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Facilities</td> <td><input type="checkbox"/></td> <td>Procedures</td> </tr> <tr> <td><input type="checkbox"/></td> <td colspan="3">Other (specify) _____</td> </tr> </table>				<input checked="" type="checkbox"/>	Training	<input type="checkbox"/>	Staffing	<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)	<input type="checkbox"/>	Facilities	<input type="checkbox"/>	Procedures	<input type="checkbox"/>	Other (specify) _____		
<input checked="" type="checkbox"/>	Training	<input type="checkbox"/>	Staffing																
<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)																
<input type="checkbox"/>	Facilities	<input type="checkbox"/>	Procedures																
<input type="checkbox"/>	Other (specify) _____																		

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
AP04.1.2	Failure to Satisfy Army Reporting Requirements	APG Garrison	August 25, 2004																
<p>CORRECTIVE ACTION/COMMENT: The Surety Officer's checklist in the EOC has been changed to include making updates to higher headquarters as applicable after initial notification is made.</p> <p>Areas needing improvement (check all that apply):</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 50%;">Training</td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;">Staffing</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Equipment</td> <td><input type="checkbox"/></td> <td>Plan(s)</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Facilities</td> <td><input checked="" type="checkbox"/></td> <td>Procedures</td> </tr> <tr> <td><input type="checkbox"/></td> <td colspan="3">Other (specify) _____</td> </tr> </table>				<input type="checkbox"/>	Training	<input type="checkbox"/>	Staffing	<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)	<input type="checkbox"/>	Facilities	<input checked="" type="checkbox"/>	Procedures	<input type="checkbox"/>	Other (specify) _____		
<input type="checkbox"/>	Training	<input type="checkbox"/>	Staffing																
<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)																
<input type="checkbox"/>	Facilities	<input checked="" type="checkbox"/>	Procedures																
<input type="checkbox"/>	Other (specify) _____																		

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
AP04.1.3	Initial Notification of On-Post and Off-Post Warning Points	APG Garrison	August 25, 2004																
<p>CORRECTIVE ACTION/COMMENT: Additional training was conducted on August 25, 2004, for the individual that failed to read the information stated on the form. This will be an objective during the next quarterly CAIRA Exercise.</p> <p>Areas needing improvement (check all that apply):</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Training</td> <td><input type="checkbox"/></td> <td>Staffing</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Equipment</td> <td><input type="checkbox"/></td> <td>Plan(s)</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Facilities</td> <td><input type="checkbox"/></td> <td>Procedures</td> </tr> <tr> <td><input type="checkbox"/></td> <td colspan="3">Other (specify) <input checked="" type="checkbox"/> _____</td> </tr> </table>				<input checked="" type="checkbox"/>	Training	<input type="checkbox"/>	Staffing	<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)	<input type="checkbox"/>	Facilities	<input type="checkbox"/>	Procedures	<input type="checkbox"/>	Other (specify) <input checked="" type="checkbox"/> _____		
<input checked="" type="checkbox"/>	Training	<input type="checkbox"/>	Staffing																
<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)																
<input type="checkbox"/>	Facilities	<input type="checkbox"/>	Procedures																
<input type="checkbox"/>	Other (specify) <input checked="" type="checkbox"/> _____																		

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
AP04.1.4	Off-Post Notification Procedures	APG Garrison	January 5, 2005																
<p>CORRECTIVE ACTION/COMMENT: The Memorandum of Understanding with the CSEPP Community is being changed to say, "Per agreement, within ten (10) minutes of an actual or likely agent release at APG or within five (5) minutes of a fire at the Chemical Agent Storage Yard, the installation will notify the designated off-post warning points of the actual or likely occurrence, its chemical event emergency notification level, and recommended protective actions."</p> <p>Areas needing improvement (check all that apply):</p> <table> <tr> <td><input type="checkbox"/></td> <td>Training</td> <td><input type="checkbox"/></td> <td>Staffing</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Equipment</td> <td><input type="checkbox"/></td> <td>Plan(s)</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Facilities</td> <td><input checked="" type="checkbox"/></td> <td>Procedures</td> </tr> <tr> <td><input type="checkbox"/></td> <td colspan="3">Other (specify) <input checked="" type="checkbox"/> MOUs _____</td> </tr> </table>				<input type="checkbox"/>	Training	<input type="checkbox"/>	Staffing	<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)	<input type="checkbox"/>	Facilities	<input checked="" type="checkbox"/>	Procedures	<input type="checkbox"/>	Other (specify) <input checked="" type="checkbox"/> MOUs _____		
<input type="checkbox"/>	Training	<input type="checkbox"/>	Staffing																
<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)																
<input type="checkbox"/>	Facilities	<input checked="" type="checkbox"/>	Procedures																
<input type="checkbox"/>	Other (specify) <input checked="" type="checkbox"/> MOUs _____																		

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
AP04.2.1	Ineffective Heat-Stress Management	APG Garrison	July 31, 2005																
<p>CORRECTIVE ACTION/COMMENT: APG will plan response team activities in accordance with an appropriate work/rest cycle to protect workers from heat-related injuries, divide workload, and ensure adequate personnel and backups are available to comply with the heat stress plan.</p> <p>Areas needing improvement (check all that apply):</p> <table> <tr> <td>_____</td> <td>Training</td> <td>_____</td> <td>Staffing</td> </tr> <tr> <td>_____</td> <td>Equipment</td> <td>_____</td> <td>Plan(s)</td> </tr> <tr> <td>_____</td> <td>Facilities</td> <td>_____ x</td> <td>Procedures</td> </tr> <tr> <td>_____</td> <td colspan="3">Other (specify) _____</td> </tr> </table>				_____	Training	_____	Staffing	_____	Equipment	_____	Plan(s)	_____	Facilities	_____ x	Procedures	_____	Other (specify) _____		
_____	Training	_____	Staffing																
_____	Equipment	_____	Plan(s)																
_____	Facilities	_____ x	Procedures																
_____	Other (specify) _____																		

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
AP04.2.2	CSDF Protective Masks	APG Garrison	July 31, 2005																
<p>CORRECTIVE ACTION/COMMENT: Personnel were aware that there was an exercise, but the response team was not aware that they had to participate in the exercise. The CSDF will participate fully in future exercises.</p> <p>Areas needing improvement (check all that apply):</p> <table> <tr> <td>_____ x</td> <td>Training</td> <td>_____</td> <td>Staffing</td> </tr> <tr> <td>_____</td> <td>Equipment</td> <td>_____</td> <td>Plan(s)</td> </tr> <tr> <td>_____</td> <td>Facilities</td> <td>_____</td> <td>Procedures</td> </tr> <tr> <td>_____</td> <td colspan="3">Other (specify) _____</td> </tr> </table>				_____ x	Training	_____	Staffing	_____	Equipment	_____	Plan(s)	_____	Facilities	_____	Procedures	_____	Other (specify) _____		
_____ x	Training	_____	Staffing																
_____	Equipment	_____	Plan(s)																
_____	Facilities	_____	Procedures																
_____	Other (specify) _____																		

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
AP02A13.2 AP03A13.2 AP04.2.3	Fire Department Protective Clothing for Chemical Response	APG Fire Department	2005																
<p>CORRECTIVE ACTION/COMMENT:</p> <p>Procedures were changed after the 2002 CSEPP Exercise where the Fire Department does not respond to CASY. TEU provides the initial response to CASY with their ready response team. The Fire Department operates the Emergency Personnel Decontamination Station in the appropriate protective clothing.</p> <p>This finding is carried over to the next annual CSEPP Exercise. APG EX 04 design/scenario did not provide opportunity for Fire Department to demonstrate decision process required when personnel are required to respond to a scene with both fire and Mustard hazards. No action plan required.</p> <p>Similarly, during APG EX 03 no opportunity to demonstrate the revised procedure noted above was presented to the Fire Department.</p> <p>During APG EX 02: The First Responders from the Fire Department did deploy to the scene in their firefighter turnout gear. DA Pam 385-61, paragraph 4-2g states: When emergency conditions involve exposure potential to liquid agent, alternate level A protection will be worn unless modified by the supervisor or chemical accident/incident control officer (CAICO) to provide life-saving measures. Because this scenario involved personal injuries, a delay in gearing up to full level A precludes the ability to provide rapid recon and rescue. Additionally, the potential for fire involving the overturned forklift created the need for the response in the firefighting gear. All APG first responders are specifically trained to avoid liquid contact if at all possible during their recon and rescue operations. Each incident will continue to be assessed on a case-by-case basis to assure the first responders are wearing the proper level of protective clothing. Future training will address this requirement and this will be an objective during the 1st Quarter FY03 CAIRA Exercise.</p> <p>Areas needing improvement (check all that apply):</p> <table border="0"> <tr> <td>_____</td> <td>Training</td> <td>_____</td> <td>Staffing</td> </tr> <tr> <td>_____</td> <td>Equipment</td> <td>_____</td> <td>Plan(s)</td> </tr> <tr> <td>_____</td> <td>Facilities</td> <td>_____ x _____</td> <td>Procedures</td> </tr> <tr> <td>_____</td> <td>Other (specify) _____</td> <td></td> <td></td> </tr> </table>				_____	Training	_____	Staffing	_____	Equipment	_____	Plan(s)	_____	Facilities	_____ x _____	Procedures	_____	Other (specify) _____		
_____	Training	_____	Staffing																
_____	Equipment	_____	Plan(s)																
_____	Facilities	_____ x _____	Procedures																
_____	Other (specify) _____																		

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
AP04.4.1	Administrative Record Under the National Contingency Plan (NCP)	APG Garrison	FY 2005																
<p>CORRECTIVE ACTION/COMMENT:</p> <p>The information provided on the CANTS is fully documented if the procedures for relaying the information on the CANTS is properly followed (APO4.1.4). Reference does specify that the call has to be recorded, just documented. Additionally, the CANTS call is recorded by Harford County. APG will purchase a voice recorder when FY 05 funds are available.</p> <p>Areas needing improvement (check all that apply):</p> <table> <tr> <td>_____</td> <td>Training</td> <td>_____</td> <td>Staffing</td> </tr> <tr> <td><u> x </u></td> <td>Equipment</td> <td>_____</td> <td>Plan(s)</td> </tr> <tr> <td>_____</td> <td>Facilities</td> <td>_____</td> <td>Procedures</td> </tr> <tr> <td>_____</td> <td>Other (specify) _____</td> <td></td> <td></td> </tr> </table>				_____	Training	_____	Staffing	<u> x </u>	Equipment	_____	Plan(s)	_____	Facilities	_____	Procedures	_____	Other (specify) _____		
_____	Training	_____	Staffing																
<u> x </u>	Equipment	_____	Plan(s)																
_____	Facilities	_____	Procedures																
_____	Other (specify) _____																		

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
AP03A03.1 AP04.4.2	Protective Actions for the Edgewood Area Population	DSHE	FY 2005																
<p>CORRECTIVE ACTION/COMMENT:</p> <p>The appropriate Protective Action Decision was made for the Edgewood Area based on the scenario. Finding carried over to next annual CSEPP Exercise. Although the appropriate PAD may have been made for this scenario, the exercise design/scenario did not require demonstration of this capability. No action plan required.</p> <p>Areas needing improvement (check all that apply):</p> <table> <tr> <td>_____</td> <td>Training</td> <td>_____</td> <td>Staffing</td> </tr> <tr> <td>_____</td> <td>Equipment</td> <td>_____</td> <td>Plan(s)</td> </tr> <tr> <td>_____</td> <td>Facilities</td> <td>_____</td> <td>Procedures</td> </tr> <tr> <td><u> x </u></td> <td>Other (specify) _____</td> <td>_____</td> <td>Demonstration__</td> </tr> </table>				_____	Training	_____	Staffing	_____	Equipment	_____	Plan(s)	_____	Facilities	_____	Procedures	<u> x </u>	Other (specify) _____	_____	Demonstration__
_____	Training	_____	Staffing																
_____	Equipment	_____	Plan(s)																
_____	Facilities	_____	Procedures																
<u> x </u>	Other (specify) _____	_____	Demonstration__																

ACTION PLAN for HARFORD COUNTY HOSPITALS
Aberdeen Community CSEPP Exercise 2004
(August 4, 2004)

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
HCP04.5.1	Inadequate Preparation Donning PPE	Harford Memorial Hospital (HMH)	April 2005																
<p>CORRECTIVE ACTION/COMMENT:</p> <p>The CSEPP coordinator for Harford Memorial Hospital (HMH), working in coordination with Science Applications International Corporation (SAIC) has completed or scheduled three CSEPP comprehensive courses covering "Preparation for Donning PPE" and four additional courses have been requested for this facility. By November 17, 2004, over a third of the HMH staff will have received the training.</p> <p>Currently scheduled Course Dates: November 4, 11, and 16</p> <p>Areas needing improvement (check all that apply):</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;">Training</td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;">Staffing</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Equipment</td> <td><input type="checkbox"/></td> <td>Plan(s)</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Facilities</td> <td><input checked="" type="checkbox"/></td> <td>Procedures</td> </tr> <tr> <td><input type="checkbox"/></td> <td colspan="3">Other (specify) _____</td> </tr> </table>				<input checked="" type="checkbox"/>	Training	<input type="checkbox"/>	Staffing	<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)	<input type="checkbox"/>	Facilities	<input checked="" type="checkbox"/>	Procedures	<input type="checkbox"/>	Other (specify) _____		
<input checked="" type="checkbox"/>	Training	<input type="checkbox"/>	Staffing																
<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)																
<input type="checkbox"/>	Facilities	<input checked="" type="checkbox"/>	Procedures																
<input type="checkbox"/>	Other (specify) _____																		

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE																
HC04.5.2	Inadequate Preparation Donning PPE	Upper Chesapeake Medical Center (UCMC)	April 2005																
<p>CORRECTIVE ACTION/COMMENT:</p> <p>The CSEPP coordinator for the Upper Chesapeake Medical Center (UCMC), working in coordination with Science Applications International Corporation (SAIC) has completed or scheduled three CSEPP comprehensive courses covering "Preparation for Donning PPE" and four additional courses have been requested for UCMC. By November 17, 2004, over a third of the UCMC staff will have received the training.</p> <p>Currently scheduled Course Dates: November 4, 11, and 16.</p> <p>Areas needing improvement (check all that apply):</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;">Training</td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;">Staffing</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Equipment</td> <td><input type="checkbox"/></td> <td>Plan(s)</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Facilities</td> <td><input checked="" type="checkbox"/></td> <td>Procedures</td> </tr> <tr> <td><input type="checkbox"/></td> <td colspan="3">Other (specify) _____</td> </tr> </table>				<input checked="" type="checkbox"/>	Training	<input type="checkbox"/>	Staffing	<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)	<input type="checkbox"/>	Facilities	<input checked="" type="checkbox"/>	Procedures	<input type="checkbox"/>	Other (specify) _____		
<input checked="" type="checkbox"/>	Training	<input type="checkbox"/>	Staffing																
<input type="checkbox"/>	Equipment	<input type="checkbox"/>	Plan(s)																
<input type="checkbox"/>	Facilities	<input checked="" type="checkbox"/>	Procedures																
<input type="checkbox"/>	Other (specify) _____																		

This Page Intentionally Left Blank

APPENDIX 1 – COMMUNITY PROFILE

This document provides the information specified by CSEPP Policy Paper Number 19 on Community Profile. Information contained in the Community Profile is provided by the Maryland CSEPP Community Integrated Process Team.

Benchmark/Capability Review for Aberdeen CSEPP Community

Alert and Notification Systems

Areas to consider, but not limited to, are:

- Initial Alert and Activation
- Protective Action Recommendations and Decision Making
- Public Notification, Instruction, and Emergency Information
- Communications Systems, Facilities, Equipment and Displays

Individual Item Status:

- (C) 15 outdoor warning sirens installed, 14 operational, silent tested daily, live test monthly
Siren APE-7 not activated due to Bald eagle nesting. Adequate area coverage provided by adjacent sirens
- (C) CANTS prompt notification call-down system operational, tested daily, back-up procedures in place. Backup installation of NAWAS instruments underway
- (C) Harford EOC link to EAS master station and Harford cable TV channel-21 EAS capability
- (C) Harford County uses a variety of communication methods to notify special populations
- (C) APG on-post cable TV channel-21 notification capability
- (PC) APG non-duty hours procedures in place but not evaluated during a CSEPP exercise

Community Self Assessment Rating – C

Automated Data Processing

Areas to consider, but not limited to, are:

- Hazard Assessment
- Protective Action Recommendations and Decision Making
- Public Notification, Instruction, and Emergency Information
- Communications Systems, Facilities, Equipment and Displays

Individual Item Status:

- (C) System operational - All EOCs have data transfer capability
- (C) EMIS installed and used by APG, MEMA, Baltimore, Harford and Kent Counties
- (C) Coordinated “Protective Action Decision Matrix”

Community Self Assessment Rating – C

Green Background	– Capable (C)
Blue Background	– Partially Capable (PC)
Black or Green Text	– Capable (C)
Blue Text	– Partially Capable (PC)
Magenta (pink) Text	– Marginally Capable (MC)
Red Text	– Not Capable (NC)

Communications

Areas to consider, but not limited to, are:

- Communications Systems, Facilities, Equipment and Displays / Individual Item Status:
- (C) CANTS prompt notification call-down system operational, tested daily, back-up procedures in place
- (C) Automated telephone ring down systems at MEMA, Baltimore, Harford and Kent Counties
- (C) Harford County school busses operating in the EPZ are equipped with cellular phones
- (C) HF radios and Direct telephone lines between Harford EOC and Schools in EPZ
- (C) NAWAS operational at MEMA, Baltimore, Harford and Kent Counties
- (C) Marine channel-16 available for Kent County, USCG, APG and DNR marine vessel communication
- (C) Commercial telephone back-up with community procedures published
- (C) APG Fire and Police have radio communication with Harford County Fire and Police

Community Self Assessment Rating – C

Coordinated Plans

This should include cross walking or integrating effective Emergency Operations Plans from the Army installations, all local jurisdictions, the States, and Federal levels:

Individual Item Status:

- (C) CSEPP-specific plans in place at all levels

Community Self Assessment Rating – C

Decontamination

Areas to consider, but not limited to, are:

- Medical Services - Medical Facilities
- Field Response
- Screening, Decontamination, Registration, and Congregate Care of Evacuees

General Status:

- (C) APG - appropriate plans, procedures and equipment
- (C) Baltimore County – appropriate plans, procedures and equipment
- (C) Harford County - appropriate plans, procedures and equipment
- (C) Kent County - appropriate plans, procedures and equipment
- (C) State - appropriate plans, procedures and equipment

Community Self Assessment Rating – C

Green Background	– Capable (C)
Blue Background	– Partially Capable (PC)
Black or Green Text	– Capable (C)
Blue Text	– Partially Capable (PC)
Magenta (pink) Text	– Marginally Capable (MC)
Red Text	– Not Capable (NC)

Emergency Operations Center

Areas to consider, but not limited to, are:

- Command and Control
- Communications Systems, Facilities, Equipment, and Displays
- 24-Hour Operations

Individual Item Status:

- (C) State construction completed 7/99 and fully operational 12/99
- (C) Baltimore renovation completed 1996; fully operational 911 center
- (C) Harford construction completed 6/97; Fire/EMS/911 center occupied 10/97; fully operational 911 center
- (C) Kent new facility completed 1990; fully operational 911 center
- (C) APG new facility completed 1995; fully operational 911 center at fire department
- (C) Communications systems in place to operate 24 hours

Community Self Assessment Rating - C

Exercises

This will be consistent with current exercise policy:

Individual Item Status:

- (C) Last CSEPP Community FAYE conducted August 7, 2002
- (C) Off-post community participates in APG quarterly CAIRA exercises to test Alert & Notification
- (C) CSEPP Community exercise (TTX) completed in February, 2003.
- (C) Army CSEPP Exercise (FME) conducted 18 June 2003 with off-post communications support.
- (C) Off-post community will exercise in a support role for AYE on post exercise scheduled for August 4, 2004

Community Self Assessment Rating – C

Personnel

This will address personnel issues:

Individual Item Status:

- (C) Required CSEPP staff in position at State and County level
- (C) Required CSEPP staff in place at APG/ECA

Community Self Assessment Rating – C

Green Background	– Capable (C)
Blue Background	– Partially Capable (PC)
Black or Green Text	– Capable (C)
Blue Text	– Partially Capable (PC)
Magenta (pink) Text	– Marginally Capable (MC)
Red Text	– Not Capable (NC)

Personal Protective Equipment

Areas to consider, but not limited to, are:

- Traffic and Access Control
- Medical Services - First Response
- Medical Services – Transportation
- Medical Services - Medical Facilities
- Field Response
- Screening, Decontamination, Registration, and Congregate Care of Evacuees

General Status:

- (C) All equipment operational and issued
- (C) Spares on hand
- (C) Refresher training ongoing

Community Self Assessment Rating – C

Training

This will be consistent with the Federal (FEMA/Army), State and local training plans:

Individual Item Status:

- (C) Initial response training complete
- (C) Refresher training ongoing

Community Self Assessment Rating – C

Medical

Areas to consider, but not limited to, are:

- Communications Systems, Facilities, Equipment, and Displays
- Medical Services - First Response
- Medical Services – Transportation
- Medical Services - Medical Facilities
- Screening, Decontamination, Registration, and Congregate Care of Evacuees

Individual Item Status:

- (C) Selected PPE (Kappler suit, Army boots and gloves, approved PAPR and hood) on-hand
- (C) Emergency medical staff at participating hospitals trained (CSEPP curriculums)

Community Self Assessment Rating – C

Green Background	– Capable (C)
Blue Background	– Partially Capable (PC)
Black or Green Text	– Capable (C)
Blue Text	– Partially Capable (PC)
Magenta (pink) Text	– Marginally Capable (MC)
Red Text	– Not Capable (NC)

Public Awareness

Areas to consider, but not limited to, are:

- Public Notification, Instructions, and Emergency Information
- Communications Systems, Facilities, Equipment, and Displays
- Protective Action Implementation for Special Populations and Facilities
- Public Affairs

Individual Item Status:

- (C) Outreach Center in EPZ County staffed and operational
- (C) Annual "All-Hazards" calendar distributed to Harford County & APG residents
- (C) Near Site Media Center (NSMC) activated during CSEPP exercises
- (C) Governor's Citizen's Advisory Commission (CAC) active
- (C) Ongoing public education programs
- (C) Boater Brochures available at all Kent County Marinas
- (C) APG's All-Hazard Emergency Brochure
- (C) Community Public Awareness Plan completed and in effect

Community Self Assessment Rating - C

Regulatory Compliance

Areas to consider, but not limited to, are:

- Hazard Assessment
- Protective Action Recommendations and Decision Making
- Public Notification, Instructions, and Emergency Information

Individual Item Status:

- (C) Complied with Federal/State OSHA guidance on PPE ensemble

Community Self Assessment Rating – C

Green Background	– Capable (C)
Blue Background	– Partially Capable (PC)
Black or Green Text	– Capable (C)
Blue Text	– Partially Capable (PC)
Magenta (pink) Text	– Marginally Capable (MC)
Red Text	– Not Capable (NC)

This Page Intentionally Left Blank

Green Background – Capable (C)
Blue Background – Partially Capable (PC)
Black or Green Text – Capable (C)
Blue Text – Partially Capable (PC)
Magenta (pink) Text – Marginally Capable (MC)
Red Text – Not Capable (NC)

APPENDIX 2 – ANNUAL EXERCISE RECAP

This Annex provides the information specified by Policy Paper Number 19 on Annual Exercise Recaps.

February 26 & June 18, 2003 Exercises:

The annual Aberdeen Community CSEPP Exercise was incorporated into the APG Chemical Accident or Incident Response and Assistance exercise conducted on June 18, 2003. It included Force Protection, Anti-Terrorism and Mass Casualty events. All Aberdeen Community jurisdictions participated in the exercise. The exercise was conducted in accordance with the Emergency Operations Plans/Procedures (EOPs) of the respective jurisdiction, as they would respond to an actual chemical accident/incident at Aberdeen Proving Ground.

Initial off-post notification was made via the CANTS and plume hazard information was received via the EMIS.

A tabletop exercise (TTX) was conducted on February 26, 2003, utilizing non-specific initiating event scenarios. Participants were presented with the situation that chemical agent vapor or chemical agent aerosol deposition was present off-post. Focus of the TTX was Re-entry/Recovery and included on and off-post representatives of the Aberdeen CSEPP Community. The TTX provided good exchanges of information among all participants.

- **Other CSEPP Highlights:** This was the first CSEPP exercise to be combined with other required exercises on APG. Because the event was hostile in nature, the Directorate of Law Enforcement and Security provided the Incident Commander. The 143rd Ordnance Battalion Commander's quick actions saved the lives of two of his soldiers. The APG Emergency Operations Center was commended for its quick activation and hazard analysis. The Public Affairs Office demonstrated its ability to augment its staff from other PAOs on the installation. The overall evaluation of the Kirk U.S. Army Health Clinic – Edgewood Area's medical team, set up and operation of the Patient Decontamination Site was exemplary.
- **Finding Resolution:** There were four unresolved findings from the 2003 community exercise.
- **Accomplishments:** Aberdeen Proving Ground (APG) successfully demonstrated its CAIRA mission capability during the exercise. Completion of the Aberdeen EX 03 satisfies the annual Initial Response Force Exercise (IRFX) requirement for APG as described in Annex C (CAIRA) Plan to the APG Disaster Control Plan.
- **Demonstrated Needs:** None.
- **Lessons Learned:** Hazard analysis and notifications need to be given the highest priority throughout a CAIRA.

August 7, 2002 Exercise:

- **Summary:** All Aberdeen Community jurisdictions participated in the exercise conducted on August 7, 2002. The Exercise was conducted in accordance with the Emergency Operations Plans/Procedures (EOPs) of the respective jurisdiction, as they would respond to an actual chemical accident at Aberdeen Proving Ground. Response included treatment at the Kent-Queen Annes' Hospital of moulaged personnel (simulating injured boaters) transferred from Worton Creek and Tolchester Marinas.

Joint activities included the exchange of information among the participating jurisdictions, the activation and operation of a Near-Site Media Center, and shared communication and automation systems.

Off-post field play focused on boater evacuation procedures. Kent County established boater reception centers at the Tolchester and Worton Creek Marinas. Actors simulating boaters were screened and decontaminated at the marina reception centers. Actors, representing both boaters and other routine patients, were screened and treated at the Kent and Queen Anne's Hospital Emergency Department. Kent County also conducted a news conference.

An evaluation team was stationed at each player location to record actions.

- **Other CSEPP Highlights:** At the accident site, the Fire Department quickly made use of available sandbags to dam up the path of the run-off in order to minimize the danger to the environment. After Fire Department personnel received telephonic information regarding an emergency, they quickly disseminated that information to their personnel, which resulted in a swift and decisive response to the accident site. The Technical Escort Unit was commended for their accountability of personnel at the Accident Site and Personnel Decontamination Site operations were all noted "strengths."

The Media Liaison Officer orchestrated several media briefings during the exercise, each of which proved to be effective in helping the media and the public understand what happened and what responses were underway.

- **Finding Resolution:** There were six unresolved findings from the 2002 community exercise.
- **Accomplishments:** Joint (on-post and off-post) coordination and interface matters noted by the evaluation team were commendable. Aberdeen Proving Ground (APG) successfully demonstrated its CAIRA mission capability during the exercise. Completion of the Aberdeen EX 02 satisfies the annual Initial Response Force Exercise (IRFE) requirement for APG as described in Annex C (CAIRA) Plan to the APG Disaster Control Plan.
- **Demonstrated Needs:** None.
- **Lessons Learned:** Revise, finalize, publish, and exercise the Near-Site Media Center Operations Plan.

APPENDIX 3 – OUT-OF-SEQUENCE MEDICAL PLAY

This Annex provides information on the out-of-sequence Medical Exercise conducted at Franklin Square Medical Center on August 14, 2004.

Franklin Square Hospital Center (FSH) and Maryland Institute of Emergency Medical Services System, Emergency Medical Resource Center (MIEMSS EMRC) participated in a community disaster drill on August 14, 2004. This participation was sanctioned as out-of-sequence play for the Aberdeen Community Chemical Stockpile Emergency Preparedness Program (CSEPP) exercise held August 4, 2004. The scenario for out-of-sequence medical play was a simulated intentional explosion and hazardous materials (HAZMAT) release on the light rail transit system in the community of Hunt Valley, Maryland.

Baltimore City Fire Department, Baltimore County Fire Departments augmented by other city fire departments, private ambulance services, Baltimore City Police, and the Baltimore County Sheriffs Department all played a role in this community-wide exercise. FSH demonstrated the ability to effectively evaluate, decontaminate, and treat 28 victims. Operations were conducted in accordance with the facility's disaster response procedures.

MIEMSS EMRC provides the primary communications interface among Emergency Medical Systems (EMS) units, receiving hospitals, and consulting physicians throughout the greater Baltimore area. It also serves as the coordinating point for the Facilities Resource Emergency Database (FRED). FRED provides an automated online, real-time message system with multiple capabilities.

MIEMSS EMRC staff members performed their duties well but were hindered by a lack of checklists and standard operating procedures to ensure key information (such as agent identification) flowed to and from FSH. Difficulties with FRED forced the FSH staff to revert to manual tracking and use an outside channel to contact the scene for necessary information. Information via this alternate channel differed significantly leading to confusion on the part of the hospital.

MIEMSS EMRC received its first indication of an event at 0853 when Baltimore County Fire EMS 1 advised MIEMSS EMRC they were responding to an incident at the Hunt Valley light rail station involving an explosion with possible chemical exposure and an estimated 100 casualties. MIEMSS EMRC notified the FSH Emergency Department (ED) at approximately 0856 that there had been an explosion at the Hunt Valley light rail system with possible use of a chemical agent, and that 150 patients were involved.

MIEMSS EMRC sent a FRED message to hospitals and key local and state agencies at 0900 requesting hospitals provide updated bed availability. At 0912, MIEMSS EMRC initiated a conference call with its key response team including physicians, scene liaison, and coordinator and maintained this call with an open line throughout the majority of the event to facilitate discussion and information exchange.

By 0915, no responses had been received regarding bed availability. MIEMSS EMRC contacted individual hospitals and were repeatedly advised of difficulties with entering data into FRED. MIEMSS EMRC conducted a manual bed count. Bed availability was relayed to the scene by the MIEMSS EMRC liaison.

At FSH, hospital staff responded to designated areas, erected the decontamination tent and established an outside triage station. The hospital Emergency Operations Center (EOC) began. There was some confusion regarding the initial notification of the EOC members until arrival of the Communications Officer. A briefing was given in the hospital's EOC at 0937 of the information received thus far. The ED Medical Director assumed the role of Incident Commander (IC) until the hospital president arrived and assumed command at 1010. The EOC Safety Officer quickly established connection with a weather service (via internet) to monitor the local temperature, humidity, and wind information to determine the length of time staff could remain in PPE.

The disaster coordinator arrived at 0959 and connected to the internal and external computer networks including FRED and Insight, the electronic ED patient information system. Insight allows the EOC to monitor the number and types of patients that have been registered in the ED.

By 1020, 16 decontamination team members have been screened by the physician's assistant. Due to increased blood pressure, one staff member was reassigned to other duties not requiring the use of Personal Protective Equipment (PPE). While the team waited to complete donning their equipment, the Disaster Coordinator reviewed their responsibilities.

The Disaster Coordinator advised the team of the chemicals believed to be involved and advised the decontamination team members to complete donning their equipment. All PAPRs were donned by 1049, activating the established work/rest cycle. At 1055, the decontamination area was fully staffed and ready to receive patients.

The first patients were transported from the scene at 1054. FSH contacted MIEMSS EMRC at 1132 for an update. There was some confusion over the number of patients being sent to FSH; multiple contacts were required to clarify.

The first two patients arrived at the triage station at 1058. The patients were triaged then taken to the decontamination tent. After exiting ambulatory decontamination, the patients received blue wristbands to signify to the ED that they were "clean." Each patient was escorted to the ED entrance where a physician's assistant re-triaged and advised hospital staff of an appropriate destination. Patients were checked in at the patient receiving area, logged in on the accountability board, and taken to their assigned areas.

Two non-ambulatory patients were processed through the decontamination area and sent to the ED for continuation of care at 1110 and 1116. They were eventually transferred to the Operating Room.

The radio system that was used for communication by the decontamination/disaster team with the ED IC was nonfunctional. This led to a lack of information on the numbers and types of

patients that were being seen and triaged. Additionally, EMS communication was scant and unhelpful at times. However, there appeared to be no compromise to patient flow, evaluation, or treatment.

The disaster coordinator at FSH advised the EOC that they had already received eight patients; three of those had been decontaminated, three were in triage, and two were in the ED. The EOC received notification that they would be receiving 10 patients by bus. The bus contained 20 patients, 10 of whom would be taken to one medical facility while the remaining 10 would be transported to FSH.

The EOC IC gave another briefing at 1114, and bed availability was reviewed.

A request was received at 1119 from the ED for replacement staff to be in PPE. It was reported that there were no more available staff trained for PPE. The ED Director and the disaster coordinator discussed this and told the ED Disaster Coordinator that the decontamination could continue simulating respirator use.

Before simulation of PAPR use was initiated, two members in level C PPE began removing themselves from the simulated hot zone at 1120 due to perceived heat stress. An additional team member dressed in PPE (excluding the PAPR) was not feeling well and removed herself from the post-decontamination area. Shortly thereafter, the decontamination team was rotated with freshly dressed responders.

The EMS informed the ED via radio at 1126 that a bus with 20 patients, some critical, was en route to FSH. By 1135, the third critical patient showing signs of a myocardial infarction, hypotension, and pulmonary edema (toxic inhalation versus cardiogenic) was in the ED. This patient too was evaluated appropriately and was transferred to the ICU for definitive care and evaluation.

ENDEX at the scene was at 1145, prior to all patients being transported. ENDEX at MIEMSS EMRC was at 1156.

Exercise play continued at the hospital. A bus with 20 ambulatory casualties arrived at 1157. All 20 were processed through triage and decontaminated. One patient was deaf and showed minimal signs of possible toxic inhalation injury. A FSH hospital employee who knew sign language reported to the ED to facilitate communication. A total of 28 patients were evaluated and treated appropriately at FSH. ENDEX was at 1230.

Strength

Subject: Facility Commitment

Discussion: Franklin Square Hospital displayed a high level of financial support, administrative dedication, and commitment to provide an effective chemical disaster preparedness response program. The entire facility displayed enthusiasm and commitment during exercise preparation, during, and after the exercise. The two disaster

coordinators are extraordinarily knowledgeable and have spent considerable time training almost 500 staff members. The level of organization, preparation, and critical thinking that went into this program is evident in the hospital's performance. The upper level management team appears fully supportive of the effort to provide this vital community function. The hospital's current outstanding acquisitions of decontamination and personal protective equipment and related capability and training, as well as the large number of personnel apparently enthusiastic to be involved in HAZMAT emergency response make Franklin Square an extremely important ongoing community asset.

Observation

Subject: Emergency Paging System

Discussion: When the emergency paging system was activated, not all of the members received the message. Upon arrival of the communications coordinator, proper procedure for batch paging was implemented. At that time, everyone received a page. There was also confusion regarding response to the page; some members were unsure if they were to report or to call before reporting which could have resulted in a significant delay in the EOC's ability to establish quickly.

Recommendation: Establish/investigate the cause of the paging system disconnect. Train personnel for a better flow of communication and then test the system.

Observation

Subject: Use of External Information Sources

Discussion: One of the first actions that the safety officer performed in the Incident Command Center was to establish an Internet connection. The local weather information was obtained and used by the EOC to determine the time that staff could be in PPE. In addition, temperature, humidity, wind speed and direction and elapsed time were monitored in real time at the decontamination site. Upon notification of the type of the suspected agent, hazardous material data sheets were obtained from the Internet (the CDC bioterrorism website). These sheets were used to formulate treatment plans, estimate projected length of stays, and determine probable resource utilization. This immediate access to information greatly improved the Incident Commands' ability to manage their resources and project their requirements. The safety officer at Franklin Square Hospital displayed a remarkable level of knowledge of the information required by the facility to make informed decisions and the ability to access and utilize external resources. In the event of a computer failure, multiple textbooks and reference materials were available for use.

Recommendation: Train personnel at each facility to use the Internet as a source of current information.

Observation

Subject: Observation of Workers in PPE

Discussion: As the initial Franklin Square Hospital decontamination team members deployed to the decontamination area, the safety officer remained engaged in suiting additional personnel donning PPE inside the hospital. Team members in PPE functioning outside the building in the decontamination area had no consistent overall supervision, and some team members in PPE overstayed their designated work/rest cycles established by hospital protocol based on the ambient temperature of 74 F. Three decontamination team members eventually self-evacuated to the technical decontamination area based on the perception that they were experiencing heat stress.

Safety officer supervision of the decontamination team in PPE, with particular attention to work/rest cycles, is an important hazard management approach to protect persons in PPE. Such individuals face heat stress and potential heat illness when dressed in protective ensembles under the weather conditions that prevailed during this exercise. Ideally, direct supervision of personnel in PPE would have allowed the safety officer to ensure strict adherence to work/rest cycles (established by hospital protocol for the applicable ambient temperature range of 70 to 85 F as 20 to 30 minutes of work, followed by 40 to 60 minutes of rest).

Direct supervision of those donning PPE was extremely important to the Franklin Square decontamination site safety officer due to the importance of correct donning of PPE in achieving protection of personnel. Once personnel fully dressed in PPE were deployed outside the building to the decontamination area, several team members requiring dress out remained inside. The decontamination site Safety Officer continued in his capacity of supervising those donning PPE, precluding the direct supervision of those then working outside.

The result of not observing decontamination team members and strictly enforcing work/rest cycles for those in PPE was that some members perceived an unacceptable exposure to heat stress and removed themselves from the decontamination area. The impact of this occurrence is two-fold: 1) most significantly, the potential exists that personnel in PPE under these conditions, not directly monitored or given guidance to comply with work/rest cycles, could remain in the work environment until they sustain primary heat injury and possibly additional secondary injuries (falls from fainting, etc.); 2) the uncoordinated withdrawal of protected staff from decontamination site stations could suddenly degrade the ability of the hospital to decontaminate patients and other decontamination team members (this was probably not the case in this exercise, in which the number of hospital personnel clad in PPE and staffing the decontamination station appeared sufficient to maintain operations even in the absence of those who self-evacuated to technical decontamination).

One person should not attempt to perform this function inside the hospital while team members dressed in PPE are functioning unobserved outside the hospital. Both these

functions are undeniably important, and one person should not be tasked with accomplishing both of them simultaneously. The decontamination-site safety officer will then be free to directly observe team members in PPE and monitor work rest cycles.

Reference: 29 CFR 1910.120(q)(3)(viii), “Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response” (OSHA HAZWOPER) standard:

Recommendation: Establish a designated position to support and monitor donning of PPE, separate from the decontamination-site safety officer.

Observation

Subject: Delay in Individual Notification Through FRED Alert

Discussion: Initial notification of key medical personnel in the Baltimore medical community is by a page initiated by the FRED alert. MIEMSS EMRC initiated a FRED alert at 0900. Due to limited capability, pages are sent out in blocks rather than to all personnel simultaneously. The delay in receipt of the information significantly impacts effectiveness in an emergency situation. The two FSH emergency preparedness coordinators received the page at 0936 and 0939.

Recommendation: Review the capacity of the system to page key emergency personnel within a specified timeframe. If capability cannot be extended to provide simultaneous notification, prioritize with persons likely to have early direct patient interaction (i.e. hospitals who could receive self-referred patients) notified first.

Observation

Subject: Initial Difficulty with FRED Input

Discussion: At 0900, MIEMSS EMRC sent the initial FRED alert requesting bed availability. Greater Baltimore Medical Center contacted MIEMSS EMRC at 0921 to state they had attempted to input data to the FRED system. Subsequent contact with other hospitals confirmed difficulty with inputting information at the hospitals.

MIEMSS EMRC staff contacted technical support to attempt to resolve this issue. There was some speculation by MIEMSS EMRC staff (and later by the FSH staff) that training and familiarity with the system were significant components of the problem.

FSH entered bed data at 0934. The other facilities were finally able to input data starting at 0954. Data was entered for inpatient bed availability. MIEMSS EMRC personnel converted this to ED capacity (priority I, II, and III). FRED also has the capability to ask/input ED status. Since this was initially done manually, there was some confusion over whether the bed status was for inpatient or ED.

Recommendation: Perform technical review of hospital use of FRED. Conduct training to ensure that hospital personnel are proficient with entering data into FRED. Implement a system that requires hospitals to demonstrate ability daily to enter data into the system.

Observation

Subject: Communication

Discussion: The portable radio system used between the decontamination/disaster team and the ED was mostly nonfunctional. Little information came from the decontamination side to the IC about the types and severity of patients. In a real-life situation this could lead to delays in patient evaluation and treatment.

Recommendation: The radio system needs to be tested and trained on by all critical staff members.

Observation

Subject: Inadequate Emergency Department Cross-Training

Discussion: When non-ED hospital staff was reassigned to the ED, non-ED staff had inadequate knowledge of the ED. Some staff could not be used and valuable time was spent providing on-the-job education to some staff.

Recommendation: Medically-trained personnel who can work in the ED need to be identified in advance and have appropriate training and knowledge of the ED. They should be identified (color-coded vests) so as to minimize confusion as to who does what in the ED during an emergency.

This Page Intentionally Left Blank

APPENDIX 4 – ACRONYMS

ABCDF	Aberdeen Chemical Disposal Facility
AOC	Army Operations Center
APG	Aberdeen Proving Ground
CAIRA	Chemical Accident or Incident Response and Assistance
CANTS	CSEPP Accident Notification Telephone System
CASY	Chemical Agent Storage Yard
CCL	Contamination Control Line
CENL	Chemical Event Notification Level
CMA	Chemical Materials Agency
CSDF	Chemical Site Defense Force
CSEPP	Chemical Stockpile Emergency Preparedness Program
DA	Department of the Army
DA PAM	Department of the Army Pamphlet
DCP	Disaster Control Plan
ECA	Edgewood Chemical Activity
ED	Emergency Department
EMIS	Emergency Management Information System
EMS	Emergency Medical Services
ENDEX	End of Exercise
EOC	Emergency Operations Center
EOP	Emergency Operations Plans/Procedures
EX	Exercise
FD	Fire Department
FEM	First-Entry Monitoring
FEMA	Federal Emergency Management Agency
HD	Type of Mustard Agent
HMH	Harford Memorial Hospital
HQDA	Headquarters, Department of the Army
IRF	Initial Response Force
JIC	Joint Information Center
JIS	Joint Information System
MCE	Maximum Credible Event
MEMA	Maryland Emergency Management Agency
MEMA	Maryland Institute of Emergency Medical Services System
MOU	Memorandum of Understanding

NOK.....Next of Kin
NRC.....National Response Center
NSMC.....Near-Site Media Center

OSHA.....Occupational Safety and Health Administration (US)

PAD.....Protective Action Decision
PAO.....Public Affairs Officer/Office
PAR.....Protective Action Recommendation
PDS.....Personnel Decontamination Station
PIO.....Public Information Officer
PPE.....Personal Protective Equipment

ROS.....Response Operating System

SIMCELL.....Simulation Cell
SOP.....Standing Operating Procedures
STARTEX.....Start of Exercise

TEU.....Technical Escort Unit
TTX.....Table Top Exercise

UCMC.....Upper Chesapeake Medical Center

ABERDEEN COMMUNITY TWO-LETTER IDENTIFIER CODES:

AP	Aberdeen Proving Ground	AC	Aberdeen Community
MD	State of Maryland	BA	Baltimore County
HA	Harford County	KE	Kent County
NS	Near-Site Media Center		

APPENDIX 5 – DISTRIBUTION

<u>Agency/Activity</u>	<u>No. of Copies</u>
Federal Emergency Management Agency ATTN: PT-CR-CS (Mr. Ronald Barker) 500 C Street SW Washington, DC 20472	5 Paper 1 CD (pdf and Word)
US Army Chemical Materials Agency (AMSCM-OPC/Mr. Richard Brletich) Bldg E5141 5183 Blackhawk Road Aberdeen Proving Ground, MD 21010-5424	3 Paper 1 CD
FEMA Region III ATTN: R3-PT-TE (Mr. Landton Malone) 615 Chestnut Street, 6 th Floor Philadelphia, PA 19106	3 Paper 1 CD
Commander, Aberdeen Proving Ground (AMSSB-GSH-FE/Ms. Linda Nogle) Building 314 Room 114 Aberdeen Proving Ground, MD 21005	3 Paper 1 CD
State of Maryland Maryland Emergency Management Agency ATTN: Mr. Bill Smith 5401 Rue Saint Lo Drive Reisterstown, MD 21136	3 Paper 1 CD
Harford County Division of Emergency Operations ATTN: Mr. Doug Richmond 2220 Ady Road Forest Hill, MD 21050-1707	2 Paper 1 CD
Baltimore County CSEPP ATTN: Ms. June Utter 700 East Joppa Road Towson, MD 21286	2 Paper 1 CD

APPENDIX 5 – DISTRIBUTION

<u>Agency/Activity</u>	<u>No. of Copies</u>
Kent County Emergency Management Agency ATTN: Ms. Sue Willits Unit D 104 Vickers Drive Chestertown, MD 21620	2 Paper 1 CD
US Army Chemical Materials Agency (AMSCM-RDC/Mr. Stephen Burciaga) Bldg E4585 5183 Blackhawk Road Aberdeen Proving Ground, MD 21010-5424	1 CD
US Army Materiel Command (AMCCB) 5001 Eisenhower Ave. Alexandria, VA 22333-0001	1 CD
US Army Materiel Command (AMCOPS-SSO/Mr. Henry Hoffman) Building E-3331, Suite 4/6 5183 Blackhawk Road Aberdeen Proving Ground, MD 21010-5424	1 CD
US Army Materiel Command (AMCOPS-SSO/Mr. Bill Leach) 9301 Chapek Road Ft. Belvoir, VA 22060-5527	1 CD
Director, CSEPP Office of the Deputy Assistant Secretary of the Army Elimination of Chemical Weapons 1213 Jefferson Davis Hwy, Suite 702 Arlington, VA 22202	1 CD
Director, US Army Nuclear and Chemical Agency (ATNA-OP) 7150 Heller Loop, Suite 101 Springfield, VA 22150-3198	1 CD

APPENDIX 5 – DISTRIBUTION

<u>Agency/Activity</u>	<u>No. of Copies</u>
Director, Defense Ammunition Center (SJMCA-AST) 1 C Tree Road McAlester, OK 74501-9053	1 CD
FEMA Region IV ATTN: R4-PT-TE (Mr. Terry Madden) 3003 Chamblee-Tucker Road Atlanta, GA 30341-3108	1 CD
FEMA Region V ATTN: R5-PT-PE (Ms. Deborah Wagner) 536 South Clark St. 6 th Floor Chicago, IL 606050	1 CD
FEMA Region VI ATTN: (Ms. Bill George) Federal Response Center 800 North Loop 288 Denton, TX 76201-3698	1 CD
FEMA Region VIII ATTN: R8-PT-CS (Mr. Deroy Holt) Denver Federal Center, Building 710 P.O. Box 25267 Denver, CO 80225-0267	1 CD
FEMA Region VIII ATTN: R8-PT-CS (Mr. Doug Becvar) Denver Federal Center, Building 710 P.O. Box 25267 Denver, CO 80225-0267	1 CD
FEMA Region X ATTN: Mr. Scott Hamilton 80515 N. Hwy. 395 Hermiston, Oregon 97838	1 CD
Anniston Chemical Activity (AMSCM-OPAN-RM/Ms. Genell Young) 7 Frankford Rd., Bldg 363 Anniston, AL 36201-4199	1 CD

APPENDIX 5 – DISTRIBUTION

<u>Agency/Activity</u>	<u>No. of Copies</u>
Ft. McClellan Army National Guard Training Center (FM-ARNGTC-CSEPP/Mr. Bob Grogan) 310 St. Clair Road, Bldg 1120 Ft. McClellan, AL 36205-5000	1 CD
Blue Grass Chemical Activity (AMSCM-OPBG-CS /Mr. Mike McAlister) 2901 Kingston Highway, Bldg S-8 Richmond, KY 40475-5008	1 CD
Newport Chemical Activity (AMSCM-OPNC-CTO/Mr. Doug Stroud) P.O. Box 160, Bldg 7700 Newport, IN 47966-0160	1 CD
Pine Bluff Chemical Activity (AMSCM-OPPA-SRC/Mr. John Short) 10-020 Kabrich Circle, Bldg 51-420 Pine Bluff, AR 71602-9500	1 CD
Pueblo Chemical Depot (AMSCM-OPPC-RDC/Mr. Doug Davis) 45825 Highway 96 East, Bldg 2 Pueblo, CO 81006-9330	1 CD
Deseret Chemical Depot (AMSCM-OPDC-RS/Mr. Jim Miller) PO BOX 250 Stockton, UT 84071-0250	1 CD
Umatilla Chemical Activity (AMSCM-OPUM-RM/Mr. Donald Smythe) Bldg 32 Hermiston, OR 97838-9544	1 CD
Argonne National Laboratory ATTN: Mr. Jacques Mitrani 9700 S. Cass Avenue Argonne, IL 60439	1 CD

APPENDIX 5 – DISTRIBUTION

<u>Agency/Activity</u>	<u>No. of Copies</u>
Innovative Emergency Management, Inc. ATTN: Jack Long 35 Kensington Parkway Abingdon, MD 21009	1 CD
SAIC ATTN: Dan Bird 3465 A Box Hill Corp Center Drive Abingdon, MD 21009	1 CD
Northrop Grumman Mission Systems ATTN: Tim Bourdess 5113 Leesburg Pike Skyline 4, Suite 706 Falls Church, VA 22041	5 Paper 1 CD
TOTAL	28 Paper 26 CDs

APPENDIX 5 – DISTRIBUTION

This Page Intentionally Left Blank