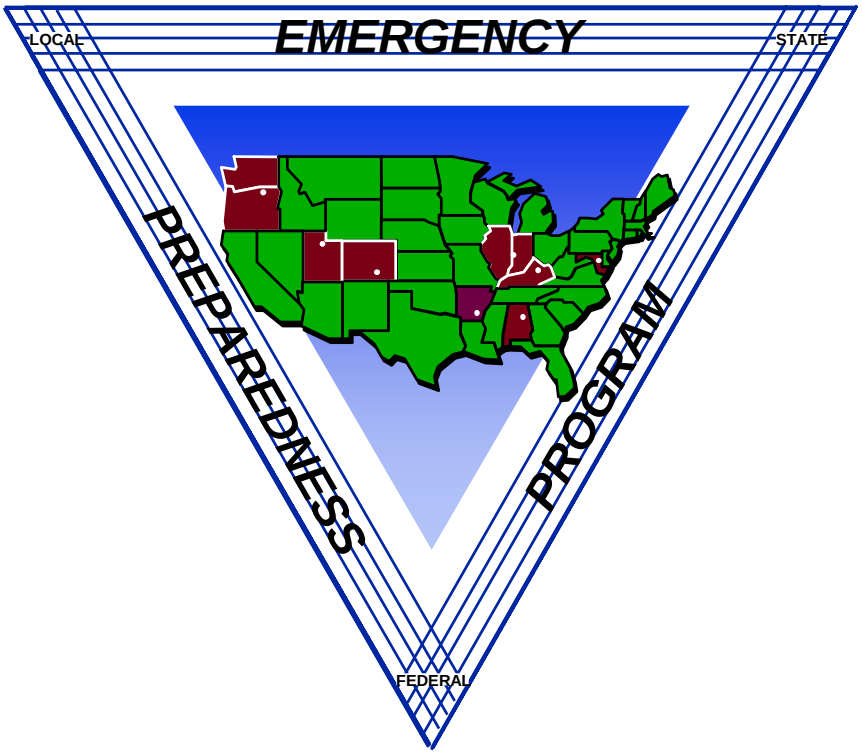
ANNISTON COMMUNITY CSEPP EXERCISE 2002 (ACE 02)

MARCH 6, 2002

CHEMICAL STOCKPILE



EXERCISE REPORT

DECEMBER 24, 2003

CHEMICAL STOCKPILE EMERGENCY PREPAREDNESS PROGRAM (CSEPP)

ANNISTON COMMUNITY CSEPP EXERCISE 2002 (ACE 02)

March 6, 2002

EXERCISE REPORT

Report Date: December 24, 2003

INSTALLATION:

Anniston Army Depot/Anniston Chemical Activity, Anniston, Alabama

RESPONSE ORGANIZATIONS:

Fort McClellan Army National Guard Training Center
Northeastern Alabama Regional Medical Center
Stringfellow Memorial Hospital
Jacksonville Hospital

APPROVED BY:

Paul Carnithan
Army Exercise Co-Director
SBCCOM CSEPP Office

Daniel R. Civis
Chief, Chemical Preparedness Branch
FEMA

ANNISTON COMMUNITY CSEPP EXERCISE 2002
(ACE 02)

EXERCISE REPORT

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ANNISTON COMMUNITY CSEPP EXERCISE 2002
(ACE 02)

EXERCISE REPORT

INTRODUCTION

The Anniston Community CSEPP Exercise 2002 (ACE 02) provided the opportunity to demonstrate the emergency response capabilities of portions of the Anniston Community and to validate correction of findings identified during the Anniston Community CSEPP Exercise 2002 (ACE 02). The State of Alabama and six off-post counties declined to participate in the exercise.

The requirement for conducting Chemical Stockpile Emergency Preparedness Program (CSEPP) exercises was established in the August 1998 Memorandum of Understanding (MOU) between the Federal Emergency Management Agency (FEMA) and the U.S. Army. Exercise design, planning, evaluation, and reporting guidance is contained in the *Chemical Stockpile Emergency Preparedness Program Exercises* document, dated March 19, 1999.

Exercise design and planning for ACE 02 was accomplished for the Army by the Army Exercise Co-Director and representatives from the Anniston Army Depot (ANAD), and Anniston Chemical Activity (ANCA). Design and planning for off-post play were accomplished by representatives of Fort McClellan Army National Guard Training Center, Northeastern Alabama Regional Medical Center, Stringfellow Memorial Hospital and Jacksonville Hospital.

Table 1 summarizes the CSEPP exercise objectives that were demonstrated in the exercise. For off-post play, only specified evaluation elements and points of review of an objective were selected and agreed-upon for demonstration. The scope and substance of play for the Army and off-post jurisdictions are described in individual extent of play agreements.

Table 1. Summary of ACE 02 Objectives

Jurisdiction	Objectives
ANAD/ANCA	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 15
Fort McClellan ANG Training Center	1, 2, 3, 4, 5, 6, 9, and 11
Regional Medical Center	1, 4, 6, and 12
Stringfellow Memorial Hospital	12
Jacksonville Hospital	12

OFF-POST ACTIVITIES

The State of Alabama Emergency Management Agency (AEMA) and all adjoining CSEPP Community Emergency Management Agencies did not participate in this year's exercise. However, Fort McClellan ANGTC and three of the local community medical facilities did participate. The hospitals received simulated casualties for evaluation.

EXERCISE SCENARIO

Pre-Exercise Scenario Description

While conducting a required interior inspection of Igloo G-602 on 4 March 2002, a surveillance crew discovered that a large crack had formed in the rear ceiling of the Igloo allowing excessive amounts of rain water to leak on several pallets of GB-filled, M55 rockets at the rear and onto the Igloo floor. On 5 March 2002, depot engineers and DPW personnel determined that repairs would have to be performed to the inside ceiling as well as to the roof. In order to accomplish the repairs at least two pallets of rockets will have to be moved outside the Igloo during the period repairs were being made the next day.

Also on 5 March 2002, a reporter for a national news agency requested and was given approval to visit and gather information to write an article relating to the destruction of all chemical agent weapons stored within the chemical storage site at the Anniston Army Depot. In order to provide a complete picture of the overall operational concept the reporter requested and was granted approval to conduct a low level fly over of the storage area and demil facility on 6 March 2002, utilizing a helicopter owned and operated by the news agency that the reporter worked for.

Initiating Event (STARTEX)

At approximately 0745 hours a chemical storage crew and DPW repair team arrived at Igloo G-602. First entry monitoring was conducted and completed at 0805 hours. At 0810 hours the storage crew moved the first pallet of rockets outside to be secured in the enhanced on-site container (EONC) parked on the roadway until repairs to the Igloo could be completed. At 0816 hours the reporter, chopper pilot and security escort took off from the depot chopper pad and headed toward the chemical storage site to take aerial photos.

At approximately 0835 hours while taking overhead photos of the operation at G-602, the chopper suddenly developed engine failure and dropped rapidly, crashing on to the roadway approximately 50 feet to the rear of the EONC and rocket pallet being strapped to the loading tray. Upon impact, the tail section broke away and struck the rocket pallet being loaded resulting in explosions and an undetermined number of rounds damaged and/or leaking. The main fuselage erupted in flames due to the ruptured fuel tanks. The munitions were not involved in the aircraft fire.

Hazard Analysis

The Initial Hazard Assessment was based on 2 rockets exploding and 13 leaking their entire contents. Simulated exercise weather was used throughout the exercise. At the start of the exercise, wind was from 280° with a wind speed of 1 meter per second and a Stability class of D. A change in simulated meteorology occurred approximately 1.5 hours into the exercise when the wind speed increased to 3 meters per second and the Stability Class changed to C. Accident site ground truth was determined during the exercise. Ground truth was that 2 rockets exploded and eight leaked their contents. The estimated No Effects distance of the Ground Truth Hazard Assessment extended about 1.5 miles beyond the Depot boundary.

COMMUNITY PROFILE:

Due to non-participation by the State of Alabama and six off-post counties, the community profile was not updated for this report. Included below is the community profile from the ACE-01 report.

ALABAMA CSEPP
PROGRAM STATUS

- **BENCHMARK COMPLETION STATUS**
  - **ALERT & NOTIFICATION SYSTEM (Red)**
  - **AUTOMATED DATA PROCESSING SYSTEM (Red)**
  - **COMMUNICATION SYSTEMS (Green)**
  - **COMMUNITY INVOLVEMENT ACTIVITIES (Red)**
  - **COORDINATED PLANS (Red)**
  - **EMERGENCY OPERATIONS CENTER (Green)**
  - **EXERCISE PROGRAM (Green)**
  - **MEDICAL SUPPORT (Blue)**
  - **PERSONAL PROTECTIVE EQUIPMENT (Fuchsia)**
  - **PERSONNEL VACANCIES (Green)**
  - **PROTECTIVE ACTIONS (Red)**
  - **TRAINING (Blue)**

Item Complete ongoing maintenance activities (Green) Not Complete, on track (Blue)
Not complete, item has minor problem (Fuchsia) Not complete, item has major problems (Red)

Alert & Notification (Red) - Community has marginal capabilities, enhancements are being initiated by all jurisdictions to improve capability
Automated Data Processing System (Red) - Community is marginally capable due to assorted software issues. All jurisdictions have agreed to use a single system, yet to be defined or agreed

upon, that ensures integration of concept of operations and protection to the public.
Communications System (Green) - System has capability to perform command and control for jurisdictions.
Community Involvement Activities (Red) - As a community, public education is not capable of ensuring the public is aware of the protective information and actions necessary to ensure their protection. Community has formed an integrated working group to address problem.
Coordinated Plans (Red) - Integration of jurisdictional plans and planning effort is over all not capable. As a CSEPP community there is no consensus for a site protective action strategy.
Emergency Operations Center (Green) - Each jurisdiction emergency operations center is capable of operations.
Medical Support (Blue) - Communities medical support is marginally capable due to incompletion of medical emergency operations centers (MEOCs), required equipment, and training issues. Medical community is implementing necessary procurement and training to address these issues.
Personnel Protective Equipment (Fuchsia) - Marginally capable due to lack of government furnished equipment availability, remaining equipment funded but not procured. Issuing and training to responders can not be completed till equipment is on hand.
Personnel Vacancies (Green) - Capable - all approved FTEs filled.
Protective Actions (Red) - As a CSEPP community there is no consensus for a site protective action strategy (Not capable).
Training (Blue) -Partially capable, community has a training program in place based on current plans, operations, and available equipment. Training will adjust based on plans, personnel, and equipment changes.

ANNUAL EXERCISE RECAPS

March 7, 2001 Exercise

Summary: The scenario was based on events occurring where toxic chemicals are stored at Anniston Army Depot. These events caused liquid agent contamination in the vicinity of the storage site, and vapor hazards downwind. The hazards were to extend beyond the installation boundary, and would require protective actions and other emergency responses to be taken in the IRZ. The hazard and extent of play in the PAZ were limited. With the type of agent released, the area of ground contamination, the vapor plume path, and the number and condition of casualties, would be within a range to achieve the objectives for each jurisdiction, and would be consistent with responders demonstrating their capabilities at the locations listed in this agreement. The following jurisdictions participated in Anniston Community CSEPP Exercise 2001: Anniston Army Depot/Anniston Chemical Activity, State of Alabama, Calhoun County, Clay County, Cleburne County, Etowah County, Fort McClellan Army National Guard Training Center, Jefferson County, Lee County, Huntsville-Madison County, St. Clair County, and Talladega County. All jurisdictions did not demonstrate all exercise objectives. In some instances, players demonstrated only some exercise objectives and/or evaluation elements because of mission roles, availability of facilities or resources, or non-use of field elements in a CSEPP exercise.

Other CSEPP Highlights: The ACE 01 was a non-duty hours exercise. The exercise started at

0605 hours and continued until 1129 hours.

Finding Resolution: In Tab A, two new findings and eight resolved, 13 observations and nine strengths were documented. There were no new Tab B findings and only nine observations noted. In addition, in Tab C, there were eleven findings, fifty eight observations and thirteen strengths identified.

Accomplishments: The Ft. McClellan Army National Guard Training Center (FM-ARNGTC) EOC successfully demonstrated its ability to notify its Crisis Action Center (CAC) staff and activate the EOC. Immediately upon receipt of the initial notification of the chemical event from ANAD (at 0604) over the CSEPP hotline, the radio room personnel began staff recall notifications. Multiple systems were used to ensure that all personnel were promptly notified. These systems included radios, automated recall system, and the back-up alert notification tree for telephone contact. The FM-ARNGTC procedures require that all EOC personnel who are able to respond to the event make a call back to the radio room to determine if their travel route will avoid any projected hazards. This was successfully accomplished. 50 percent of the EOC staff arrived within 15 minutes and, at 0650, the EOC was declared functional by the Training Center Facility Manager.

Demonstrated Needs: Despite a credible effort to secure entrances during the exercise at Calhoun County Northeast Alabama Regional Medical Center, one basement door was found to be unattended and could become a point of entry if people were held outside by security measures at other doors. One of the "victims" made it past a security officer stationed near a main entrance to the emergency department (ED) area while the officer was engaged with a patient. The latter may be an inevitable consequence of carrying out a drill without disrupting normal activity, but the former needs attention.

Lessons Learned: At the State Of Alabama AEMA EOC it was the first time the Restricted Area Descriptive System (RADS) announcements were utilized in an evaluated exercise. Lessons were learned, but overall the RADS was of value enabling life safety and medical response within the threat wedge to be conducted timely and safely.

March 22-23 2000 Exercise

Summary: All Alabama CSEPP jurisdictions except Jefferson County participated in the 2000 Anniston Community Exercise. Anniston Army Depot/Anniston Chemical Activity (ANCA), the State of Alabama (all offices having command and control responsibilities in a chemical event), Calhoun County, Clay County, Cleburne County, Etowah County, Fort McClellan Army National Guard Training Center, St. Clair County, Talladega County, Madison County (host county role) and Lee County (host county role) all participated in the exercise. The exercise was conducted in accordance with the Emergency Operations Plans (EOPs) of the respective jurisdictions, as they would respond to an actual chemical accident at ANCA. Response included treatment at Northeast Alabama Regional Medical Center of moulaged personnel (simulating injured ANCA workers) transferred from ANCA. Seven medical facilities received simulated injured personnel for evaluation. Additionally, county law enforcement, State Troopers, and the State Department of Transportation exercised their portions of the Interstate

Traffic Management Plan.

Other CSEPP Highlights: Since the Reentry and Recovery Phase would not be evaluated in the normal response exercise, the Anniston Chemical Activity Commander decided to practice those procedures during a follow-on phase. Those participants conducted group discussions about reentry and recovery considerations during the afternoon of 22 March and began writing the Reentry and Recovery Plan and accomplished those procedures on 23 March. This was also the first exercise of the new Fort McClellan Army National Guard Training Center Command Post.

Finding Resolution: In Tab A (ANCA), eight findings were closed, but there were six new and two repeat findings. There were no new Tab B findings. Additionally, there were seven new Tab C findings, all dealing with medical issues.

Accomplishments: This was the first evaluation of the Northeast Alabama Regional Medical Center Medical Emergency Operations Center (MEOC). It was determined that the MEOC was adequate to coordinate the management, allocation and use of medical resources to treat all contaminated patients.

Demonstrated Needs: A concern was raised that the supplies of Atropine available for CSEPP purposes, could become a major problem if used for treatment of OP pesticide poisoning. The concentration of the Atropine is so weak that the volumes needed to provide an effect could cause death from hemolysis.

Lessons Learned: Close monitoring of the hazard plume by exercise control personnel is still a requirement. Incorrect meteorological data inputs resulted in a plume being broadcast to the off-post communities stating that the hazard plume was confined to the installation.

SIGNIFICANT EVENTS TIMELINE

A chronological summary of response activities is provided in Table 2, Significant Events Time Line. This listing was developed from observed player actions at each exercise location and incident logs maintained by players.

Table 2. Significant Events Timeline

Time	Location	Activity
0810	ANAD – SSCC	Download message given.
0815	ANAD – SSCC	Download message given by Security. Confirmed by CSDF and all security personnel.
0835	ANAD – Accident Site	STARTEX - Helicopter crash 0835:30 – MSS Rocket explosion Initial message given to EOC by crew leader on site.

Table 2. Significant Events Timeline

Time	Location	Activity
0836	ANAD – SSCC	Chemical alarm sounded in the limited area.
0835	JH	STARTEX
0835	RMC	STARTEX per SIMCELL (evaluators only)
0836	ANAD – EOC	Initiation of exercise.
0836:50	ANAD - EOC	Field report characterizing the event received via radio in EOC.
0837	ANAD – Accident Site	EONC driver and assistant EONC driver self-administered one Mark I kit.
0837	ANAD – EOC	Explosion called into EOC.
0837	ANAD – SSCC	Initial report of helicopter crashed near Igloo G-602.
0838:00 to 0838:30	ANAD – EOC	On-post siren activation. This continued every 12 minutes for the first hour and every 20 minutes until the command decision to cease sounding sirens at 1159.
0838	ANAD – EOC	Decision made to run two rockets exploding and 13 leaking.
0838	ANAD – EOC	Sounded siren on-post.
0838	ANAD – EOC	Phone and radio message sounded for people in building.
0838	ANAD – EOC	Radio message over net completed.
0838	ANAD – Bldg 363	Test exercise message about accident disseminated over intercom.
0838	ANAD – EOC	ANAD declared event time.
0839	ANAD – Accident Site	EONC driver checked on forklift driver and administered Mark I kit. Assistant EONC Driver evacuated upwind to PTV for treatment.
0839	ANAD – EOC	Command staff responded to EOC.
0839	ANAD – EOC	Chemical event declared on the Emergency Management Information System (EMIS).
0839	ANAD – EOC	Demil Site ringdown phone completed.

Table 2. Significant Events Timeline

Time	Location	Activity
0840:40 to 0842:40	ANAD – EOC	Initial on-post command information notification to non-essential personnel. Periodic updates were made throughout the exercise until those personnel were released at 1230.
0840	ANAD – EOC	LTC Williams arrived at EOC.
0840	ANAD – EOC	Hotline Delta identified.
0840	ANAD – EOC	Message started to notify on post organizations on depot ringdown phone.
0840	SMH	With no prior notice, eight (8) patients arrive through EMS ambulance entrance to the emergency department (ED). This entails the keypad lock at the entrance being accessed by one of the students participating in the drill acting as a patient. Their presence was announced by a patient with psychological symptoms screaming for help. Two (2) of the patients were lying on the floor unresponsive.
0840	SMH	“Code Blue”, signifying an external disaster, is called overhead throughout the hospital on the PA system.
0841	ANAD – Accident Site	Safety person administered second Mark I kit to forklift driver, and third to EONC driver. The assistant EONC driver was decontaminated. EONC driver was evacuated to the PTV.
0841	ANAD – EOC	EOD requested; CO affirmed request
0841	SMH	Several staff went to the hallway to see what the commotion was. Uncertain of the situation, the ED staff contained the patients in that specific hallway, resulting in at least six staff members, including the ED physician and two of the ED nurses, becoming contaminated
0841	SMH	Triage of patients #30,4,40,26,48,1,16,46
0842	ANAD – Accident Site	EONC driver was evacuated to the PTV.
0842	ANAD – EOC	Form 18 completed using SafePort.
0842	ANAD – SSCC	Security patrol reported Igloo G-602 door open, one casualty inside igloo and two casualties outside being treated for GB agent.
0842	SMH	Patient # 46, an apneic organophosphate agent casualty, placed on a backboard, loaded onto decon "Tiger Cat contamination assist tables" (located on a stretcher) and moved to ED trauma room from ambulance hallway. ED trauma room is located at the opposite end of the hallway from the ambulance entrance.
0843	ANAD – EOC	LTC Williams requests that surveillance respond and be prepared for EOD.

Table 2. Significant Events Timeline

Time	Location	Activity
0843	ANAD – EOC	Depot ringdown phone completed. EOD notified at this same time.
0843	RMC ED	Disaster call received @ Emergency Department (ED) desk
0843	SMH	Overhead announcement updates to "Code Black", signifying it is a chemical incident.
0843	SMH	Decon facility is being assembled, located just outside of the Ambulance entrance.
0844	ANAD – Accident Site	Forklift driver loaded on gurney and taken to PTV (all victims at PTV).
0844	ANAD – EOC	LTC Williams called SBCCOM (MG Doesburg) for initial notification of event.
0844	ANAD – EOC	EMIS broadcast to Ft McClellan.
0844	ANAD – EOC	Start of Initial notification to the off-post via the simulated dedicated Hot Line.
0844	SMH	Patient. #16 (convulsing on floor) was transferred to a backboard. She was given atropine IM, then loaded onto a conventional stretcher, and moved to ED trauma room.
0844	SMH	Patient # 46 decontaminated with 5 % Clorox solution.
0845	ANAD - EOC	Critical Information as defined on Form 18 completed during initial notification.
0845	ANAD – EOC	EMIS broadcast acknowledgement received from Ft McClellan.
0845	JH	Nine panicked victims stormed the Emergency Department (ED) entrance, bowling over the Safety Officer, who said "Oh no." The ED called a Code Mass Arrival over the public address (PA) system. ED staff quickly determined that the ED Waiting Area was contaminated. One victim simulated collapsing on the floor and seizing.
0845	RMC ED	Medical Incident Commander (MIC) called a marshalling of personnel, Single secretary (of 2) starts recall (see results Appendix A)
0845	SMH	Patient #16 MD orders atropine IM, no specified dose
0846	ANAD – Accident Site	Clothing removed from EONC driver, eye wound dressed and patient was decontaminated with water (NOTE: chest and arm not dressed).
0846	ANAD – EOC	Completed (simulated) PAR Zones to off-post.
0846	JH	The ED started their call tree. Two ED staff members came out of the ED Treatment Area into the Waiting Area and returned to the Treatment Area.

Table 2. Significant Events Timeline

Time	Location	Activity
0846	SIMCELL	Heads-up call to MG Doesburg – initiated at 0844, completed at 0846 (from Barb in EOC).
0846	SMH	Patient # 48 (with a penetrating abdominal wound), and # 40, who complained of vomiting were moved to the trauma room from the hallway.
0846	SMH	Guard assigned to hallway door to secure area. Guard not wearing PPE.
0846	SMH	Hallway door guard stops Patient 30,1,26,4 from advancing further into ED
0847	ANAD – EOC	LTC Williams / CEA asked if there was information on injuries – answer, unknown at this time. Also asked if this was the authorized helicopter that was doing the overflight of the installation. Answer – unknown.
0847	JH	One female victim was placed on a stretcher by six ED staff, who were not suited in personal protective equipment (PPE.) One of the ED physicians was standing in the Waiting Area and stated that the patients should be moved to the Decontamination Area.
0847	SMH	ED MD orders 2-PamCl 2mg IV, atropine 10mg IV repeated x 1, and ativan 2mg IV for patient # 46.
0848	ANAD – EOC	Notified Fort McClellan of chemical event.
0848	JH	ED staff designated to perform security functions implemented a lock-down procedure by standing at the two doors and preventing entry and exit. Four staff members began to set up the Decontamination Area. They experienced difficulty assembling the tents. Hard-sided wading pools were used between the tents as catch basins. Three ED staff members not suited in PPE walked three victims out to the Decontamination Area. Two victims were on stretchers, and one was on a wheelchair.
0848	SMH	Patients #1 (with pain behind the eyes), # 4 (with pain behind eyes, blurred vision, cough, and wheezing), # 26 (with psychosomatic symptoms), and #30 (with panic disorder) were triaged and sent back to the hot line for proper decontamination.
0848	SMH	Patient # 16 placed in decon Tiger Cat bath and decontaminated with soap and water. Confusion exists about whether to use bleach solution or soap and water.
0848	FM-ARNGTC	Event notification received via hotline call (simulated using commercial phone line).
0849	RMC ED	Call to ED from ANAD Clinic, reporting helicopter crash into igloo containing GB rockets, release of agent
0849	SMH	Patient # 46 re-decontaminated with soap and water.
0849	SMH	Patient # 46 receives 10 mg atropine and 2 mg of ativan IV.

Table 2. Significant Events Timeline

Time	Location	Activity
0849	SMH	ED MD orders 10 mg of IV atropine for patient # 48
0850	JH	Three gurneys were taken to the contaminated side of the Decontamination Area.
0850	SMH	Patient # 16 receives 10 mg atropine IV
0850	SMH	Patient # 40 IV's started and 10 mg atropine IV
0850	SMH	Received first phone call from RMC signifying that drill has begun
0850	SMH	Decon shower set-up continues
0851	RMC ED	Code Green called via hospital intercom, MEOC activated. One MD enters the ED asking "What is a Code Green?"
0851	SMH	Hot line running (screens had been set up prior to STARTEX)
0851	SMH	BP monitor & EKG placed on patients # 16 & # 46
0852	ANAD – Accident Site	Forklift driver was loaded into PTV with litter straps in place.
0852	ANAD – Accident Site	Approx. 5 minutes transpired before anyone attended to EONC Driver's chest and arm wounds. Even though these were not critical additional simulated blood was added in order to get a response from the responders. Wounds were immediately dressed and bleeding stopped. ABCs.
0852	JH	The lead physician concluded that three ED staff members were contaminated and had to go to the Decontamination Area.
0852	RMC ED	Decontamination setup begun outside ED, security performs lockdown and isolation of ED. Decontamination rooms emptied of storage, one person setting up decon area, operations meeting occurring with ED staff.
0852	RMC MEOC	Three hospital workers reported to Fast Track area of the ED to begin Emergency Operations Center (EOC) set up by removing equipment carts for access to the Communications room and incident tracking boards.
0852	SMH	Patient # 1 triaged by MD & sent to Trauma room.
0852	SMH	Patient # 1 brought to trauma room with mild organophosphate exposure, atropine 10mg IV ordered
0852	SMH	Decontamination begun on ambulatory patients, in hallway.
0852	SMH	Patient # 48 (abdominal wound) IV/NS, oxygen, dressing
0852	SMH	MD listening to breath sounds of patient # 40 with chest tightness/miosis, lacrimation and rhinorrhea
0853	ANAD – Accident Site	PTV 67 and 77 departed site with injured workers.
0853	ANAD – EOC	Initial press release authorized by CEA.

Table 2. Significant Events Timeline

Time	Location	Activity
0853	ANAD – EOC	AOC notified of chemical event.
0853	JH	Two laboratory workers brought additional supplies to the ED. Two ED staff members not participating in the exercise came over to the Decontamination Area, talked with the contaminated staff members, and then returned inside the ED. Four Decontamination Team members began to don PPE.
0853	SMH	BP & EKG monitor placed on patient # 48
0853	SMH	Patient # 26 brought to trauma room, given 2mg IV ativan
0853	SMH	MD examines patient # 30, ambulatory c/o eye pain
0854	ANAD – EOC	EEI on injuries provided to CO/CEA.
0854	RMC MEOC	Communications room (containing dispatch equipment and plume tracking map) is in service and manned by two hospital workers. The Gynecology rooms (four) have been put in service as follows-Gyn 1-Medical Control, Gyn 2 – Administrative, Gyn 3 – Other facilities Gyn 4 – spare by four hospital employees
0854	SMH	No notification of an event had arrived at the ED by any route. The ED contacted MEOC and were told that the exercise had not started. The ED advised that they were receiving casualties.
0854	SMH	Patient # 4 brought to trauma room, given atropine 10mg IV
0854	FM-ARNGTC	ANAD notified via e-mail that Ft. McClellan was evacuating Pelham Range.
0855	ANAD – Accident Site	Third Mark I kit administered to EONC driver and assistant.
0855	ANAD – EOC	SRF requested.
0855	JH	The Medical Emergency Operations Center (MEOC) at the Northeast Alabama Regional Medical Center (RMC) notified the ED that an incident occurred involving a helicopter crash and M55 rockets.
0855	SIMCELL	AOC (Army Operations Center) notified.
0855	SIMCELL	SRF (Service Response Force) requested.
0855	SMH	All initial patients now in trauma room, receiving treatment while decon being set up
0855	SMH	First two patients (#46 and #16) intubated, each receive another 20mg IV of atropine for a total of 40mg each
0855	SMH	Respiratory care employee arrives in dirty area to help care for patients, no protective equipment on.
0855	SMH	Patient # 1 receives eye irrigation for eye pain, receives another 10mg atropine for total of 20mg

Table 2. Significant Events Timeline

Time	Location	Activity
0856	RMC MEOC	All MEOC phones are in place and fax machine (for information and plume updates) in service in Administrative room.
0856	RMC ED	Three staff RNs begin to suit up for decontamination effort. Observed no pre-screening of vital signs. Suiting up in cramped shower area; One SCBA set "do not use – empty"
0856	SMH	Charge nurse gives MD up date on bed status. Seventeen (17) beds available.
0856	SMH	One (1) critical care bed available, and fourteen (14) can be emptied
0856	SMH	Four (4) adult, one (1) pediatric ventilators available
0856	SMH	MD orders two (2) adult ventilators to the ED trauma back room
0856	SMH	First patient staged outside decon shower, waiting for completion of set up.
0837:20	ANAD-EOC	Lead Hazard Analyst stated the event was two rounds exploding and 13 leaking.
0857	ANAD – Accident Site	EONC driver's wounds dressed; both EONC driver and assistant had all clothing removed and were decontaminated then covered with blankets.
0857	ANAD – EOC	COL Bates arrived and LTC Williams updated him on situation
0857	JH	Two victims in wheelchairs, four victims on stretchers, and three standing victims were lined up on the contaminated side of the Decontamination Area.
0858	ANAD – Accident Site	Forklift driver was left unattended in PTV for approx. 5 minutes.
0858	ANAD – SSCC	CB2 Gate opened/Post 9 Gate closed.
0858	ANAD - EOC	ANAD completed second notification to the simulated off-post to include the Supplemental Information on their Form 18. Subsequent notifications were made at approximate 30-minute intervals for three hours, then at one-hour intervals until ENDEX.
0858	RMC MEOC	MEOC telephoned SIMCELL to notify of being operational. Fax machine is operational but no information received at this time.
0859	ANAD – Hotline	RTAP departed Bldg. 78 for Hotline Delta.
0859	RMC ED	MIC asks for "all available bodies"
0859	SIMCEL	SBCCOM EOC notified.
0845:25	ANAD – EOC	Critical Information as defined on Form 18 is completed during initial notification.

Table 2. Significant Events Timeline

Time	Location	Activity
0900	ANAD – Accident Site	Surveillance 68, Decon 65, and PTV 70 arrive at site to conduct initial assessment and decontamination.
0900	JH	Five real patients, including one critical patient, arrived, and ED staff assignments were adjusted to accommodate this change. Hospital administrative staff were standing downwind of the Decontamination Area and were assigning packets for registration and recording assessment and treatment to each decontaminated person.
0900	RMC MEOC	Stringfellow Hospital calls, asking about incident. RMC calls back notifying them of the details of the incident; "Code Yellow" Multiple casualty declared via overhead page. Decontamination area taped off, security adequate
0900	SMH	Reversed decon process, trauma room declared dirty side and roped off separating the trauma rooms from the other ED rooms
0901	SMH	Received word from MEOC that the exercise should not yet be underway. The ED staff elected to play the scenario through as it had begun to unfold rather than back up and restart.
0901	SMH	MD asks staff if the want to start over, staff vote to continue
0901	SMH	Call received from RMC MEOC advising a restart of the exercise
0902	ANAD – Accident Site	EONC driver and assistant loaded into van.
0902	ANAD – EOC	Initial information brief provided by Director of Operations to EOC.
0902	RMC	Triage areas being identified throughout the facility with colored flags, large pool of personnel assembling in hallway
0902	RMC MEOC	Regional Medical Center (RMC) is contacted by State EOC for verification on radio status and operations.
0902	SMH	Penetrating abdominal trauma of patient # 48 recognized, moved up in line for decontamination as non ambulatory patient
0903	RMC MEOC	No information received, State EOC completes radio identification with all agencies.
0903	RMC ED	Inside registration established (3 persons)
0903	SMH	Patient # 12 passed barricades, entering the ambulance doorway and collapsed in ED/ambulance door way
0903	SMH	First radio communication noted, hand held Motorola Talk-about
0903	SMH	Decontamination of first patient, patient # 2
0904	ANAD – Accident Site	PTV 1 left for Dear Clinic with forklift driver.

Table 2. Significant Events Timeline

Time	Location	Activity
0904	ANAD – EOC	All ANAD EOC stations staffed.
0904	RMC ED	Personnel receiving patients from decon dressed in gowns and other standard body substance isolation. Anniston blood bank queried.
0904	SMH	Patient. # 6 positioned to decon shower
0905	RMC ED	Dress out complete – Splash suits, boots, gloves, aprons. No respiratory protection is worn because OSHA compliant start up program is in progress. Gloves on inside of sleeves on two providers, outside of sleeve on one. One MD and two RNs are in pre-triage area & distribution point just inside the ED from the decontamination area. These personnel are dressed in scrubs and Tyvek Aprons, as well as exam gloves.
0905	SMH	Patient # 26 emerged from decontamination and moved to clean side of ER. She had a (simulated) IV and abdominal penetrating wound.
0905	SMH	Patient # 12 found comatose in ambulance entrance, brought to trauma room vomiting, unconscious, given ativan 2mg IV and atropine 20mg IV
0905	SMH	Communication to MD done from cold side of decon shower
0905	FM-ARNGTC	Informed of (simulated) traffic accident in vicinity of Gate 3.
0906	ANAD – Accident Site	EONC van left for Deer Clinic.
0906	JH	The Safety Manager was instructing confused and suited Decontamination Team members concerning where they would be stationed and their roles. One of the Decontamination Team members took the hood off of the their PPE and the mask down to readjust it while in the contaminated area.
0906	RMC ED	1st casualty arrives. Chest tightness, 2 Mark I kits administered. Decontamination effort begun
0906	SMH	Decontamination completed on patient #26
0907	ANAD – Accident Site	Vehicle stopped to correct litter that was placed in PTV backwards.
0907	RMC MEOC	Fax received. Incident and Plume information. Staffing at RMC verified.
0907	SIMCELL	AMC Safety notified of chemical event.
0907	SMH	Patient # 12 showing no improvement, CPR begun, intubated, placed on ventilator, given 20mg more IV atropine based on continued constricted pupils.
0907	SMH	Patient. # 26 processes to cold side through ED front door, to admitting

Table 2. Significant Events Timeline

Time	Location	Activity
0907	SMH	Admitting personnel places wrist band with patient name on left wrist
0908	JH	The lead physician interrupted play in the exercise to treat the real critical patient in the ED. Another physician replaced her in the Decontamination Area.
0908	RMC ED	Four patients arrive, tagged with symptoms, no moulage. Initial triage, Mark I treatment and decontamination "performed", with treatment and decon simulated for safety reasons. All patient clothing is placed in one receptacle, valuables are separated by individual patient and identified. Treatment and decontamination times are limited due to simulation
0909	RMC MEOC	Staging areas assigned north and south of the plume track for emergency response vehicles. MIC evaluates the need for possible lock down of hospital due to plume track.
0909	RMC ED	Large personnel pool in hallway identified as "runners", will transport patients to different areas of hospital; first patient (ID #3) through decon, taken to Room #4 (critical room)
0909	SMH	Patient. # 48 decon completed escorted to ED front door
0910	ANAD – Accident Site	Assessment reported to FCP: two exploded rockets, unknown number of leaking rockets, helicopter crash site still burning.
0910	ANAD – EOC	Puddle size of 8 X 12 feet reported.
0910	RMC MEOC	Second fax received update of plume information, plume tracking board updated in RMC EOC. National Guard EOC is operational and notifies RMC EOC.
0910	RMC ED	Other runners given brief instruction on areas in hospital used for patients (1st runner was unfamiliar with ED layout)
0910	SMH	Patient # 48 arrives in triage area/clean side of ED with wrist ID band, ambulatory, has abdominal wound
0910	SMH	Patient # 12 decontaminated
0910	SMH	Patient. # 40 decon completed, had tape on left shoulder with meds given and treatment provided
0910	FM-ARNGTC	EOC fully operational.
0911	RMC MEOC	RMC EOC simulated turnover of medical 911 dispatch from state EOC to RMC
0911	RMC ED	2nd patient (ID #6) taken into room #4, given 2 Mark Is in decon
0911	SMH	Observed decon team simulate using brush, soap and rinse
0912	ANAD – EOC	Decision process – Surety Officer / LTC Williams on rounds involved – two rounds exploded unknown leaking – Assume two rounds exploding and all (13) leaking.

Table 2. Significant Events Timeline

Time	Location	Activity
0912	JH	Decontamination Team members began decontamination of Victims 1 through 9. Decontamination of the two contaminated ED staff members was completed and they were sent into the ED. A third contaminated ED staff member, who had not been assessed by the lead physician and was not assigned tracking materials or tagging, completed Decontamination and was sent to the Equipment Room to don PPE.
0912	RMC ED	Patients in room #4 seen by RN, assessed, no further antidote administered
0913	ANAD – Accident Site	Igloo door closed.
0913	RMC ED	3rd patient (ID #45) into room #4, assessed by second RN, no further antidote administered; other patients being taken to designated areas in the hospital per their priority
0913	SIMCELL	AMC HQ notified of chemical event.
0913	SIMCELL	TACOM (Tank Automotive Command) notified of chemical event.
0913	SIMCELL	SBCCOM legal notified (possible claim) of chemical event.
0913	SMH	First patient sent from the clean triage area into ED and placed in bed.
0913	SMH	Patient # 48 passed out in triage area.
0913	FM-ARNGTC	Directed all Training Center divisions to perform accountability checks and to direct those who had not arrived at work to stay/return home.
0914	ANAD – EOC	LTC Williams advised that all the CSDF personnel were accounted for. Again LTC Williams asked if there were any visuals as to the cause of the accident. Asked the security and CSDF forces if they saw anything.
0914	JH	The first of the two contaminated ED staff members entered the ED Treatment Area, was assessed, determined to have no agent effects, and returned to work. An unsuited member of the Housekeeping Staff entered the area in which Decontamination was being conducted and returned to the hospital without being decontaminated.
0914	RMC MEOC	Fax received with updated plume information; still contained to Post.
0914	RMC ED	Two more patients arrive outside ED. 10-15 minute decon time verbalized by personnel, one Mark I given
0914	SMH	Last three patients being brought out to decon on stretchers
0914	SMH	First non ambulatory patient in Tiger Cat tub brought to decon line

Table 2. Significant Events Timeline

Time	Location	Activity
0915	ANAD – Accident Site	PTV 1 arrived at Deer Clinic. The door between the chamber and emergency were opened after an individual leaned against it. This should not happen due to the positive and negative pressure between the rooms. Suggest a dead bolt or locking mechanism is installed on he door.
0915	ANAD – Hotline	RTAP began monitoring at Hotline Delta.
0915	JH	The second of the two contaminated ED staff members entered the ED Treatment Area, was assessed, determined to have no agent effects, and returned to work.
0915	RMC ED	6th casualty arrives into ED. Expected casualty # report received
0915	SMH	Patient # 46 on (simulated) ventilator brought to holding area within institution,
0915	SMH	Patient # 48 placed on stretcher and sent into ED without report given to receiving nurse.
0915	FM-ARNGTC	First casualty report received; six injuries (at least one urgent with head trauma and broken bones). Air evacuation requested. Air Route 2 was directed for use by the MEDEVAC helicopter. Last unit reported evacuated from Pelham Range.
0916	ANAD – Accident Site	Top Igloo vent closed.
0916	RMC ED	4th patient (ID # 40) into room #4, supportive care
0917	ANAD – EOC	At 0907 MG Doesburg was named the SRF Commander by DA.
0917	RMC ED	5th patient (ID #10) into room #4, supportive care
0917	RMC MEOC	EOC began to plan the specific areas for staging emergency equipment. RMC makes decision to move an earlier staging point due to updated plume information and simulates contact to Talladega County for staging at the Speedway with simulated notification to FAA for possible low level aircraft evacuation.
0917	SIMCELL	TACOM safety notified of chemical event.
0917	SMH	A real-time pediatrics patient was moved from the ED to the hospital.
0917	SMH	All staff in contaminated area begins decontamination
0917	SMH	Patient. #16, decon completed
0917	FM-ARNGTC	Second situation update. [Reviewed incident information; six casualties on Pelham Range; one with head injury; life flight requested]
0918	ANAD – Accident Site	Igloo door vent closed.

Table 2. Significant Events Timeline

Time	Location	Activity
0918	RMC ED	Two more patients arrive outside ED, one patient receives two Mark Is, and both patients are decontaminated
0918	SMH	Vent., IV, exchanged as Patient.#16 passed over hot/cold line
0919	ANAD – Bldg 78	EOD team leader briefed by FCPO.
0919	JH	The RMC MEOC called the ED to determine the availability of treating physicians, patient beds, and antidote and blood supplies. The Decontamination Team realized they could not move stretchers or wheelchairs through the Decontamination Area because of the hard-sided wading pools and catch basins. Nonetheless, they attempted to move some of the wheelchairs through anyway, and the wheelchairs fell on the victims. Therefore, they resorted to ambulating the non-ambulatory victims through the Decontamination Area.
0919	SMH	Staff who were potentially contaminated by contact with patients began going through decon.
0920	JH	Victim 1 completed Decontamination on a stretcher. The Decontamination Team called a request to the ED for two more stretchers; the ED responded that no more stretchers were available.
0920	RMC ED	Two more patients arrive, decontaminated
0920	RMC ED	MEOC notified ED reference 6 patients arrived, available capacity of 45
0920	RMC MEOC	RMC simulates contacting Calhoun County for staging of Emergency Response Units.
0920	SMH	Clean patients being re-triaged from scratch, receiving ID bands, at ED entrance
0920	SMH	Patient. # 12 decon completed
0920	SMH	Patient. # 12 vent. IV exchanged for clean one as passed over cold line
0921	ANAD – EOC	Update – information was passed on to the command group CO/LTC/CEA on the extent of injuries for the three depot workers.
0922	ANAD – EOC	LTC Williams asked Surety Officer to call the FCP and ask Security in EOC to try to gain information on whether the crew of the helicopter or the crew on the ground was injured
0922	ANAD – EOC	It was reported that the puddle and the pallet had been covered.
0922	ANAD – Hotline	Hotline Delta monitoring completed; area declared “clean.”
0922	SMH	Patient # 12 received in ED from triage nurse and is on a ventilator
0923	ANAD – Accident Site	Damaged pallet of rockets and liquid agent spill were covered with plastic by decon crew on site.

Table 2. Significant Events Timeline

Time	Location	Activity
0923	ANAD – EOC	CSDF personnel accounted for.
0923	JH	Victim 1 (Scenario 23) arrived unresponsive and on a stretcher in the ED Treatment Area. Victim 1 had presented as a heat stroke victim. In the Treatment Area, the treating physician considered the possibilities of heat stroke or diabetic coma and administered D5W and oxygen, and ordered complete blood count (CBC,) blood glucose, arterial blood gases, and chest X-ray. He noted low blood pressure and ordered a fluid bolus. Victim 1 was to be monitored for vital signs and neurological status.
0923	RMC ED	Additional antidote arrived from pharmacy (was received on this date), approximately 4000 additional mg, Two additional patients arrive outside ED and are processed. Notified that "7 psy" en route.
0923	SMH	MD pronounces patient # 12 dead
0923	SMH	Simulated call placed to EPA/ notified of ED contamination
0924	ANAD – Accident Site	PTV 2 arrived at Dear Clinic.
0924	ANAD – EOC	NRC notified of chemical event.
0924	JH	Victim 2 completed Decontamination on a stretcher.
0924	RMC ED	Stablized patients from room #4 transferred to GI lab, followed by RN.
0924	RMC MEOC	Hospital and EMS accountability boards updated and complete
0924	SIMCELL	NRC (National Response Center) received chemical event notification.
0925	ANAD – EOC	ETA of SRF 1015 hrs. Need information from the key players for the hand off briefing.
0925	RMC ED	Two additional patients arrive outside ED and processed
0925	SMH	All personnel from contaminated ED processed through decon
0926	ANAD – Accident Site	(PTV 2) As patients unloaded, stretcher was not working properly, clinic personnel assisted and finally placed patient on clinic litter.

Table 2. Significant Events Timeline

Time	Location	Activity
0926	JH	Victim 3 completed Decontamination on a stretcher. Victim 2 (Scenario 47) arrived on a stretcher in the ED Treatment Area. Victim 2 had presented with a moderate liquid organophosphate exposure and an open lower leg wound. The treating physician immobilized her leg before moving her. He determined she was 30 weeks pregnant, without vaginal bleeding, and with clear lungs. He ordered intravenous normal saline, a 500 cc fluid bolus, three l/min oxygen by nasal cannula, two mgs intravenous (IV) penicillin, 500 mgs IV levicon every 24 hours, a CBC, basic metabolic profile, fetal heart tones, fetal monitoring, and type and cross match of three units of blood for standby.
0926	RMC ED	Local media arrives, SIMCELL notified
0926	SMH	Patient # 16 received in ED on ventilator with wrist ID and paper information from triage nurse
0926	SMH	Normal outside triage and decon established
0926	SMH	Anniston FD contacted, asking for hazmat team respond to ED
0927	SMH	Discussing with Site Evaluator lead to allow FD to respond to ED
0928	ANAD – EOC	Updated plume briefed to CO/LTC Williams.
0928	RMC ED	6th patient (ID #35) to room #4, supportive care
0928	SMH	Patient # 12 is moved from ED and sent to the temporary morgue
0930	ANAD – Dear Clinic	"C" collar applied to EONC driver and mask removed inside chamber at clinic.
0930	ANAD – Accident Site	Smoke/fire at helicopter crash site was extinguished.
0930	JH	The Decontamination Team began to doff their PPE and decontaminate team members. Victim 3 (Scenario 44) arrived in the ED Treatment Area. Victim3 had presented with a moderate organophosphate exposure and agitation, delusions, and hallucinations. The treating physician ordered establishment of IV access, observation, and administration of more IM atropine if needed.
0930	RMC ED	7th patient (ID #6) to room #4, supportive care
0930	SMH	Patient # 48 is sent to surgery
0930	SMH	Patient # 16 is sent to ICU
0930	SMH	Available in-house staff count complete and delivered to ED charge nurse.
0931	ANAD – EOC	CO/CEA/ & staff discussed with command group the positioning of RTAP off-post. Directed to send one.

Table 2. Significant Events Timeline

Time	Location	Activity
0931	JH	Victim 4 (Scenario 15) arrived in a wheelchair in the ED Treatment Area. Victim 4 had presented with a moderate organophosphate exposure and rapid respiratory rate. The treating physician ordered observation.
0932	RMC ED	Two additional patients arrive outside ED and are processed. Condition of staff in suits checked by MD
0932	SMH	Last patients from initial group re-triaged, admitted and registered into ED
0933	ANAD – Accident Site	Decontamination with sodium carbonate began at agent spill. Decontaminant sprayed both under and over the plastic cover.
0933	JH	Decontamination of Victims 5 through 9 was completed. Victim 6 (Scenario 55) arrived in a wheelchair in the ED Treatment Area. Victim 6 had presented with psychosis. The treating physician ordered establishment of IV access, oxygen, and observation.
0934	JH	Victim 5 (Scenario 20) arrived in wheelchair in the ED Treatment Area. Victim 5 had presented with asthmatic symptoms of wheezing and severe respiratory distress. The treating physician continued as-needed (PRN) albuterol and planned to recheck them. Another member of the Housekeeping staff was decontaminated; she was not assessed for adverse effects.
0934	SMH	Patient # 19 arrives at ED with complete of hypothermia, correctly recognized as not needing decon and brought directly to ED triage
0935	ANAD – EOC	EOD at the Hot Line preparing to go down range.
0935	JH	Victim 7 (Scenario 60) arrived in a wheelchair in the ED Treatment Area. Victim 7 had presented with panic, hyperventilation, and pregnancy. The treating physician ordered one mg ativan, two mgs haldol, and observation.
0935	RMC ED	8th patient (ID #53) arrives in room #4, supportive care, Two additional patients arrive outside ED and are processed; 16th patient indoors
0935	RMC MEOC	Mock Media Faxes arrive. Stringfellow contaminated but cleaning in process by FD
0935	FM-ARNGTC	EOC staff directed to coordinate with alternates for conducting 24-hour operations.
0937	JH	Victim 9 (Scenario 50) arrived on a stretcher in the ED Treatment Area. Victim 9 had presented with asthmatic symptoms of wheezing and respiratory distress; she was to receive oxygen, albuterol, and ativan. The treating physician did not evaluate Victim 9 because of miscommunication about when the exercise ended.

Table 2. Significant Events Timeline

Time	Location	Activity
0938	RMC ED	Retriage/treatment notices a heat injury that was given two Mark I kits
0938	RMC GI Lab Bay	Yellow tagged patients being cared for during entirety of exercise, antidote not present in area
0939	ANAD – EOC	RTAP status to CO/CEA – Coordinated with off-post and advised them it was for confirmation of the downwind hazard.
0940	RMC ED	Two additional patients arrive outside ED and processed
0940	SMH	Patient # 19 brought back to ED for treatment
0941	ANAD – Hotline	MPDS arrived at Hotline Delta.
0942	JH	The ED announced Code Mass All Clear on the PA system. ENDEX.
0942	RMC GI Proc. Room	White tagged patients (Imminent death) located in this location throughout exercise
0942	SMH	Patient # 24, psychotic, arrives at ED entrance, given unreliable history, is brought selectively through decon with female RN accompany, need for one-to-one alerted to ED staff through two-way radio
0943	RMC ED	Ten patients arrive outside ED. Initiates first backup of decontamination line.
0943	RMC MEOC	Recurring test exercise messages from SIMCELL as Calhoun Co EOC
0944	SMH	Decon team suiting up in back hallway. Some of the PAPRs had a short connector tube between the PAPR and the face piece hose. That section was fitted with a friction connector that could be broken open by an agitated patient. Two of the Racal units had the third cartridge pointing up, not down. Two had seals still plugging the canisters while they were being worn and two had loose canisters. All problems eventually corrected.
0945	RMC ED	PRN Nursing services offers 4 nurses “5 minutes away if needed, they come from the floors”
0945	SMH	Patient # 24 received in ED from triage with wristband ID and verbal report
0945	SMH	Patient # 7 arrives, brought to decon, and then triage
0945	SMH	First OSHA level C protected person arrives in decon area to conduct triage; decon team had to wait for backup supplies to arrive since theirs were contaminated by first arriving patients
0946	RMC Physical Therapy	Black tagged patients (Dead) relocated to this area during entire exercise. These patients had deteriorated from “white” status

Table 2. Significant Events Timeline

Time	Location	Activity
0947	SMH	Patient # 7 received in ED from triage with wristband ID and verbal report given.
0948	SMH	Orders given by MD for breathing Treatment for patient # 7
0949	RMC ED	22nd patient indoors
0950	RMC Ambulatory Care	Green tagged patients (walking wounded/worried) escorted to this area and cared for during entire exercise, no antidote noted in area
0950	SMH	Patient # 54 arrives, psychotic, is decontaminated and brought to triage
0950	SMH	Patient. # 54 outside hysterical, running from ED staff
0951	FM-ARNGTC	Third situation update. [Everyone except those supporting the MEDEVAC cleared Pelham Range; staff should have activated their 24-hour plans; State active duty requested; fund cite requested for other needs]
0951	RMC ED	No additional patients presenting outside ED
0952	SMH	Last unprotected staff member outside goes through decon herself
0952	SMH	Patient #13 arrives, appropriately triaged by Level C personnel
0953	SMH	Patient # 13 decon. Completed
0954	SMH	MD received walkie talkie for communication with decon team
0954	SMH	Patient # 11 being triaged
0955	ANAD – EOC	CO/CEA want to know who is in helicopter.
0955	SMH	Patient # 54 received in ED from triage with wristband ID and verbal report given.
0955	SMH	Patient # 13 decon performed
0955	FM-ARNGTC	Ft. McClellan requested RTAP support from ANAD (sent at 1000).
0956	RMC ED	Room #4 empty, patients stabilized and moved to either GI Lab Bay or Physical Therapy
0956	SMH	Patient. #11 decon completed.
0957	ANAD – EOC	Update– ETA for the SRF 1500 hrs; lead HA was explaining to the Hazard Analysis group the new weather and plume information; extensive radio traffic; COL Bates/LTC Williams/ Controller discussion. There was much confusion and no one within close proximity was listening to EOC update.
0957	SMH	Patient # 13 continues to wait in triage for evaluation, experiencing fasciculation
0957	FM-ARNGTC	Possible dirt biker identified on Pelham Range.
0958	SMH	Patient # 11 received in ED from triage with wrist band ID and verbal report given

Table 2. Significant Events Timeline

Time	Location	Activity
0958	SMH	Last patients brought from triage to ED for treatment
1000	RMC ED	Received fax exercise media news story
1001	FM-ARNGTC	MEDEVAC completed; Pelham Range clear; MPs remaining at Gate 3.
1002	RMC ED	Last patient through decontamination
1002	SMH	Patient # 13 received in ED from triage with wristband ID and verbal report given.
1002	SMH	Fire Department personnel processing through decon line
1005	SMH	Patient # 13 is sent to cardiac for monitoring
1006	ANAD – Accident Site	EOD and AFCPO arrived at the accident site. Assessment revealed two rockets exploded, eight rockets leaking, and five rockets undamaged. No render safe operations conducted by EOD.
1006	ANAD – EOC	Casualty management discussed with CEA. Concern about calling the Ministry Team since the injured employee's wife worked there and was likely to be the one to answer the telephone. She wanted to deviate from norm and request the head of the Ministry Team. CEA concurred.
1006	SIMCELL	NOK (Next of Kin) notification #1 made.
1007	RMC ED	Lifesaver (Aeromedical service) called, patient. expired en route to RMC
1007	SMH	ENDEX
1008	RMC ED	27th patient. indoors (red), ENDEX called victims remaining
1013	ANAD – Accident Site	Remaining two members of decon crew departed site for Hotline.
1014	ANAD – Hotline	MPDS operational.
1015	ANAD – Dear Clinic	SIMCEL notified of patient status. EONC Driver in surgery. Patient lost eye and will be admitted in stable condition for 48 hours. EONC Assistant and Forklift Driver both treated for minor wounds and admitted for 24-hour observation.
1015	ANAD – EOC	Discussion with EOC staff and LTC Williams on the need to have a decision at a later point when to advise the simulated off-post to come out of the shelter-in-place mode. As they reviewed the plume projections, they decided it was too early to make that call.
1015	ANAD – Hotline	First person began processing through MPDS.
1027	ANAD – EOC	Information just passed to casualty management to give names out.
1028	ANAD – EOC	The information center is operational.

Table 2. Significant Events Timeline

Time	Location	Activity
1029	ANAD – Accident Site	RTAP #2 reported no agent vapor detected in the air at G-602-A.
1030	FM-ARNGTC	Situation update.
1031	ANAD – EOC	Hotline and JIC announced as operational.
1033	ANAD – EOC	Safety office received (simulated) names of people in helicopter crash.
1038	ANAD – EOC	LTC Williams had discussion to broadcast second run. Decision is to go with run #9 (later changed to #11) and that now was the opportunity to update the PAR with the off-post.
1039	SIMCELL	NOK (Next of Kin) notification #2 made.
1041	ANAD – EOC	Tech escort will be requested by EOD.
1044	ANAD – EOC	Decision process – LTC Williams/CEA/Surety Officer to cover remaining rounds; keep them under surveillance to ensure the plastic does not come off; back away. Verified the igloo was locked.
1047	ANAD – Hotline	First person completed processing through MPDS.
1052	ANAD – EOC	LTC Williams called SBCCOM EOC with an update on the status.
1108	ANAD – EOC	Decision process – discussion with Surety/Safety on where they were in the process. Photos taken of the site? Need to be taken to preserve as much of the information as possible before NTSB and other responders come in.
1112	ANAD – EOC	Decision made to “release” non-essential personnel from shelter. Need for coordination with county recognized.
1112	ANAD – EOC	East area depot personnel released from shelter. Discussion and decision on allowing non-essential personnel go home. Security needed to assist to ensure an orderly evacuation/release.
1128	ANAD – EOC	The initial press conference scheduled for 1300 hours.
1143	ANAD – EOC	Fire department decided to check/assess the accident site to search for bodies to be removed.
1145	ANAD – EOC	Heat casualty real world.
1148	ANAD – EOC	Third real world heat injury reported.
1158	ANAD – EOC	LTC Williams authorized the EOC to cease sounding the depot siren.

Table 2. Significant Events Timeline

Time	Location	Activity
1239	ANAD – EOC	Crews took lunch break, planned to reassemble at 1400 to go in and containerize the leaking/damaged munitions. Gathered up PPE and equipment to conduct operations.
1300	ANAD – EOC	Press conference.
1324		ENDEX

LISTS OF STRENGTHS, FINDINGS, AND OBSERVATIONS

Lists of strengths, findings and observations identified during ACE 02 are shown in Tables 3, 4, and 5. They are grouped by the Tab in which they can be found.

Findings have an assigned identifying number that may be used to identify the finding throughout the report and in completing the action plans. The number is structured as follows: XX00A9.1. The "XX" is a two-letter identification of the response organization to which the finding applied [e.g., AI for Anniston Community (two or more jurisdictions), AN for Anniston Army Depot (ANAD)/Anniston Chemical Activity (ANCA), AL for the State of Alabama, ADPH for the Alabama Department of Health, CH for Calhoun County, CL for Clay County, CB for Cleburne County, ET for Etowah County, FM for Fort McClellan, HM for Huntsville-Madison County, JF for Birmingham-Jefferson County, LE for Lee County, ST for St. Clair County, and TA for Talladega County]; "02" represents the year of the exercise; "A" is the Tab designation (A, B, or C) in which the finding is reported; "9" is the objective number (1-15) to which the finding relates; and ".1" is the sequence number of the finding under the objective.

Findings from the previous exercise that were not resolved during ACE 01 are listed by their previously assigned identifying numbers and are carried forward with an updated number.

Table 3. Tab A Listing

Type	ID Number	Description	Page
Strength	AN (Obj. 1)	Alert and Notification (A&N).	A-1
Observation	AN (Obj. 1)	Initial Alert and Notification Off-Post.	A-2
Strength	AN (Obj. 2)	Hazard Analyst Section Discussions.	A-3
Observation	AN (Obj. 2)	SafePort©.	A-3
Strength	AN (Obj. 4)	Proactive Thinking.	A-4
Strength	AN (Obj. 4)	Reporting Requirements of Environmental Officer.	A-4
Strength	AN (Obj. 4)	Command Group Guidance to the Hazard Analysts.	A-4

Table 3. Tab A Listing

Type	ID Number	Description	Page
Observation	AN (Obj. 4)	Timely Sharing of Information.	A-5
Observation	AN (Obj. 4)	Documentation of Decisions and Key Information.	A-5
Observation	AN (Obj. 4)	Documenting Information Safety Position.	A-5
Observation	AN (Obj. 6)	Repeated Alert and Notification of Sirens.	A-6
Observation	AN (Obj. 9)	EOC Briefing Overheard by Reporter via Telephone.	A-7
Observation	AN (Obj. 9)	Need for a Second Computer.	A-7
Observation	AN (Obj. 9)	Need for Media Monitoring.	A-7
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ORGANIZATION OF REPORT

The remainder of this report is organized as follows:

Tab A On-Post Activities
Tab B Joint/Interface Matters
Tab C Off-Post Activities
Appendix 1 Action Plans by Jurisdiction
Appendix 2 Acronyms and Abbreviations
Appendix 3 Distribution

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ANNISTON COMMUNITY CSEPP EXERCISE 2002
(ACE 02)

EXERCISE REPORT

TAB A: ARMY ACTIVITIES

INTRODUCTION

Tab A documents the specific strengths, observations, and findings noted by the evaluation team concerning the emergency response plans and procedures demonstrated by the Anniston Army Depot (ANAD) and the Anniston Chemical Activity (ANCA) during the Anniston Community CSEPP Exercise 2002 (ACE 02). The evaluation team's recommendations are also provided, where appropriate. The State of Alabama and the six off post CSEPP counties declined to participate in this exercise. Therefore, items that were evaluated and would normally be included in Tab B, are included in Tab A and identified by "(with Tab B Implications)" following "Strength", "Observation" or "Finding".

OBJECTIVES

ANAD/ANCA successfully demonstrated applicable Points of Review (PORs) of Objectives 1, 2, 3, 4, 5, 6, 7.1, 8, 9, 10, 11, 12, 13 and 15 as they appear in Appendix C of the CSEPP Exercises document, March 19, 1999.

Objective 1. Initial Alert and Activation

Strength (With Tab B Implications)

Description: Alert & Notification (A&N).

Discussion: The team responsible for alert and notification to both the on post and off post populations worked with great diligence, discipline, and focus to accomplish their tasks and mission. Their teamwork is commendable and a credit to the training, thought, and effort they bring to their jobs. Telephonic updates to the simulated off post community were timely, thorough, and accurate. The team constantly prompted each other in an attempt to ensure that neither information nor agreed upon report times were missed. This sensitivity to off post needs for constant information was impressive. The activation of the on post sirens was every bit as timely as notifications to the off post community. The regularity of the on post siren activation was complemented by on post telephonic updates of information. These updates kept the on post community informed of on going emergency response actions until the command decision to release the non-essential workforce. The care and concern of the on post workforce was equally paramount with the welfare of the simulated off post citizenry as the crisis unfolded.

The framework established for both on post and off post notifications is an excellent one. Using timer devices as a reminder to pull information and make notifications encourages a seriousness of purpose by focusing the attention of the team members. The command emphasis on this function is obvious by the very location of this group in a central EOC location adjacent to the command figures.

Observation (With Tab B Implications)

Description: Initial Alert and Notification Off-Post.

Discussion: Exercise artificialities and equipment failures prevented the unequivocal determination as to whether ANAD would have met the 5-minute initial alert and notification time as required in the ANAD and AEMA MOA on initial notification. The following factors contributed to the perceived near miss situation.

1. The A&N call was placed over commercial phone lines rather than the dedicated Hot Line. The first call did not successfully connect and had to be redialed. The dedicated Hot Line was not used due to the lack of off post participation in the exercise.

2. The automated Protective Action Recommendation system, SafePort©, was not fully operational; the auto load feature was not functioning resulting in a more time consuming effort to generate the PARs.

Recommendation:

1. To play out time critical functions in exercises requires the entire community to participate real time with the equipment they currently have – as the Army maintains, you must train as you will fight. This was not done in this exercise. Simulating functions is like EMS personnel simulating CPR; their skills will erode and the public will suffer.

2. The SafePort© situation must be fixed or compensatory procedures used to ensure the quickest notification to the off post community.

3. There are possible enhancements that ANAD should consider to current operations pending transition to D2Puff.

a. In order to expedite data loading into D2PC, the auto D2PC function can be utilized for multiple scenarios. Given the operation involved, ANAD should run at least four scenarios: 3 rounds spilling, a still air event with 2 exploding and 13 leaking, an open air event with 2 exploding and 13 leaking, and an igloo fire. Preloading those will give the hazard analysts a head start in providing emergency response solutions. This does not address every possible event, but it does offer the opportunity to quickly adapt already running information to the situation at hand. If in doubt, the hazard analyst will always choose an MCE anyway. When movements begin to the ANCDF, additional MCEs should be added to these four. Furthermore, it is incumbent upon ANCDF personnel to be as quick to pass

critical information to the ANAD EOC as field personnel are trained to on ANAD.

b. The automation system generates the information that goes into the locally developed Form 18 for notification to the off post. That information could be transmitted electronically, nearly simultaneous with the telephonic call. CSEPP guidance makes the telephonic notification the primary method, but it does not exclude augmenting or supplementing that telephonic notification via electronic means. The telephonic notification is crucial to the person-in-the-loop concept to ensure authenticity of a report and provide clarification, if necessary. The telephonic notification concept embodied in CSEPP guidance is certainly not meant to discourage creative and quicker dissemination of information. A computer can pass information faster than a person speaking over a phone line.

Objective 2. Hazard Assessment

Strength

Description: Hazard Analyst Section Discussions.

Discussion: The hazard analysts participated in numerous discussions concerning things that should be considered in the hazard modeling process and what should be modeled as "what ifs". All of the analysts participated equally. These open discussions can significantly improve the modeling process and provide better information to the command group. These discussions can also reduce the introduction of errors into the modeling process.

Observation (With Tab B Implications)

Description: SafePort©.

Discussion: SafePort© appeared to be a useful package for producing scientifically based, legally defensible protective action recommendations (PARs). The use of the current version of SafePort© that is not integrated into the management automation system slows down the hazard analysts and increases the possibility of introducing errors.

Recommendation: That SafePort© or a similar system be first validated and then approved as an official tool to be used. Also recommend that selected tool be integrated into the management automation system. Additionally, this tool should be made available to the other chemical sites and tailored to those other sites, if desired.

Objective 3. Protective Action Recommendation and Decision-Making

No strengths, observations, or findings were noted.

Objective 4. Command and Control

Strength

Description: Proactive Thinking.

Discussion: The Command Group, other action officers in the EOC and the logistics cell exhibited laudable proactive rather than reactive thinking. That is, they thought ahead of problems to be solved or plans to be made rather than waiting for the issues to become urgent. Examples included the following. The logistics cell started making plans and arrangements for billeting and transporting the SRF members as soon as they were aware that those augmenters had been requested, but before the logistics cell had been formally tasked from the EOC to make those arrangements. Thought was given to the need to preserve evidence at the accident scene and also how to do it early in the response. Further, the need to advise those sheltering in place to break shelter (to include people off post) and the need for a revised PAR associated with that was considered early on. The matters regarding breaking shelter and preserving evidence have not been given attention reliably at other CSEPP exercises. Therefore, the actions by the Anniston IRF staff are to be complimented.

Strength (With Tab B Implications)

Description: Reporting Requirements of Environmental Officer.

Discussion: Notifications were documented and made in a timely manner and posted to the Status Boards. Also, excellent use was made of the Free Form Log to update completed and pending tasks.

Strength

Description: Command Group Guidance to the Hazard Analysts.

Discussion: The Command Group provided very good guidance to the hazard analysts on specific "what ifs" and assumptions they wanted used for modeling operations. As a result, the Command Group was kept very well informed concerning the hazard modeling products, since the hazard analysts were better able to produce information that was useful to the Command Group.

Observation

Description: Timely Sharing of Information.

Discussion: The first official information "update" within the EOC was conducted at 0902 hrs, approximately 26 minutes into the event. Members of the EOC were attentive and very much in need of this information. Follow-on updates were more difficult to focus on due to several simultaneous conversations and radio transmissions occurring in the same general area. These other discussions greatly detracted from timely dissemination of information.

Recommendation: The initial briefing should be conducted as soon as all essential elements of information have been collected and the majority of the EOC responders have arrived. This enables the work force to conduct their functions efficiently and eliminates repetition. Side conversations and telephone conversations should be paused when updates are provided to the EOC staff. This will allow all members of the EOC the opportunity to hear what actions have been taken and understand the current status of the event.

Observation

Description: Documentation of Decisions and Key Information.

Discussion: Although major decisions were made in a timely manner, there were numerous occasions where the discussions which led up to these decisions were not documented. Documenting the facts known at the time of the decision and a short note on the thought process and options discussed will be extremely helpful in litigation and required On-Scene Coordinator record keeping.

Recommendation: Designate an individual to capture the major decisions on EMIS Free Form Log for the required record keeping.

Observation

Description: Documenting Information Safety Position.

Discussion: Notification of the event to the Army Operations Center (AOC), Soldier & Biological Chemical Command (SBCCOM) and other organizations was completed in a timely manner and documented onto the Status Boards with the times the different organizations were telephonically notified. A local form titled "Chemical Event Form-Enclosure 4" was used for initial and subsequent follow up calls made with partial information placed onto one form. The person(s) performing these notifications said they do not use the Free Form Log.

Recommendation: Additional training on the use of the Free Form Log. If response personnel / managers still choose not to use that log, suggest documenting more information as to who, what, where, why, when or what was discussed onto original form stated above or a continuation sheet of same form or placing more information into the Status Boards.

Objective 5. Public Notification, Instructions, and Emergency Information

No strengths, observations, or findings were noted.

Objective 6. Communications Systems, Facilities, Equipment, and Displays

Observation

Description: Repeated Alert and Notification of Sirens.

Discussion: During the course of the exercise, sirens were repeatedly set off every 12 minutes of the first hour of the exercise and every 20 minutes thereafter; from 0838 hrs until the decision was made by the Commander at 1258 hrs to end the sounding of the sirens. The need to do this manually was labor – intensive and time consuming.

Recommendation: Programming of the current siren system (or new siren system to be installed) should be accomplished to sound automatically every 12 minutes for the first hour of exercise or event. The timer clock used could then be set for every 20 minutes until the Commander decides to stop sounding the sirens, or this too could be automated. This would free up Hazard Analysis personnel to concentrate more time to perform Hazard Analysis duties, plotting, off post notifications, weather logs etc.

Objective 7. Protective Action Implementation for Special Populations and Facilities

No strengths, observations, or findings were noted.

Objective 8. Traffic and Access Control

No strengths, observations, or findings were noted.

Objective 9. Public Affairs

The following three items document the specific observations noted by the evaluation team at the Depot EOC.

Observation (With Tab B Implications)

Description: EOC Briefing Overheard by Reporter via Telephone.

Discussion: While talking to a news media representative, an update briefing going on in the background was overheard and used by the reporter as an additional news source. The media person subsequently reported this information before it was approved for release.

Recommendation: Recommend that the PAO use a headphone with a microphone incorporating a background noise limiter to prevent information being prematurely released to the news media. Additionally, this device would provide hands-free operation to the public affairs team member, which would facilitate easier computer operations.

Observation

Description: Need for a Second Computer or Monitor.

Discussion: While typing news releases and responding to news media inquiries, the PAO missed much of the information available on the computerized logs. A second computer or monitor that had the updated information available would have helped the PAO to keep informed with the latest updates.

Recommendation: Recommend that a second computer or monitor be added to the PAO area.

Observation

Description: Need for Media Monitoring.

Discussion: No one was monitoring news on the accident being presented to the public by the news media. The news media will be reporting on an accident within 15 to20 minutes. It is important to monitor what information is being provided to the public to enable the PAO to know if the information is accurate and, if not, to correct information provided to the media in a timely manner.

Recommendation: Recommend that someone in the EOC monitor the TV and radio stations.

The following four items document the specific strengths and observations noted by the evaluation team at the Joint Information Center (JIC).

Strength (With Tab B Implications)

Description: Joint Information Center (JIC) Operations.

Discussion: The absence of off post community participation presented special challenges to the limited JIC staff. The Army participants were able to produce a fully functioning JIC despite these shortages, displaying the effects of superior training. Joint Information System (JIS) operation between the EOC and the JIC were good. Other JIS components could not be evaluated due to community nonparticipation.

Observation (With Tab B Implications)

Description: Unclear News Releases.

Discussion: News releases did not contain basic elements of the accident, leaving reporters scrambling to look up old releases to see how the new information fits in. In one release, it was unclear whether the injured were on the helicopter or elsewhere. There was too much emphasis on the helicopter crash and too little on the chemical accident.

Recommendation: Encourage more training for news writers and a good review process by the PAO

Observation (With Tab B Implications)

Description: On-Post PAD Release.

Discussion: News releases did not contain the on post protective action decision (PAD). This is an important element of the public news release. This oversight may have been in part caused by the absence of any off post release of PAD or protective action recommendation (PAR) (i.e., exercise artificiality).

Recommendation: Initial releases from Depot EOC should contain this information, and not delay it until JIC opens

Observation (With Tab B Implications)

Description: JIC News Conference.

Discussion: Both commanders used acronyms and terms unfamiliar to the public (surety mission, etc.) during their statements. They also failed to make eye contact with reporters during their opening statements.

Recommendation: Encourage spokesperson training.

Objective 10. Medical Services - First Response

Strength

Description: Leadership During Patient Care.

Discussion: A Toxic Detection Equipment Operator took charge of patient care at the accident site. She continually provided instructions to other responders to insure only water was used to irrigate wounds and patients were monitored, decontaminated and removed from the site as quickly and safely as possible.

Recommendation: This employee should be commended for her assumption of initial accident site command and control and effective triage efforts.

Observation

Description: Wounds Not Quickly Treated.

Discussion: Chest and arm wounds on the Enhanced On-Site Container (EONC) driver were not treated quickly. The patients clothing was removed and his face wounds dressed. He was then left unattended for approximately 5 minutes with no dressings applied to other wounds. Due to simulation constraints, active bleeding is difficult to stage. When the evaluator poured more blood on the wounds to make it appear as if they were still bleeding, the responders quickly and appropriately dressed the wounds.

Observation

Description: Patient Left Unattended for Greater Than 5 Minutes.

Discussion: The unconscious forklift driver was loaded into Patient Transport Vehicle (PTV) 1 and left unattended for greater then 5 minutes. All patients should be frequently checked on, but unconscious patients should be continually monitored in the event they vomit, stop breathing or become conscious

Recommendation:. Continually monitor patients.

Objective 11. Medical Services - Transportation

Observation

Description: Patient Transport Vehicle (PTV) Gurney Would Not Function Properly.

Discussion: The gurney was initially placed in the PTV backwards and would not lock into position. The PTV was stopped and the gurney and patient turned around and secured. After arrival at the Dear Clinic the gurney would not lift. Medical assistants from the clinic then attempted to lift the gurney and then lifted the patient to a clinic gurney. Evaluators were told that these gurneys are old and do not function correctly. New ones similar to the ANAD Fire Department are being researched at this time

Recommendation:. Retrain all responders on proper function of current gurneys. Purchase similar gurneys to the Fire Dept. so equipment is standardized on post.

Objective 12. Medical Services - Medical Facilities

Strength

Description: Notification of Next of Kin.

Discussion: There was a situation where a Casualty Coordinator was to call the Ministry Team to notify them of injured personnel. She was aware that one of the names on the list was the spouse of an individual working for the Ministry Team. To avoid telephonic notification she discussed the situation with the CEA and received permission to confer with the Lead Ministry Team member. That way the Leader could provide in-person notification. Her action displayed use of common sense, attentiveness and compassion that is commendable.

Strength

Description: Safety Officer Follow Up on Casualty Status.

Discussion: A representative from the Safety Office reported to the Dear Occupational Health Clinic to receive an update from Clinic personnel on casualty names, status and specific information. This information was then brought back to the EOC to upgrade or cross check vital information that had been previously been given to Casualty Control Officer from the field or the Fire Net radio system. This helped to update Commander, EOC personnel and Casualty Control Officer, making next of kin notification information more reliable.

Observation

Description: Airlock Door Would Not Secure.

Discussion: The airlock door between the Dear Clinic chemical decontamination chamber and the treatment room is normally secured via positive and negative airflow. An individual leaned on the door and it opened. If air testing were not completed or the chamber contaminated it would in turn contaminate the clinical area.

Recommendation: Install a locking device on the door to insure security until patients are determined to be clean.

Objective 13. Field Response

Strength

Description: Real Time Analytical Platform (RTAP) Monitoring.

Discussion: Two toxic detection equipment operators showed above average knowledge of the RTAP and monitoring equipment (minicams). Additionally, they kept in touch with the FCP and kept them informed of all monitoring results. The FCP likewise informed security guards that it was safe to unmask after several negative readings were reported. The communication was frequent and precise on both ends. All monitoring operations were conducted appropriately and according to prescribed procedures.

Strength

Description: Field Command Post Vehicle.

Discussion: Anniston Chemical Activity obtained a standard ¾ Ton Panel Van from General Service Administration (GSA) and modified the standard design to accommodate Field Command Post (FCP) operations. This modification allowed all Emergency Response Forces (i.e., Security, Fire and Emergency Services, and Chemical Responders) to assemble and coordinate all aspects of any emergency actions required by ANCA.

Recommendation: ANCA share their design of their FCP vehicle with other chemical installations for their potential use.

Observation

Description: FCP Fire Net Communication.

Discussion: The FCP Fire Net operator could not, throughout the exercise, contact (via radio) elements falling under its jurisdiction. Although he knew that these elements were dispatched forward of the FCP location, he could not get information as to their exact location and status. In addition, when communication was established with certain

elements, incomplete information was received (i.e., number of individuals in a vehicle did not match with what was being reported by other means). Although more time consuming, the FCP was able to remedy some of these problems by utilizing the FCP Security and Surety Net operators.

Recommendation: If these problems were strictly equipment malfunctions, it is recommended that a communication specialist take corrective action. If not, it is recommended that the various elements be pro-active in ensuring that information is provided to the FCP Fire Net operator.

Observation

Description: Flow/Sharing of Information Between FCP and EOD Element.

Discussion: After the EOD Initial Entry Party (IEP) evaluated the situation at the accident site, the IEP provided the FCP (via radio communication) the following information: a total of 15 rockets were involved (8 leakers, 5 non-leakers, 2 exploded). As part of its function, the IEP must determine the location, number and condition of the muntions involved (this information was provided to the team by the evaluator at the site). After processing through the MPDS, the IEP members did not provide the FCPO with a complete picture as to the locations of the specific munitions to facilitate the tasks of future responding work parties (remediation). In addition, the FCPO did not request such information from the IEP

Recommendation: Recommend that the IEP provide the appropriate information as to location to allow the FCPO to make appropriate decisions. A sketch could be utilized to convey this information.

Observation

Description: M8A1 Alarm Was Not Operating.

Discussion: One M8A1 Alarm was not running at the Mobile Personnel Decontamination Station (MPDS) location. An RTAP operator said that it had been set up and running when it was placed at the front of the MPDS.

Recommendation: Personnel should check all monitoring systems periodically to ensure they are operational.

Observation

Description: Personnel Working Beyond Monitored Area Not Wearing PPE/Mask.

Discussion: MPDS set-up personnel were working in an area beyond the point which had been monitored. Workers were about 20 feet beyond the M8A1 alarm.

Reference: DA PAM 385-61. 31 March 1997, page 10, paragraph 4-2g.

Recommendation: Personnel should ascertain exactly where agent monitoring has taken place.

Observation

Description: Improper Agent Monitoring at Establishment of Hot Line Operations.

Discussion: An RTAP operator conducted agent sampling at the proposed hot line location. Two M8A1 alarms were deployed, one in front and one about 40 feet directly behind that one. Two hoses from the RTAP were deployed for monitoring in this general area.

Reference: DA PAM 385-61. 31 March 1997, page 44, paragraph D-4c.

Recommendation: Two personnel should report to the proposed hot line location. They should monitor the proposed contamination control line (CCL). If the test is negative, advance toward the accident site 50 meters and perform 2 more tests 50 meters apart on an axis that is perpendicular to the route of advance. If these 2 tests are negative, move to the center of the 3 test sites and perform vapor tests. If all tests are negative, the area can be declared clean.

Finding AN02A13.1

Description: Tracking of Toxicological Agent Protective (TAP) Clothing Wear Time.

Discussion: There was no accurate recording of TAP clothing wear time for the various elements responding to the accident/incident site (e.g. MPDS, EOD IEP).

Reference: DA Pam 385-61, 31 Mar 97, page 13, Table 4-1

Recommendation: Recommend that an individual be designated to track wear time of personnel in TAP clothing.

Status of Previous Findings:

- **Previous Finding Number: AN01A13.1**

  Description: SOP for the Mobile Personnel Decontamination Station (MPDS).

  Resolved: No. However, a draft MPDS SOP has been written and is awaiting final authorization.

  New Finding Number: AN02A13.2

- **Previous Finding Number: AN01A13.2**

  Description: Protective Clothing/Personnel Decontamination

  Resolved: No. Due to nonparticipation by EOD personnel, this action was not demonstrated.

  New Finding Number: AN02A13.3

Objective 15. 24-Hour Operations

No strengths, observations, or findings were noted.

ANNISTON COMMUNITY CSEPP EXERCISE 2002
(ACE 02)

EXERCISE REPORT

TAB B: JOINT ACTIVITIES

INTRODUCTION

There were no observations noted by the evaluation team during the Anniston Community CSEPP Exercise 2002 (ACE 02) relative to areas of coordination and interface between the Army and off-post jurisdictions due to the lack of off post participation in the exercise.

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ANNISTON COMMUNITY CSEPP EXERCISE 2002
(ACE 02)

EXERCISE REPORT

TAB C: OFF-POST ACTIVITIES

INTRODUCTION

Tab C documents the specific strengths, observations, and findings noted by the evaluation team concerning the emergency response plans and procedures demonstrated by the off-post communities participating in ACE 02 on March 6, 2002. The following off-post medical facilities were evaluated: Northeast Alabama Regional Medical Center (RMC), RMC Medical Emergency Operations Center (MEOC), Stringfellow Memorial Hospital, and Jacksonville Hospital. Additionally, Ft. McClellan Army National Guard Training Facility, to include Pelham Range, participated in the exercise. The State of Alabama (AL) and the remaining off-post communities declined to participate in the exercise. Included is a letter from the Acting Director of the State of Alabama Emergency Management Agency (AEMA) dated January 22, 2002, stating that they would not participate in ACE 02. Also included is a Headquarters Federal Emergency Management Agency memorandum dated February 5, 2002, encouraging off-post participation and requesting written responses as to why they could not participate in the exercise. The evaluation team's recommendations are provided, where appropriate.

This Tab also indicates for each jurisdiction the status of correction of findings for applicable objectives from previous exercises.

OBJECTIVES

The objectives, evaluation elements, and points of review (PORs) selected for demonstration and evaluation by the civil jurisdictions are fully described in Appendix C of the *Chemical Stockpile Emergency Preparedness Program Exercises* document, March 19, 1999.

EVALUATIONS

The evaluations for each jurisdiction are presented on the following pages:

AEMA Letter dated January 25, 2002 ..... C-3
FEMA Memo dated February 5, 2002 ..... C-5
Ft. McClellan Army National Guard Training Center C-7
Northeastern Alabama Regional Medical Center C-11
Stringfellow Memorial Hospital C-23
Jacksonville Hospital C-33

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STATE OF ALABAMA
EMERGENCY MANAGEMENT AGENCY
5898 COUNTY ROAD 41 • P.O. DRAWER 2160 • CLANTON, ALABAMA 35046-2160
(205) 280-2200 FAX # (205) 280-2495

DON SIEGELMAN
GOVERNOR

LEE HELMS
ACTING DIRECTOR

January 22, 2002

Mr. Russ Salter
FEMA HQ
500 C Street, SW
Washington, DC 20472

THRU: Mr. Ken Burris
FEMA Region IV
3003 Chamblee-Tucker Road
Atlanta, GA 30341

Dear Mr. Salter

As you well know, Alabama has been working diligently since our November 2000 meetings with Congressman Riley to obtain the funding necessary for completing our CSEPP readiness to start incineration at Anniston Army Depot. During the summer of 2001, Senator Shelby, Congressman Riley, and Governor Siegelman continued to push the Army and FEMA to take action on our funding requests.

In late 2001, the Operational Assessment Team headed by Mr. Patrick Wakefield, Undersecretary Aldridge's point of contact, arrived at agreement with our counties and the Alabama Emergency Management Agency (AEMA) on the level of funding needed for us to have the resources needed to carry out our planning. The amount $40.5 million was to have been made available in late November of 2001. As of this date, the State has received no funds. Therefore, no planning and subsequent resourcing has occurred. For this reason I have taken a long, hard look at our approaching Anniston Community Exercise (ACE).

Our operational capabilities are basically the same as they were for ACE 2000 and 2001. Because we have not received funding in time to make substantial gains in 2000 and 2001, we cannot test the response issues that are tied to this funding. Therefore, I have decided that we should postpone our participation in the 2002 ACE until we can see some positive movement in our preparedness efforts. It would seem that midsummer or early fall would be a good target if we can get our complete funding and get moving with the planning.

For these reasons, be advised that AEMA will not participate in the upcoming ACE practice exercise on February 13, 2002. Unfortunately, these same problems exist regarding AEMA's participating in the ACE scheduled for March and, therefore, I do not foresee us participating in it. The issue in a "nut shell" for us is the 2002 ACE should allow us to measure our increased ability to respond to a chemical incident. Any increased response capability is directly tied to planning and resources. With the inordinate delays we have experienced getting the required funding, there is no significant increase to measure. Our need to exercise our abilities is essential but it must be done in a way that is meaningful and measurable.

I urge you to release to Alabama the entire $40.5 million Undersecretary Aldridge authorized and help us reschedule our 2002 ACE at a time when it will be a meaningful event for our local response communities and our state agencies.

Sincerely,

Lee Helms
Acting Director

LH/DD/nkrl22006

pc: Governor Don Siegelman
Brian Cash
(6) CSEPP County EMA Directors

Federal Emergency Management Agency

Washington, D.C. 20472

FEB - 5 2002

ONP-TH-CS

MEMORANDUM FOR: Paul W. Fay, Jr.
Division Director
Readiness, Response and Recovery Directorate

FROM: Russell Salter
Director
Technological Hazards Division

SUBJECT: Alabama's Participation in Anniston Community Exercise 2002 (ACE)

The purpose of this memorandum is to request that you work with the Alabama CSEPP emergency management community to encourage that they continue preparations for and participate in the scheduled Anniston Community Exercise 2002 (ACE 02) on March 6, 2002. In the interest of public safety, we should strongly urge the State of Alabama, the Alabama Department of Health and all CSEPP counties to use this opportunity to train and to practice the necessary response skills to protect their citizens using existing equipment and capabilities. It would also demonstrate how they would respond to a chemical incident today, not based on forthcoming resources.

CSEPP exercises are designed to provide an assessment of the current level of preparedness of the CSEPP community. The exercises provide a basis upon which to build and strengthen the response capabilities both on- and off-post using the procedures, personnel, and equipment on hand. Last years exercise noted some CSEPP response shortcomings (11 Findings and 58 Observations for the Off-Post community), thus it is even more important that this year's exercise be conducted now. The Alabama Department of Public Health (including participating county hospitals) received eight findings and the State of Alabama, Calhoun and Etowah Counties each received one finding. The scheduled March 6, 2002, exercise is an excellent opportunity to demonstrate that these findings have been corrected and that the emergency management community can protect their citizens.

Several significant response capabilities have been added in the last year that require exercising and evaluation. Great efforts have been made to implement the Medical Emergency Operations Center (MEOC) planning process into the community response. Also, the "Automated Guide Book" is now in place in the Alabama CSEPP community. The Federally Managed Exercise this year is an outstanding opportunity to demonstrate both of these capabilities. This is an opportunity to train and educate key first responders, decision makers, elected officials, and members of the general public on its use and functions.

The ACE 2002 exercise on March 6th will demonstrate the community's current response capability and provide an opportunity for each individual responder to do their job protecting

the public. We want to help demonstrate to the citizens of the Anniston community that their State, local, and federal emergency management officials are doing our duty for them. Therefore, FEMA along with our Army partners, will continue to prepare for this exercise. If our fellow partners, Alabama State and county agencies, are unwilling or unable to participate with us in this exercise, please have them each respond in writing by February 15, 2002, as to why they cannot demonstrate corrective actions that enhance public safety during the March exercise.

If you have any further questions, please contact Ronald Barker at (202) 646-3679.

FORT McCLELLAN

INTRODUCTION

Ft McClellan demonstrated, in accordance with the extent of play and applicable plans and procedures, the Objectives, Evaluation Elements, and Points of Review: 1.1, 1.2 1.3, 2.1, 2.3, 3.1, 3.2, 4.1, 4.2, 5.1, 5.2, 6.1, 6.2, 9.1, 9.2, and 11 from Appendix C of the Chemical Stockpile Emergency Preparedness Program Exercise document, dated March 19, 1999.

Objective: 1 Initial Alert and Activation

Fort McClellan Army National Guard Training Center (FM -ARNGTC) EOC successfully demonstrated its ability to notify its Crisis Action staff and activate the EOC. Notification to the EOC staff began immediately upon receipt of an event notification from ANAD (0848). The command element was operational within two minutes; fifty percent of the EOC was staffed within 10 minutes; the EOC was completely staffed in 25 minutes. Multiple systems were used to ensure the staff was notified promptly.

Objective: 2 Hazard Assessment

Fort McClellan Army National Guard Training Center (FM-ARNGTC) EOC successfully demonstrated its ability to conduct hazard analysis throughout the simulated incident. Members of the hazard analysis group demonstrated their competence in using hazard analysis computers and software. Hazard analysts were able to accurately interpret plume data broadcast by ANAD via EMIS and consistently provided timely advice to the command group.

Objective: 3 Protective Action Recommendation and Decision Making

Fort McClellan Army National Guard Training Center (FM-ARNGTC) EOC successfully demonstrated its ability to make and implement protective action decisions. The PAR from ANAD included evacuation of zone M2 (Pelham Range) and M3 (Fort McClellan). The predetermined PAD for Pelham Range is evacuation of all personnel and the radio room duty officer directed the evacuation order be given immediately upon receiving a valid notification message. As the predicted plume only “glanced” area M3, the command group correctly relocated personnel from only those portions of M3 that were potentially at risk if a significant wind shift occurred.

Objective: 4 Command and Control

Fort McClellan Army National Guard Training Center (FM-ARNGTC) EOC successfully demonstrated its ability to direct and control emergency operations. The OEC staff effectively coordinated with other jurisdictions. Communication between the EOC and tenet activities and

parent organization (e.g., the State Military Department) were timely and efficient. The EOC staff responded rapidly to the situations presented to them. They managed a "real world" helicopter resupply operation simultaneously with a MEDEVAC operation associated with the simulated incident, effectively controlling the movement of two aircraft through the response area. The Training Center Manager (TCM) was in-charge of the EOC, coordinated staff actions, and focused on planning future missions. He consulted with the appropriate staff when necessary and delegated authority as required by the situation. The Range Officer/Operations Officer conducted all situation updates and concentrated on overseeing current, active response missions.

Observation

Description: EOC Message Flow.

Discussion: The FMARNGTC EOC has a locally developed message form that is used to record telephone calls coming through the communications center. The call taker records basic information (e.g., date/time of the call, caller's name and telephone number, and the message) and then passes the message to the appropriate EOC action officer. Many times during this incident, the forms were not properly used. Call takers wrote down the caller's name and telephone number on a piece of paper or yellow sticky note, attached the note to the form, and passed it to the action officer. In most cases, there was no indication of the subject of the call.

While the use of the message form is an excellent idea, at present there is no mechanism to track the messages or to ensure that the command group is aware of their content. The message is provided to the action officer and it goes not further. Many times, information contained in these messages or action taken in response to the message has an effect on conducting current operation or planning future operations.

Recommendation: The FMARNGTC needs to formalize their message taking procedures and forms. Message forms should be printed on multicopy/color "NCR" forms. A three-copy form would allow the message to be split so that the command group gets a copy and the action officer gets the original and a copy. Once the action is complete and the action officer records the result on the form, the original is provided to the command group. The original is matched to the copy maintained by the command group to show action completion.

Objective: 5 Public Notification, Instructions, and Emergency Information

A survey of all activities, (9), operating on Pelham Range on the day of the exercise found that all key personnel were aware of proper emergency procedures and evacuation routes. While the level of understanding varied from activity to activity, they all could provide basic information and would have been able to evacuate Pelham Range in the event of a chemical event at ANAD.

Observation

Description: Pelham Range Alert, Notification, and Evacuation

Discussion: FM-ARNGTC has developed a comprehensive program for notification and evacuation of personnel from Pelham Range. A comprehensive Range and Safety Certification program is conducted twice a month for individuals and organizations responsible for range and training site operations. Chemical event information, response measures, command and control, alert and notification, maps and evacuation procedures are an integral part of the certification process. A comprehensive safety briefing is required prior to any range and training operations.

A Survey of all activities present on Pelham Range on the day of the exercise, a total of nine (9), found that all key personnel were aware of proper emergency procedures and evacuation routes. While the level of understanding varied from activity to activity, they all could provide the basic information and would have been able to safely evacuate Pelham Range in the event of a chemical event at ANAD.

While the siren system with voice messages was not activated in Pelham Range due to the off-post community not playing, the PA system portion of the sirens was used to pass on information that an exercise was being conducted. All personnel interviewed indicated that the sirens were clearly heard during periodic ANS tests. The most recent siren test was on March 5, 2002.

The presence of recreational users (e.g., hunters, fishermen) on Pelham Range continues to be a matter of concern. All recreational users are given a handout explaining the Fort McClellan Alert and Notification System including a map of the Pelham Range Evacuation Routes. More than 500 hunting permits are issued annually. During hunting season from 200 to 250 hunters may be in the permitted areas at one time. Some permits are issued for a seven-day period, permitting permit holders to hunt as they wish during that period. Consequently GMO does not know the number of permit holders present at any one time during the period or their permit. While all hunters are required to attend a hunter safety course, it is not yet an annual requirement and some hunters attended the course over ten years ago. Pelham Range evacuation information has been included in the hunter safety course since 1998. A new hunter/recreation safety course to be required of all seeking or holding permits to use Pelham Range for any type of recreation is proposed to begin in August 2002. The two-hour course will include thirty minutes devoted to CSEPP.

The Fort McClellan Alert and Notification System handout indicates the same tone alerts, WHOOP TONE, for "6. "WARNING! Anniston Army Depot has announced a chemical agent release. Standby for further instructions. …" And "8. CHEMICAL ALERT! Initiate evacuation procedures immediately. A chemical agent release has occurred at Anniston Army Depot. EVACUATE IMMEDIATELY! CHEMICAL ALERT!" are identical and could cause confusion in an event. When installation of tone alert radios (TARs) is complete a new map will be provided that will correct this problem.

Recommendation: FM-ARNGTC requires that all hunters/recreationists complete a hunter safety, including CSEPP and alert and notification information, before being permitted use of Pelham Range facilities. Periodic re-certification (perhaps annually) of completion of the hunter/recreation safety course should be required.

Continue the strong command emphasis on safety awareness on Pelham range by individuals and organizations.

Objective: 6 Communications Systems, Facilities, Equipment, and Displays

Fort McClellan Army National Guard Training Center (FM-ARNGTC) EOC successfully demonstrated its ability to use its facility, communications systems, and information displays to conduct an emergency operation. The EOC is located in a renovated building with modern infrastructure. The EOC has multiple communications systems and information displays that allow the EOC staff to properly direct and control operations.

Objective: 9 Title: Public Affairs

Fort McClellan Army National Guard Training Center (FM-ARNGTC) EOC successfully demonstrated its ability to perform public affairs activities. The public affairs group responded to media inquiries, developed media releases, and conducted media analysis. Two EOC staff members were interviewed by the mock media on FMARNGTC operations conducted in response to the simulated incident at ANAD. They responded with accurate and appropriate information. The TCM was consulted, when appropriate, on media related activities. All media releases were reviewed and approved by the TCM. Copies of all media releases were provided to the information center.

Objective: 11 Medical Services - Transportation

Fort McClellan Army National Guard Training Center (FM-ARNGTC) EOC successfully demonstrated its ability to transport injured personnel during the training event. A traffic accident at in the vicinity of Pelham Range Gate 3 was reported to the EOC. The guard informed the EOC of the number of casualties and that at least three of the injured would require MEDEVAC helicopter support. The EOC coordinated the MEDEVAC request, cleared air space over the installation, and arranged for ambulances to transport the less critically injured. Once the identities of the injured were obtained, the EOC determined their status (e.g., Active Guard and Reserve, technician, contractor, etc.) and coordinated next of kin notifications. FMARNGTC staff appropriately made next of kin notifications only to the family members of injured personnel that were under ARNG control. They correctly coordinated with contractor parent companies and other agencies for those individuals that had no relationship with the ARNG.

Northeastern Alabama Regional Medical Center (RMC)

Objective: 1 Initial Alert and Activation

The Emergency Department of the RMC received initial notification of the exercise scenario at 0849, directly from the Anniston Army Depot (ANAD) medical facilities. This information included that an accident had occurred, that it involved a downed aircraft, and the there was a potential release GB from several M55 rockets. The Medical Incident Commander (MIC) at RMC immediately activated the Medical Emergency Operations Center (MEOC) and initiated the RMC disaster plan. The MEOC displayed a well-disciplined and rehearsed operation in setting up, and operating throughout the exercise event. All information received and transmitted was done in a timely manner and efficiently

At 0858, the MEOC notified the SIMCELL by telephone that it was operational. Fax machine was operational but no information was received at this time. At 0911, the MEOC simulated turnover of medical 911 dispatch from state EOC to the MEOC. The operation worked in an organized fashion, and all personnel understood their roles and responsibilities.

Overall, the unique implementation of this resource allowed the Initial Notification process to relay the appropriate information and activate the proper resources to manage and handle the incident.

Objective: 4 Command and Control

Regional Medical Center (RMC) effectively demonstrated command operations displaying discipline and organization throughout the incident. RMC as the designated lead hospital demonstrated the ability to coordinate the two other local hospitals as well as local emergency response for the county. Information gathered from the two other medical facilities in the county regarding hospital staff, hospital beds and specific unit beds available was logged at the MEOC and maintained appropriately. This information proved useful in plotting patient destinations and emergency response. The MEOC successfully simulated the ability to identify the available Emergency Response units and the staging areas to be assigned to them. Specific staging areas assigned were as follows: Alexandria High School with four Advanced Life Support Units (ALS) two Basic Life Support units (BLS), Munford High School with five ALS units, three BLS units, one Fire and Rescue unit, Talladega Super Speedway with four ALS units, three BLS units, two Fire and Rescue units. At 0911 Simulation of the turn-over of emergency medical calls from the state EOC to MEOC was effectively demonstrated and the use of hospital staff who were Emergency Medical Dispatch (EMD) trained were prepared to begin emergency medical operations. Plume tracking remained updated and current as new information arrived.

Overall the MEOC demonstrated exceptional ability to receive information in a timely manner, update status boards and effectively manage and distribute resources. MEOC provided a two-way line of communication with all agencies involved and provided updated information to facilities.

Objective: 6 Communications Systems, Facilities, Equipment and Displays

Regional Medical Center (RMC) has dedicated rooms for the Medical Emergency Operations Center (MEOC) in the Emergency Department (ED) area. More specifically, these rooms are located in the Fast Track area of the ED. The main room of the MEOC includes numerous phone lines for incoming and outgoing calls, county map for plume tracking and staging areas for response equipment, 800 megahertz system for emergency response dispatch and appropriate work stations for five communication personnel to function in fielding and dispatching calls. Located in close proximity to the communications room are four supplemental rooms. These four rooms are stocked with phone lines, fax machine, and appropriate documentation and reference material to aid in carrying out specific duties assigned. These rooms are dedicated to serving individually as Medical Control, Administrative and Facility Representatives. The corridor that contains all rooms involved in the MEOC operations contains four dry erase boards that track the availability of hospital beds, hospital personnel, emergency response units and plume tracking information for the entire county. Overall communications operated without delay or malfunction. Appropriate equipment, office space and supplies were available to the MEOC staff. Some installed equipment included television, VCR, multiple phone lines, fax machine, desktop computers (with tie in ability to plume tracking computer) and 800 megahertz radio system (Primary communication, limited range restricts transmissions to Calhoun County). Members of the MEOC followed a very structured operating procedure from start to finish of exercise displaying a solid understanding of MEOC plan. Displays and status boards were updated instantaneously with newly received information.

The MEOC has appropriate facilities and equipment to adequately support communications center functions. One minor limitation to the system is the restricted range of the 800 megahertz radio system used for primary communication. Transmission of this system is limited to Calhoun County and does not transmit to surrounding counties.

Observation

Description: Communication System Has Limitations

Discussion: An 800 mhz communication system has been obtained for the RMC facility as part of the MEOC established there. The system has limitations of range. These limitations are not noted on plot/plume/area planning maps. Limitations of communication due to limitations of range may thus be poorly anticipated.

Recommendation: Map plotting of the 800 mhz range limitations could be easily accomplished. If such plotting demonstrated significant compromise of emergency communications, range extension technology could be implemented.

Objective: 12.1 Adequacy of Medical Facility and Health Care Personnel in Handling Potentially Contaminated Individuals

The Northeast Alabama Regional Medical Center (RMC) is a large Level II Trauma center in the center of the city of Anniston, that provides a significant amount of the medical care for the

surrounding community. This facility sees a significant number of patients per day (approx. 65,000 per year), thus requiring significant staffing loads; 13 nurses at peak, 3 physicians at peak, and 6 support staff at peak. The facility also participates in the Chemical Stockpile Emergency Preparedness Program (CSEPP), and has made extensive preparations for such an event.

The planning for a CSEPP (or any hazardous/multiple casualty event) has been extensive and utilizes nearly every department of the hospital. In such an incident, the ED staff is primarily responsible for decontamination, initial triage and treatment of casualties. Support staff, provided by other departments in the hospital, function as patient transport to appropriate departments, runners, and medical support in less critical areas. Patients deemed critical are kept in the ED until stable, while those less critical go to other departments, such as the GI Lab area, GI Lab Procedure area, Physical Therapy Department, and Ambulatory Care Department, where they are cared for by this support staff. The triage system implemented is somewhat unique in the fact that a "White" category has been instituted, which identifies those patients who face imminent death and will require significant resources that are not available at the time of triage. All other categories retain their standard connotations as with the Simple Triage and Rapid Treatment/Transport paradigm.

Perhaps the most noteworthy aspect of RMC's disaster planning is the incorporation of a Medical Emergency Operations Center (MEOC). This facility, based within the ED, is tasked with overall Command and Control of the medical resources in the area during a disaster response. This includes the two additional medical facilities (Stringfellow Hospital and Jacksonville Hospital) as well as Emergency Medical Services (EMS) resources, medical equipment resources, and transport resources. The MEOC receives information from either the Anniston Army Depot (ANAD) or the Calhoun County Emergency Operations Center (EOC), and is tasked to transmit that information to the medical resources in the area. Personnel in the MEOC also keep track of available beds, personnel, and other aspects of the response through representatives from each medical facility and continual contact with each resource agency. This MEOC can also tie into the plume modeling systems (FEMIS/EMIS) when they are operational. The MEOC and its operational plan are unique in the hospital arena, and have been designed extremely well for disaster response. The MEOC was very well designed as part of a "dual use" area that functioned normally as a patient evaluation area within the ED but could be very quickly converted to an exceptional Operations Facility. Communication with partnering hospitals was excellent.

The RMC ED is located in an area remote from the main body of the hospital, which allows for easy isolation if necessary. A number of lockable doors, both within the ED and at access points into the ED, allow for multiple combinations of isolation, controlled access, and compartmentalization of the facility. The ED facility is divided into multiple functional parts: reception, Fast Track, Medical Emergency Operations Center, trauma, decontamination, cardiac observation, and intermediate treatment areas. All of these areas can serve a variety of functions from multiple patient treatments to Incident Command and Control. The decontamination area has a separate outside entrance and a large functional shower area with both overhead and handheld water sources. The decon runoff water still goes to sewer and the air handling system needs to be separated. The RMC Pharmacy is in close proximity to the ED.

The facility is equipped with Mark I Nerve Agent Antidote Kits, as well as large amounts of bulk atropine and pralidoxime chloride for use in such an event. Total amounts upon the initial site visit

were: 60 Mark I kits in the ED, 19200 mg of Atropine, 1504 g of pralidoxime chloride and approximately 20 g of diazepam. During the exercise, the pharmacy brought a new shipment of atropine to the ED, adding approximately 4000 mg to the total amount of antidote. Much of the ED staff has been trained to recognize signs and symptoms of an organophosphate exposure, as well as treat it with the appropriate antidotes.

The Emergency Department (ED) has an in-dwelling decontamination facility, providing a route for contaminated personnel to enter the facility without risking contamination of the ED or other parts of RMC. The decontamination area is conveniently placed immediately at the entrance to the ED. Consideration is being given to further development of a semi-enclosed expansion involving an in-place overhang which will allow use of heated water as an adjunct to the decontamination process. This expansion will provide sufficient space for gender separation during decontamination. Further plans include designation of an immediately nearby medical building as a re-direction site for decontamination, evaluation and care and holding of the ambulatory patients. Establishment of an ambulatory decontamination facility at a separate location (~200 yards) will minimize logistical difficulties for large patient numbers but may complicate the handling of ambulatory patients who require immediate care.

The decontamination area, as constructed, consisted of an interior washroom with excellent water/flush capability and adequate runoff disposal per current EPA regulations. This decontamination setup is complimented by a minimum of eight (8) personnel trained in personal protective equipment (with several additional personnel in training), and an ED staff who generally understands patient care and treatment in such an event.

The March 6, 2002 exercise at RMC began at 0849 with notification from the ANAD Medical facilities. This began a series of events, including the preparation of the decontamination area outside the ED, a “Code Green” announcement via overhead page (denoting a disaster event), and the activation of the MEOC. Preparation for the announced chemical disaster was expediently implemented. Call-backs were undertaken for nursing and medical staff with excellent response and (simulated) timeliness of returning staff. Uniquely, a separate callback was initiated for a roster of specifically ED trained and experienced physicians. Consideration is being given to provision of this roster of individuals with “beeper/pager” system for a more rapid and uniform response.

The staff quickly assembled in the ED, and began to implement their specific areas of the disaster plan. The decontamination crew was composed of three (medically and PPE) trained nurses. The decontamination crew was thus able to provide medical treatment to those patients requiring immediate attention prior to completion of decontamination. The decontamination team began setting up the receiving area for the “contaminated” patients outside, the MEOC personnel began setting up their facility in the ED, and additional personnel began to arrive from other departments to assist in the preparation and care of patients. Once all departments were prepared, the first patients arrived and were decontaminated, then ushered into the ED. An initial medical triage evaluation of the decontaminated patient was then immediately provided by a Level C protected physician who provided additional Mark I therapy as indicated by his assessment. The triaged patients were color coded by application of colored wrist bands. Demographic information was then acquired by support personnel who at that point provided the patients with name tags. Medical charting of acquired vital sign data was limited and did not uniformly include oximetry. A runner from the available labor pool

transported the patient to the appropriate designated area per wrist color identification. Simulated attendance by nursing personnel was provided during transport of the immediate (red) patients to the ED room (#4) used for the initial observation/further treatment of this level casualty. In this room, care was provided by a trained nurse and (simulated) physician. Other support personnel were immediately available to augment the room 4 staff. Although some respiratory failure casualties might be expected, there were no respiratory therapists in evidence. Three anesthesia physicians were recorded as present on site. Of the 11 designated IMMEDIATE CARE TEAM physicians, eight (8) were recorded as present on site and the remaining three (3) were recorded as within two (2) minutes of arrival. None of these physicians participated in the actual exercise activities. Although these physicians were reported to have awareness of the subject of chemical agent exposure/therapy there was no record of the extent of their training, evidence of maintenance of that training or evidence of regular exercise of that training. In ED room #4, the patients were provided with (simulated) intravenous support. Support medications were available in the decontamination and reception area of the ED, but not distributed to either room #4 or to the other areas of follow-up care. Nursing personnel providing follow-up care had limited training in the recognition or therapy of near-term effects or complications of the identified chemical exposure. As such, early recognition of respiratory and neurologic complications may have been compromised. Patients, as they stabilized, were rapidly transferred from the immediate room to a lower intensity holding area where there was continued medical observation. Patient monitoring appeared excellent. There was no test of ED ability to respond to deteriorating medical conditions. The ED was capable of maintaining continued medical support for its' normal ("real-world") daily/community activities while participating in the exercise.

Completion of decontamination was not measured by any specific technique nor was there (simulated) evidence of clinical assessment of residual signs/symptoms after decontamination. There was, however, immediate access to an evaluating triage officer (physician in this case) who was able to clinically assess and direct additional medical care as needed. There was inadequate limited documentation of specific medical therapy given to each individual at any time through decontamination to arrival at designated observation/care points within the ED.

The decontaminated patient was then handed off to the triage officer, in this case an MCBC trained physician whose expertise was demonstrated by his rapid and incisive response to several issues at the decontamination site, specifically, an incident of Mark I therapy provided inadvertently for a patient with symptoms/signs of heat exhaustion was rapidly recognized and remediated. Such expertise should be recognized as a critically important benefit of provision of "gold standard" training to the physicians and physician extenders at major medical facilities within CSEPP purview.

Patients were transferred to the appropriate departments based on their triage category; this involved the use of four additional areas of the hospital, as well as numerous staff. During this time, several reports were provided to the MEOC from the SIMCELL, relaying plume information as well as other pertinent scenario information. The MEOC also kept in close contact with other medical facilities as to their resources available and the amount of patients being received. RMC processed a total of 34 patients during the exercise, effectively simulating decontamination efforts and medical care for each.

Upon arrival within the ED, secretarial personnel acquired demographic information. Contrary to hospital disaster plan, these individuals did not wear gloves, shoe covers or gown. No other individuals in contact with the patients at any time (contrary to hospital disaster plan) wore shoe covers, gloves or gown.

Within the ED, at designated care sites, the patients were (typically) provided with Oxygen and intravenous access. Vital sign monitoring did not initially include O2 saturation. Not all nursing staff was aware of signs/symptoms of deteriorating organophosphate injury, or of specific actions to be taken (to include possible further decontamination). Additional physician staffing was reported as on-site by the telephone recall system. These individuals were not physically present. There was no evidence that these individuals have the requisite knowledge/training to effectively care for this illness.

During the hotwash, the staff relayed that the exercise mildly stressed the RMC facility; it was stated that it is not uncommon to receive this number of patients in a one hour period during normal operations. The RMC staff indicated that overall, they believed they performed well and could handle a larger patient load if necessary. It was pointed out that the staff has requested additional training in decontamination and personal protective equipment; they infrequently utilize the equipment or skills. It was also noted during the exercise that staff inside the ED were not completely familiar with the recommended applications of Mark I kits in regards to patient signs and symptoms. The triage system utilized during the exercise was not the exact one utilized during an actual incident; this could easily be rectified by incorporating a START-based triage system and incorporating simple identification measures, such as colored engineers tape or pre-fabricated tags. The staff primarily based triage decisions on severity of wounds and/or signs and symptoms, which allowed for much individual subjectivity. Incorporating a START-based system would allow a more objective and standardized form of triage that all personnel involved in such an incident could apply.

Overall, this exercise mildly stressed the RMC disaster plan, and the staff of the facility performed extremely well and effectively. Some observations were noted, but if presented with a hazardous materials incident involving multiple casualties, RMC would be able to effectively decontaminate and treat the casualties as appropriate, while operating the MEOC to coordinate medical resources in the community.

Strength

Description: Efficient Use of Physician Resources.

Discussion: During multiple casualty/mass disaster events, hospitals often find themselves with limited physician resources both during an event and during a period of recovery thereafter. RMC, through its' MEOC structure, has provided for the possibility of any physician at any of the three hospitals to work, during an emergency, at any of the other hospitals

Recommendation: RMC, as the leader for patient care in the Calhoun Co. area, has been able to address a problem of national importance. This accomplishment should be widely recognized.

Strength

Description: Exceptional Pharmaceutical Preparation.

Discussion: Pharmaceutical quantity and formulations were in exceptional supply. Atropine, pralidoxime and diazepam (as well as other benzdiazepines) were immediately available within the ED in quantity and formulation adequate for a Maximum Credible Event (MCE). Immediate provision of backup supplies was undertaken in a very timely fashion by the pharmacy.

Recommendation: RMC should be commended. RMC's methods of attention to pharmaceutical detail should be replicated with other facilities

Strength

Description: ED Physician Training Exceptional.

Discussion: ED physicians demonstrated excellent clinical assessment and judgment skills during the exercise. Such skills appeared to be in part due to the physicians' utilization of in-depth teaching/ training programs.

Recommendation: Continue support for physician access to nationally accredited programs such as TCTC and MCBC

Strength

Description: Excellent Overall Design of ED.

Discussion: The overall design of the Emergency Department to accommodate a disaster scenario is excellent. The ability to set up a Medical Emergency Operations Center that can be isolated from the patient treatment areas is wonderful and functional. The potential for having an incredibly functional decontamination area is also evident. With some assistance this facility can be a banner of excellence in decontamination, disaster command and control, and patient treatment during a disaster, for the entire medical community to emulate.

Recommendation: The RMC needs some assistance in achieving their ultimate goals. Equipment and funding support could make this happen.

Observation

Description: Decontamination Facilities Are Limited.

Discussion: Hot water decontamination and gender specific decontamination facilities are not available. Area utilized for current decontamination process is space-limited. Decontamination is thought less efficient and (potentially) less complete in circumstances of physical and emotional discomfort.

Recommendation: RMC is planning a restructure/expansion of a designated area immediately adjacent to the ED which will permit both heated water utilization and establishment of gender specific decontamination lines. Additionally, RMC is considering utilization of an immediately proximate medical building for the assessment, decontamination, observation and necessary follow-on care of ambulatory patients ("green"). This will significantly reduce the patient load to the decontamination area immediately outside the ED. Possible difficulties in re-transporting (likely very few) deteriorating "green" patients to the ED for further care have been noted and are under discussion by RMC

Observation

Description: Air-handling Techniques Are Limited.

Discussion: Airflow occurring at the decontamination area is incompletely segregated from the remainder of the ED or the hospital. Environmental engineers, (if on duty) are able to accomplish a significant airflow segregation although this may require an undesirable length of time. In the absence of engineering support, the hospital emergency plan directs use of the Fire Alarm system to effect airflow shutdown (HVAC automatically shuts off with Fire Alarm)

Recommendation: RMC is undertaking further review of air-handling within the facility. Construction of a (under consideration) decontamination expansion may facilitate improved air handling.

Observation

Description: Limited Application of Personnel Safety Techniques.

Discussion: Hospital personnel providing support to the multiple casualty exercise were observed to not avail themselves of available safety equipment to specifically include shoe covers, gloves and gowns. This observation included physicians, nurses, demographic secretarial personnel and runners – all of whom were in immediate proximity of the involved patients. The hospital emergency/safety plan specifically addresses and directs such protection.

Recommendation: Education/training should include specific reference to risks involved and the general importance of use of prescribed safety equipment.

Observation

Description: Evacuees Clothing Not Separated.

Discussion: Every evacuee's clothing was simulated to be going into a single container, unseparated and unmarked. There would be no easy method to sort the clothing and return it to the proper evacuees or get evidence of amount of actual exposure and match it to a person.

Recommendation: As evacuees come into the decontamination area they could be directed to disrobe into a plastic garbage bag (clear) and could even make out their own identification tag. Non-ambulatory evacuees could have their clothing placed in a similar bag and marked by the decontamination workers. Valuables can be gagged in smaller, zip-lock type bags and placed in the custody of law enforcement or security. This was simulated in the exercise.

Observation

Description: Setting Up the Decontamination Line.

Discussion: Decontamination was simulated because of cool weather. There were limited personnel to set up the decontamination line while others were getting dressed in PPE to prepare to receive evacuees. The decontamination shower was unable to be erected because of missing and/or broken parts. This evidently occurred in the last annual CSEPP exercise and have not been replaced as of yet. Even when complete, the shower is difficult and time consuming to set up. Therefore, an incomplete decontamination system was set up and simulated. This created an unreal time (shortened) in decontamination.

Recommendation: The phrases, "You get good at what you do." and "Repetition is the mother of skill.", come to mind here. A simpler set up, such as an inflatable tent, could make the set up of decontamination easier, faster, and more conducive to minimal personnel commitment. A tarp with the decontamination layout pre-designated on the tarp by marking could help someone who is not intimately familiar with the layout to be successful. EMT's or others could be used more effectively in operating the decontamination line while reserving the RN's for treatment. This is currently the plan. A decontamination checklist would help insure the proper set up. It might also be considered to set up a self- decontamination line for ambulatory, asymptomatic evacuees.

Observation

Description: Dressing Out in PPE.

Discussion: The dress out in personal protective equipment (PPE) was incomplete. The facility is currently in process with physicals and fit testing for the wearing of respiratory protection and therefore, elected to not wear respiratory protection. The facility does have, on site, both Powered Air Purifying Respirators and Self-Contained Breathing

Apparatus for use in the decontamination effort. There was no pre-entry screen of vitals of personnel donning PPE observed. Only three people donned PPE because of limited suits and limited personnel. Post exercise, it was revealed that the batteries to the PAPR's were missing and that fact would have taken this respiratory protection out of service.

Recommendation: The PPE program should be completed and documented as per the regulation. Training and practice on a regular basis could help the confidence of the wearers. As per the regulation, a maintenance program could ensure the viability of the equipment. A pre-entry/donning checklist would also be helpful to screen the wearers for heat stress, anxiety, etc. Procurement of additional PPE along with some training suits could also help this facility be more prepared.

Observation

Description: Inadequate PPE Donning Area.

Discussion: The area in which the decontamination workers were donning their PPE was cramped, had no chairs, and provided no room for pre-entry screening.

Recommendation: An organized layout of donning areas, PPE storage, chairs, check off lists, and self screen vitals could help this become an easier task.

Observation

Description: Limited Mark 1 Kits at Decontamination Area.

Discussion: There were a limited number of Mark 1 auto injector kits available at the screening, decontamination area. Two boxes of 30 each were observed. This is sufficient to treat 20 seriously exposed patients or a slightly greater number of lesser exposed persons. The Mark 1 kits are much easier to administer that syringes while in PPE at the decontamination line. This coupled with the need for immediate treatment, even pre-decontamination, makes the availability of a stock of these kits an imperative.

Recommendation: Procure a larger number of Mark 1 auto injector kits for use at the screening/decontamination area.

Observation

Description: Heat Stress Put Patient Reportedly Treated.

Discussion: Signs and symptoms of heat stress were not interpreted by RMC decontamination team personnel as indicating toxic chemical agent exposure. This diagnosis resulted in the selection of an inappropriate treatment modality (Atropine and 2PAM chloride therapy) being applied. This misdiagnosis was later realized and appropriate counter therapy initiated.

Recommendation: Continued training and in recognition of agent exposure signs and symptoms should be provided to all emergency response augmenters.

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Stringfellow Memorial Hospital

Objective: 12.1 Adequacy of Medical Facility and Health Care Personnel in Handling Potentially Contaminated Individuals

Stringfellow Memorial Hospital is a 75-bed hospital with six critical care beds and 10 beds in the emergency department. The emergency department is staffed with one physician and a minimum of two nurses at any time. A third nurse is on the 7 AM to 3 PM shift, a fourth on an 11 AM to 11 PM shift, and a fifth on a 3 pm to 3 am shift. One emergency technician staffs the 7 PM to 7 AM shift on and one clerk each staffs the 7 AM to 3 PM and 3 PM to 11 PM shifts.

The hospital has 13 Kappler Guardian suits and eight Racal powered air-purifying respirators (PAPRs) with tight-fitting face pieces. Thirty (30) members of the hospital staff are trained to don and work in the personal protective equipment.

The emergency department occupies the northwest corner of the hospital. It is laid out as a “U”, opening toward the north. The eastern arm opens to the waiting room, where a triage nurse and clerk are positioned. The entrances from the waiting room are secured with combination keypad locks. Visibility to the parking lot is limited from near the triage nurse's workstation and even more limited from the clerk's station. The western arm of the U is the ambulance entrance, with trauma and major event rooms directly down a short hallway. Ordinarily, no employee is in that hallway. The ambulance entrance is secured with a keypad combination lock and there is a TV monitor camera at the entrance.

Decontamination equipment consists of an outdoor shower, installed in a basin to contain runoff. Warm water comes from a spigot in the hospital wall through a hose to the showerhead. Privacy is provided by a set of panels designed for industrial welding shielding. They can be easily placed and hold up well in wind, a considerable improvement over the system that gave them trouble last year. Stretcher decontamination is carried out either by lifting a wheeled stretcher over the curb that forms the decontamination basin or by use of "Tiger Cat Contamination Assist Tables," a foldable frame with an impermeable liner and a drainage point. A red-striped rope strung over heavy cones demarcated the Hot Line. The Cold Line was demarcated with a blue-striped rope.

Antidotes are stored in the pharmacy. They have two boxes of 30 Mark I Nerve Agent Antidote Sets with expiration date 11/04. There are 12 boxes of 10 packages of 10 ml multidose vials of atropine 0.4 mg/mL and 34 boxes of 25 1 mL vials of atropine with 1 mg/mL. Many of the dilute boxes will expire 03/2003. Five (5) boxes of the stock expired in 02/2002. In addition, they have thirty boxes of six (6) 1gm vials of 2PAM, expiration 4/05. The pharmacist reports they have had trouble getting diazepam and plan to use Ativan 2 mg *in lieu* of diazepam 10 mg. They have 130 boxes of one-gram lyophilized 2PAM chloride.

The hospital has a disaster plan. The plan did not designate a public affairs officer; they arrived at a decision on who would perform that task without unnecessary delay.

On the day of the exercise, some pre-placement had been done of the decontamination privacy screens, and fans arrive at ED entrance to provide positive pressure before STARTEX, but the exercise was, for the most part, played as a cold start. STARTEX was scheduled at 0830, but did not begin precisely as scheduled. The simulated casualties, who were nursing and EMS students, showed up at 8:40am as instructed. The emergency department's first information about the exercise occurred at 0840, when eight casualties appeared in the secured hallway at the ambulance entrance. No notice was received from either the MEOC or the Anniston Army Depot (ANAD). A patient with psychological symptoms screaming for help announced the victim's presence. One of the EMS students participating in the drill knew the keypad combination and had unlocked the entrance.

E.R. staff responded to the scene and began loading two seriously injured patients onto backboards for transfer to non-ambulatory decontamination. At 0841, Code Blue, signifying an external disaster, was announced over PA system. The Medical Director (MD) immediately began assessment of the most serious patients. Inasmuch as there was as yet no warning or indication of a chemical hazard, neither the MD nor other staff who soon joined wore any personal protective equipment. Some of the patient's tags presented an unmistakable picture of organophosphate poisoning, so the staff immediately recognized both a potential for contamination. At least six staff members, including the ED physician and two of the ED nurses, become contaminated. The staff continued to provide care to the afflicted, loading two of the most seriously injured onto backboards, thence into Tiger Cat baths. The safety officer quickly cordoned off the back corridor with red rope, indicating that it was a hot zone.

At 0843, a PA system announcement updated the emergency to Code Black, signifying it is a chemical incident. Contaminated patients were triaged and moved to the trauma room for stabilization and treatment while decontamination was being set up. Patient #16, a convulsing nerve agent casualty, was given Atropine IM, and then loaded onto a plain stretcher. The first patient (#46, an apneic casualty) was decontaminated with neat Clorox. (The hospital had indicated some confusion in the guidelines regarding proper decontamination technique. CSEPP guidance still speaks of use of hypochlorite, while Domestic Preparedness and most other sources now emphasize soap and water as the preferred method.) State sources have still not provided the hospital with documentation that they may move to soap and water, which they have been requesting since before the last exercise.

At 0845, patient # 16 was placed on backboard and gurney, and moved to ED trauma room, where the MD ordered atropine IM, no specified dose. Two ambulatory patients who complained of vomiting were moved to an ambulatory shower. While three others, patients #9, #48 (with a penetrating abdominal wound), and #40 were moved to the trauma area by the MD, who ordered 2PAM chloride 2 mg IV, atropine 10mg IV repeated x 1, and Ativan 2mg IV for patient #46.

Patients #1 (with pain behind the eyes, blurred vision, already improving), #4 (with pain behind the eyes, cough and sneezing), #26 (with psychosomatic symptoms), and #30 (with panic disorder) were triaged and sent back to the hot line for proper decontamination. Patient #16 was decontaminated with soap and water. Patient #46 received 10-mg atropine and 2 mg of Ativan

IV, and the MD ordered 10 mg of IV atropine for patient #48. At 0851, patient # 16 received 10 mg atropine IV and patient # 40 had IV's started and 10 mg atropine IV.
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No notification of an event had arrived at the ER by any route. The ER contacted MEOC to advise that they were in codes Blue and Black, and was told that the exercise had not started. Shortly afterward, the ER received the first phone call at 0850 from RMC signifying that the drill has begun.

At 0853, patient #26 was brought to the trauma room and given 2mg IV Ativan. Patient #4 walked to the Trauma room and was given atropine 10mg IV. At 0855, a staff member gave a bed accountability report to the MD. By 0855, all initial patients were in the trauma room, receiving treatment while the outside decontamination facility was being set up.

Patients #46 and #16 were intubated, and each received another 20mg IV of atropine for a total of 40mg each. A respiratory care employee also with no protective equipment on arrived in the dirty area to help care for patients. Patient #1 received eye irrigation for eye pain, and received another 10mg atropine for total of 20mg.

At 0900, the planned decontamination process was reversed. The trauma room had been declared dirty and roped off separating the trauma rooms from the other ED rooms. The side of the decontamination shower that would ordinarily be clean became the hot side. In view of the confusion in the start, the MEOC suggested they might wish to back up and restart the exercise. The staff considered the possibility but decided to play it out as it had begun, inasmuch as it provided an opportunity to exercise contingencies (the contamination of part of the ER) that had not been tried before. Fans (blowers) were set up to provide positive airflow from the cold zone into warm zone.

At 0903, a new stretcher was brought with patient # 12 (nerve agent symptoms). Soon after, patient #26 emerged from decontamination and moved to clean side of ER. She had a (simulated) IV and abdominal penetrating wound. Patient #12 was found comatose in the ambulance entrance, brought to trauma room vomiting, unconscious, given Ativan 2mg IV and atropine 20mg IV. At 0907, patient #12 was showing no improvement, CPR was begun, she was intubated, placed on a ventilator, and given 20mg more IV atropine based on continued constricted pupils.

At 0917, a real-time pediatrics patient was moved from the ED to the hospital. All of the putatively contaminated staff went to the decontamination station for personal decontamination. At 0919, staff who were putatively contaminated by contact with patients began going through decontamination.

At 0923, the MD pronounced patient # 12 dead; the patient was moved to the morgue. At 0930, patient # 48 (with the penetrating abdominal wound) was sent to surgery and patient # 16 was sent to the ICU. An available in house staff count was complete and delivered to ED charge. At 0932, the last patients from initial group were re-triaged, admitted and registered into ED.

At 0934, the first patient of the second wave of (recycled) casualties, patient #19 with

hypothermia, arrived at the ED, was correctly recognized as not needing decontamination and was brought directly to ED triage. At 0942, patient #24, a psychotic, arrived at ED entrance, gave an unreliable history, and was brought selectively through decontamination. A need for one-to-one female RN accompaniment was conveyed to ED staff through 2way radio.

At 0944, decontamination teams were suiting up in back hallway. The hoods are not the type developed for use with PAPRs. They are a khaki double-aproned version with a clear face piece and an inhalation valve in the face piece. Some of the PAPRs had a short connector tube between the PAPR and the face piece hose. That section was fitted with a friction connector that could be broken open by an agitated patient. Two of the Racal units had the third cartridge pointing up, not down. Two had seals still plugging the canisters while they were being worn and two had loose canisters.

At 0945,the last unprotected staff member outside went through decontamination herself. Patient #13 arrives, appropriately triaged by OSHA Level C personnel. By 0955, there are now no female personnel to perform decontamination. At 0958, the last patients brought from triage to Emergency Department for treatment. ENDEX occurred at 1007.

The hot wash identified several important areas for improvement. First, the staff need time and training to practice with their new decontamination suits, and extra suits and canisters for this practice. Second, they need to acquire some sort of cleanable triage tag; the lack of any way to record information resulted in several nurses recreating documentation at different stages of the treatment, decontamination, and triage process. Third, staff identified a problem accessing and using the IV 2PAM during a disaster; they either need to develop a protocol with the pharmacy to premix the solution, or be provided with more Mark 1 kits. Also, the doses of atropine given were too high for this situation; better training needs to be provided to the medical staff about the appropriate dosages of atropine for nerve agent casualties. Nurses showed interest in use of fluorescein tracers for decontamination in drills, and were given instructions on how to prepare and use such a tracer.

Withall, the hospital demonstrated good capability, an excellent approach to continuous quality improvement, and success in improving an already good capacity.

Observation

Description: Triaging On the Clean Side of the Decontamination Line.

Discussion: During the triage process on the clean side of the decontamination line, serious/critical patients along with other patients had to wait more than five minutes before being triaged. Patient # 48 presented to the clean side of the decontamination line complaining of a penetrating abdominal wound, hypertension, dyspnea, bronchorrhea, diaphoresis, and other organophosphate signs and symptoms. The patient went unconscious before other healthcare personnel rendered attention. Once the patient was identified as critical, she was processed into the ER rapidly. Due to the absence of moulage, there were no visual signs for the triage nurse to observe. The triage nurse had to read the patient

information card that gave the signs and symptoms for each of the patients. The triage nurse was doing a head to toe triage on each of the patients, which took several minutes each. This was the four tier triage system.

Recommendation: Consider looking into the START triage system where a patient can be triaged in a matter of seconds, and directed to other parts of the hospital for their particular physical needs. This will help in reducing the bottleneck affect in the triage area.

Observation

Description: Patient Information Tracking.

Discussion: Patient tracking for this facility is done with Pro-Med, an electronic/computer system. During a disaster, an Emergency Patient Information packet is used. This is located in the decontamination supply closet. Since the hallway where the closet is located was contaminated, these packets where not available or used. Most patients, not all, received a patient ID tag that was placed on their wrist. The ID tag consisted of patient's name and triage status, blue, orange, or yellow, in written form. A patient triage form, a head to toe assessment, was filled out on some patients. The patient care nurse in the ER received one triage form. The 'runner' who brought the patient from the triage area to the back rooms gave the receiving nurse a verbal patient report. The receiving nurse used a blank sheet of paper to write patient information. It was stated that the patient information would be entered into the Pro-Med system to generate a patient account number. Any triage form, or emergency patient information packet that was generated would become part of the patient permanent record.

Recommendation: Consider using a patient tracking system that can withstand a decontamination environment. This information tag can be passed on with the patient as they are processed through the system. This will help in eliminating confusion on pre-hospital treatment, i.e. decontamination completion, vital signs, and medication given. This will also reduce the redundancy of re-writing patient information.

Observation

Description: Current Lack of HVAC Isolation for the ED and Automatically Locking Doors.

Discussion: Currently, the hospital does keep the ED over pressured from the rest of the facility, however, they are unable to provide a vapor lock with the outside door that would be used as the cold zone entry. In addition, they only have one security officer at night, and no physical plant employees after 8:00 PM. Therefore, they are moving toward a plan to be able to automatically lock all of the doors to the facility. They are working on this plan with the Army Corps of Engineers who are planning to perform updates on the facility.

Recommendation: The integrity of the hospital cannot be guaranteed until these

improvements are completed. We recommend that the schedule for the Army Corps of Engineers to complete these upgrades be in keeping with the proposed operation schedule of the plant.

Observation

Description: New Equipment Has Corrected Many of Last Year's Problems.

Discussion: (1) The hospital has created a permanent decontamination feature with a concrete contoured wall about 6 inches high to contain decontamination runoff. They have used sturdy, rigid-framed screens with an opaque canvas-like cover to protect privacy and prevent overspray from escaping environmental controls. They have a rapidly-installed rigid shower head support with attached hand held sprayer.

(2) Decontamination supplies are kept in a permanent closet inside the emergency department. Additional supplies there include six Tiger Cat Contamination Assist Tables with liners and nine replacement liners. These are folding containers that can be placed on a gurney and used to decontaminate non-ambulatory patients. There are a total of four 2 to 2.5 gallon closed collapsible plastic containers that can be attached directly to the Tiger Cat systems or could be used with the drain pump for the outdoor system. They have two 55-gallon plastic drums to contain runoff pumped from any source.

(3) They have 13 Kappler Guardian suits and eight Racal Breathe-Easy powered air-purifying respirators (PAPRs) with tight-fitting face pieces. The PAPRs use three cartridges each, and the hospital has acquired an extra battery for each PAPR. All (except one recent addition) of the 30 personnel trained to use personal protective equipment have undergone fit testing.

(4) They have three non-porous backboards for decontamination of non-ambulatory patients.

(5) Their barrier material consists of 3/8 inch nylon rope with a red stripe for the hot line and a blue stripe for the cold line.

(6) They have five boxes of 60 each Hefty 13-gallon Cinch Sak plastic bags for contaminated clothing. They have about 3 1/2 boxes of 50 Zip Lock quart bags for valuables.

(7) They have two 14-quart plastic buckets, two wheel brushes, two pump-type 2.5-gallon sprayers for soap and for hypochlorite decontamination, a 25-foot extension cord to work with the 1/6-horsepwoer 20 gallon/minute 110 volt submersible pump for wastewater evacuation, and a box of washcloths.

Recommendation: Continued quality improvement will pay off, as it has already. Emphasis may shift from acquisition more toward practice. May consider frequently practicing with equipment to familiarize staff with use and function

Observation

Description: Need for Hospital ICS Implementation.

Discussion: Although the hospital has a good disaster plan that it has exercised and practiced on real events, it would benefit from incorporating elements of hospital ICS into that plan. For example, they did not have a designated incident commander, although the disaster coordinator RN functioned as one. Also, their disaster plan did not have a pre-designated public information officer. Finally, they use a color triage system that is not standard for most of the country. They currently use blue for severe casualties, orange for moderate casualties, and yellow for walking wounded, as opposed to the standard red, yellow, and green. While this does not appear to pose a problem internally, it could pose a problem in communicating patient severity with the outside world.

Recommendation: The hospital consider implementing Hospital Emergency Incident Command System in its disaster plan, as well as a standardized triage tagging system.

Finding ADPH02C12.1

Description: Decontamination Team Members Should Be Monitored.

Discussion: OSHA 29 CFR 1910.120 mandates requirements to any organization using any OSHA Level of Personnel Protective Equipment. This mandate includes a health monitoring process. The person responsible for this process must have training in this field. There must be written documentation of blood pressure, pulse, respiration's and weight prior to an employee who puts on or takes off the protective equipment. Radio communication between the personnel wearing the PPE and the medical monitor must be available during the time the employee is in a hazardous environment. Immediately after the personnel leave the hazardous environment and PPE, a post-screen must be administered.

Reference: OSHA 29 CFR 1910.120 -- Hazardous Waste Operations and Emergency Response

Recommendation: Obtain OSHA-approved training for Medical Heat Stress Monitoring from a certified source. Create documentation that will track personnel using Personnel Protective Equipment in a hazardous environment. Assign and incorporate into the Stringfellow Memorial Hospital Emergency Preparedness Operational Plan a position and job description for this position.

Finding ADPH02C12.2

Description: PAPRs Were Improperly Used.

Discussion: Five problems were observed with use of PAPRs:

1. Some were donned upside down, so that one canister opened upward in a way that would have admitted water into the filters.
2. Two of four workers left the dressing area with plugs still in the canisters. They discovered their error within a very few minutes, but the discovery of the first incident did not translate into a recheck before the second left the area.
3. At least two of the four workers wearing PAPRs had loose canisters while in the working area. That could result in leakage of contaminated air into the air supplied through the hose.
4. Two of the PAPRs had an extra hose segment between the blower unit and the mask. That segment joined the hose to the mask by a friction fit connector that could be easily opened with minimal pressure.
5. The hoods that have been supplied to the hospital do not have the elephant-trunk-like covering for a PAPR hose. The hose is made of a silicon rubber that provides relatively poor resistance to penetration by liquid mustard.

Reference: .Respirators must be maintained carefully and inspected before each use. See 29 CFR 1910.120 and 134, as well as the manufacturer's instructions.

Recommendation:
1. Obtain proper hoods through CSEPP.
2. Practice correct use

Finding ADPH02C12.3

Description: Inappropriate Dosage of Medications.

Discussion: There was some confusion regarding the dosages of atropine, 2PAM and Diazepam. First, the hospital was mostly out of Diazepam, and thus substituted Ativan. Due to this confusion, the dose of Diazepam was occasionally ordered as 2 mg. Second, it was clear that while well intentioned, the physicians participating had not had the benefit of taking a Chemical Stockpile Emergency Preparedness Program course. They dosed atropine in increments of 10mg, using almost entirely the intravenous route of administration. Therefore, although the casualties were correctly diagnosed as mild, moderate and severe nerve agent poisonings, the dosages given respectively were usually 10mg, 20mg, and up to 40mg of Atropine. In addition, the atropine stocked in the pharmacy was of two different concentrations, and most was expiring this month. Finally, while they were well stocked with IV 2PAM chloride, they need to develop protocols to use this preparation. 2PAM was kept in the pharmacy and not called for during the exercise. Because it was not available, the staff did not prescribe it for most patients. When they did prescribe 2PAM, it was as 2mg IV. There did not appear to be a protocol for the dilution, dosing, and rate of administration for the lyopholized 2PAM. Staff identified this in the hot wash as an area for improvement; a future plan would include a protocol for pharmacy to mix the 2PAM at the onset of an event, and deliver it to the ED in enough volume to be slowly dripped in over the required time course.

Reference: Medical Management of Chemical Casualties Handbook.

Recommendation:

1. More of the medical staff, particularly the physicians, need to participate in CSEPP training, or undergo local training.
2. Pharmacy and Nursing need to develop protocols and procedures for the administration of IV 2PAM.
3. Alabama State DPH should be encouraged to provide the hospitals with a single strength formulation of atropine, and possibly to provide more Mark1 kits to reduce confusion.

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Jacksonville Hospital

STARTEX occurred at 0835. At 0845, nine panicked victims stormed the Emergency Department (ED) entrance, bowling over the Safety Officer, who said "Oh no." The ED called a "Code Mass Arrival" over the public address (PA) system. ED staff quickly determined that the ED Waiting Area was contaminated. One victim simulated collapsing on the floor and seizing.

At 0846, the ED started their call tree. Two ED staff members came out of the ED Treatment Area into the Waiting Area and returned to the Treatment Area. One female victim was placed on a stretcher at 0847 by six ED staff, who were not suited in personal protective equipment (PPE). One of the ED physicians was standing in the Waiting Area and stated that the patients should be moved to the Decontamination Area. The Charge Nurse assigned ED staff members to implement a partial lock-down procedure by standing at the two doors and preventing entry and exit. Two more physicians arrived to help.

Four staff members began to set up the Decontamination Area. They experienced difficulty assembling the tents. Hard-sided wading pools were used between the tents as catch basins. Three ED staff members not suited in PPE walked three victims out to the Decontamination Area. Two victims were on stretchers, and one was in a wheelchair. Then, three guernies were taken to the contaminated side of the Decontamination Area. The lead physician concluded that three ED staff members were contaminated and had to go to the Decontamination Area.

Meanwhile, two laboratory workers brought additional supplies to the ED. Two ED staff members not participating in the exercise came over to the Decontamination Area, talked with the contaminated staff members, and then returned inside the ED. Four Decontamination Team members began to don PPE. One of the five victims remaining in the Waiting Area was twitching on the floor; it was also noted that she was pregnant. An ED nurse walked the victim to a stretcher and moved her out to the Decontamination Area. Two of the other four victims were walked to stretchers and wheeled out to the Decontamination Area, and two were walked out to the Decontamination Area.

At 0855, the Medical Emergency Operations Center (MEOC) at the Northeast Alabama Regional Medical Center (RMC) notified the ED that an incident occurred involving a helicopter crash and M55 rockets. The lead physician walked out to Decontamination Area to assess and treat contaminated victims. She was not suited in PPE.

At 0857, two victims in wheelchairs, four victims on stretchers, and three standing victims were lined up on the contaminated side of the Decontamination Area. At 0900, five real patients, including one critical patient, arrived, and ED staff assignments were adjusted to accommodate this change.

Starting at 0900, the lead physician initially assessed and determined treatment for each victim on the contaminated side of the Decontamination Area. She assessed the two contaminated ED

staff members first and determined that they had no adverse effects. They were sent into Decontamination. Victim 1 (Scenario 23) presented as a heat stroke victim and was to receive six mgs of intramuscular (IM) atropine. Victim 2 (Scenario 47) presented with a moderate liquid organophosphate exposure and an open lower leg wound; she was to receive four mgs of IM atropine, a dose of 2-pralidoxime (2PAM,) and wound lavage. Victim 3 (Scenario 44) presented with a moderate organophosphate exposure and agitation, delusions, and hallucinations; she was to receive two mgs IM atropine and two mgs IM ativan. Victim 4 (Scenario 15) presented with a moderate organophosphate exposure and rapid respiratory rate; she was to receive oxygen and one mg IM ativan. Victim 5 (Scenario 20) presented with asthmatic symptoms of wheezing and severe respiratory distress and was to receive IM atropine and 2PAM. Victim 6 (Scenario 55) presented with psychosis and was to receive IM atropine and ativan. Victim 7 (Scenario 60) presented with panic and hyperventilation and was to receive four mgs IM atropine and intravenous fluids. As Victim 7 was pregnant, Labor and Delivery was contacted. Victim 8 (Scenario 39) presented with pain behind the eyes, blurred vision, runny nose, cough, chest tightness, and decreased blood pressure; she was to receive six mgs IM atropine, two mgs IM ativan, intravenous fluids, and oxygen. An electrocardiogram (EKG) was to be obtained. Victim 9 (Scenario 50) presented with asthmatic symptoms of wheezing and respiratory distress; she was to receive oxygen, albuterol, and ativan.

The Safety Manager was instructing confused and suited Decontamination Team members concerning where they would be stationed and their roles. One of the Decontamination Team members took the hood and mask off of the their PPE to readjust it while in the contaminated area. At 0908, the lead physician interrupted play in the exercise to treat the real critical patient in the ED. Another physician replaced her in the Decontamination Area. Decontamination Team members began to decontaminate Victims 1 through 9. They completed the decontamination of the contaminated ED staff members and sent them into the ED. A third contaminated ED staff member, who had not been assessed by the lead physician and was not assigned tracking materials or tagged, completed Decontamination and was sent to the Equipment Room to don PPE.

At 0914, the first of the two contaminated ED staff members entered the ED Treatment Area, was assessed, determined to have no agent effects, and returned to work. An unsuited member of the Housekeeping Staff entered the Decontamination Area and returned to the hospital without being decontaminated. Then, the second of the two contaminated ED staff members entered the ED Treatment Area, was assessed, determined to have no agent effects, and returned to work.

The RMC MEOC called the ED to determine the availability of treating physicians, patient beds, and antidote and blood supplies. Then, the Decontamination Team realized they could not move stretchers or wheelchairs through the Decontamination Area because of the hard-sided wading pools and catch basins. Nonetheless, they attempted to move some of the wheelchairs through anyway, and the wheelchairs and victims separated from one another. Therefore, they resorted to ambulating the non-ambulatory victims through the Decontamination Area.

Victim 1 completed Decontamination on a stretcher. The Decontamination Team called a request to the ED for two more stretchers; the ED responded that no more stretchers were

available. Victim 1 (Scenario 23) arrived unresponsive and on a stretcher in the ED Treatment Area. Victim 1 had presented as a heat stroke victim. In the Treatment Area, the treating physician considered the possibilities of heat stroke or diabetic coma, ordered D5W and oxygen, and ordered a complete blood count (CBC,) blood glucose, arterial blood gases, and chest X-ray. He noted low blood pressure and ordered a fluid bolus. Victim 1 was to be monitored for vital signs and neurological status.

Victim 2 completed Decontamination on a stretcher. Then, Victim 3 completed Decontamination on a stretcher. The stretchers were not decontaminated because they did not fit into the tents. Victim 2 (Scenario 47) arrived on a stretcher in the ED Treatment Area. Victim 2 had presented with a moderate liquid organophosphate exposure and an open lower leg wound. The treating physician immobilized her leg before moving her. He determined she was 30 weeks pregnant, without vaginal bleeding, and with clear lungs. He ordered intravenous normal saline, a 500 cc fluid bolus, three l/min oxygen by nasal cannula, two gms intravenous (IV) penicillin, 500 mgs IV levaquin every 24 hours, a CBC, basic metabolic profile, fetal heart tones, fetal monitoring, and type and cross match of three units of blood for standby.

At 0930, the Decontamination Team began to doff their PPE and decontaminate team members. Victim 3 (Scenario 44) arrived in the ED Treatment Area. Victim 3 had presented with a moderate organophosphate exposure and agitation, delusions, and hallucinations. The treating physician ordered establishment of IV access, observation, and administration of more IM atropine if needed. Victim 4 (Scenario 15) arrived in a wheelchair in the ED Treatment Area. Victim 4 had presented with a moderate organophosphate exposure and rapid respiratory rate. The treating physician ordered observation. Decontamination of Victims 4 through 9 was completed by 0933.

Victim 6 (Scenario 55) arrived in a wheelchair in the ED Treatment Area. Victim 6 had presented with psychosis. The treating physician ordered establishment of IV access, oxygen, and observation. Then, Victim 5 (Scenario 20) arrived in wheelchair in the ED Treatment Area. Victim 5 had presented with asthmatic symptoms of wheezing and severe respiratory distress. The treating physician continued albuterol nebulized (SVN) as-needed (PRN) and planned to recheck them. Another member of the Housekeeping staff was decontaminated and was not evaluated for adverse effects.

Victim 7 (Scenario 60) arrived in a wheelchair in the ED Treatment Area. Victim 7 had presented with panic, hyperventilation, and pregnancy. The treating physician ordered one mg ativan, two mgs haldol, and observation.

Victim 8 (Scenario 39) also arrived in a wheelchair in the ED Treatment Area. Victim 8 had presented with pain behind the eyes, blurred vision, runny nose, cough, chest tightness, and decreased blood pressure. The treating physician ordered observation.

Victim 9 (Scenario 50) arrived on a stretcher in the ED Treatment Area. Victim 9 had presented with asthmatic symptoms of wheezing and respiratory distress; she was to receive oxygen, albuterol, and ativan. The treating physician did not evaluate Victim 9 because of

miscommunication about when the exercise ended.

The ED announced "Code Mass All Clear" on the PA system at 0942, and ENDEX occurred. Then, a hotwash was held with all staff members who participated in the exercise in the Cafeteria.

During the exercise, ED staff demonstrated a victim tracking system. For each mock victim and some of the contaminated staff members, a tracking packet and triage tag were issued. Bagging and labeling of victim personal belongings was not demonstrated. Initial evaluation conclusions and treatment were noted on the victim scenario tags on round colored stickers. Triage tags were used to record identifying information, arrival time, and tracking information. The packet issued for each victim, contained forms that were used to record evaluation conclusions and treatment ordered in the ED Treatment Area.

Inventory of hospital antidote stores revealed 260 20-ml vials of 0.4 mgs/ml atropine with an expiration date of June 2000, 590 with an expiration date of February 2002, and 1000 with an expiration date of March 2002. One atropine jet (one mg/10 ml) had an expiration date of August 2002, eight had an expiration date of October 2002, one had an expiration date of December 2002, two had an expiration date of January 2003, two had an expiration date of February 2003, eight had an expiration date of June 2003, and two had an expiration date of June 2004. Two atropine vials (one mg/one ml) had an expiration date of September 2003, and 775 had an expiration date of December 2003. Altogether, 606 20-ml 2-protopam (2PAM) vials (one gm/20 mls) had an expiration date of September 2001, 192 had an expiration date of June 2002, and 438 had an expiration date of April 2005. During the pre-exercise briefing and hotwash after the exercise, the Safety Manager asked for help in finding out where to send or how to dispose of expired antidote supplies properly.

Overall, the exercise was well conducted. The Decontamination Team and ED staff members showed a great deal of interest, dedication, and enthusiasm for performing the tasks involved in responding to a chemical incident. Exercise performance has noticeably progressed since last year evidencing the staff's strong commitment to learning and improvement. Some opportunities for growth were identified, including: (1) better decontamination equipment, (2) guidance on appropriate decontamination solutions, (3) better PPE and radios, (4) improvements in decontamination lay out procedures, (5) non-simulated training, and (6) improvements in facility security procedures for chemical incident response, (7) improvements in communication with the MEOC, and (8) improvements in the use of the victim tracking system. Although Decontamination Team and ED staff member training has been minimal to date, they are very interested in receiving as much training and participating in as many exercises as possible.

Observation

Description: Communication With the MEOC.

Discussion: Jacksonville Hospital is one of three hospitals whose communications are directed through the Medical Emergency Operations Center (MEOC) at the Northeast Alabama Regional Medical Center (RMC) in Anniston. Owing to some problems with exercise coordination, the MEOC did not notify the ER of the exercise incident before mock victims arrived. However, their inquiry about available staff, bed count, and available antidote and blood supplies was timely and appropriate. ER staff did not call the MEOC back at any point during the exercise to inform them of numbers of victims being received and treated, severity of injuries, victim disposition, or status of hospital treatment and bed capacity.

Recommendation: Hospital staff and the MEOC should improve communications with each other. The MEOC should encourage hospitals to call in updates about numbers of victims being received and treated, severity of injuries, victim disposition, and status of hospital treatment and bed capacity. This helps coordinate available resources for the overall management of an event. Dynamic two-way communication optimizes information flow and situational awareness critical for decision making and resource allocation essential to optimizing the quality of victim management.

Observation

Description: Ineffective Use of Tracking System.

Discussion: During the exercise, ED staff demonstrated a victim tracking system. For each mock victim and some of the contaminated staff members, a tracking packet and triage tag were issued. Bagging and labeling of victim personal belongings were not demonstrated. For each mock victim and some of the contaminated staff members, a tracking packet and triage tag were issued. Initial evaluation conclusions and ordered treatment were noted upon round colored stickers on the victim scenario tags. Triage tags were issued as the victims exited the Decontamination Area and used to record identifying information, arrival time in the ED, tracking numbers, and the ED treating physician's diagnosis and ordered treatment. (Initial diagnosis and treatment were not recorded on the triage tag or on the pre-labeled forms in the packet issued for each victim.) The forms were used to record (for a second time) evaluation conclusions and treatment ordered in the ED Treatment Area.

Recommendation: During exercises, ED staff should not use victim scenario tags to track victim information. These are a simulated feature that would not be present in a real incident so staff should not become used to relying on them as part of the tracking system. Initial triage categories, diagnoses, and ordered treatments should be recorded on the triage tag or forms that follow the victim. Personal belongings should be identified and secured in a bag after removal during Decontamination. The number on the triage tag should be placed on the corresponding bag containing the personal belongings to facilitate their return to the owner after their decontamination.

Observation

Description: Non-Optimal Decontamination Equipment.

Discussion: The hospital did not have optimal decontamination equipment. They had been provided with decontamination tent units with catch basins and hard-sided wading pools to use between tent units. The present equipment does not allow non-ambulatory victims to be moved through Decontamination on a stretcher or in a wheelchair without significant difficulty and safety hazards to victims and decontamination staff. Furthermore, the catch basins and hard-sided wading pools presented trip hazards. Owing to the small size of the tent units, it was difficult for the staff to safely move victims into and out of the tents. Decontamination equipment did not include shields to protect the privacy of unclothed victims. As one of only three hospitals in the primary county, anticipated patient volume would quickly overwhelm this limited decontamination capability at Jacksonville Hospital.

The Calhoun County Health Department delivered some new equipment the day before the exercise, including backboards, decontamination solutions, inflatable decontamination tubs, contaminated solution containers, and patient elevation crates. No instructions were provided with the delivered equipment.

Recommendation: CSEPP program officials should provide better equipment that is portable, appropriately sized, and easily assembled and used for Jacksonville Hospital so decontamination can be conducted to accommodate anticipated patient volume, without safety hazards, and with assurance of victim privacy. When equipment is provided, it should be provided with instructions for use and at a time that allows the ED staff to become familiar with it and use it in exercises. Exercising in the equipment that would actually be used if a real event occurred greatly improves the quality of the exercises.

Observation

Description: Use of Bleach Solution for Decontamination.

Discussion: Decontamination Team members appeared uncertain about the currently recommended solution to use for decontamination. The Safety Manager spoke about how a diluted solution of household bleach (sodium hypochlorite) would be used for decontamination if washing victims was not simulated.

Recommendation: Local guidance should be generated supporting the use of one particular solution (currently soap and water would be the acceptable choice in the CSEPP environment). Although this is supported by the current mainstream of medical and emergency response thinking, hospitals need support upon which to base such procedures and to allay liability concerns.

Observation

Description: Insufficient Decontamination PPE.

Discussion: During the exercise, Jacksonville Hospital had a total of eight personnel dressed in personal protective equipment (PPE). There were no safety or backup personnel available to enter the contaminated area. They have a total of eight PPE suits, including eight particulate-air-purifying respirators (PAPR's). This would be inadequate to sustain decontamination operations at a primary receiving hospital while allowing adequate rehabilitation of the Decontamination Team members.

Of additional concern to hospital staff was the fact that only one size (large) of Kappler suits, butyl rubber gloves and boots had been provided. Staff experienced difficulty operating in the PPE because of improper fit. This resulted in difficulty seeing while donning suits and moving about in them safely. The hand-held radios provided to Decontamination Team members made hearing and being heard when they spoke very difficult.

There were no communications between the Decontamination Team and ED to coordinate victim flow. Therefore, decontaminated victims just arrived at the ED doors after completing Decontamination resulting in patient "pile up" at the ED entrance.

Recommendation: CSEPP administrators in this community should work with each facility to provide a sufficient number of PPE suits in various sizes to meet the facility's needs. Radios that can be used inside the PPE should be provided so Decontamination Team members can communicate effectively during exercises and real incidents.

Observation

Description: Decontamination Procedures and Training.

Discussion: Jacksonville Hospital personnel marked off the area for set up of the Decontamination Area prior to arrival of evaluators. Initial set-up appeared well organized. The entire Decontamination Area was well marked with restricted access from the parking lot side. Entry and exits were clearly marked. Cold and hot zones were not visibly well demarcated. This was likely to be one reason there were repeated violations of the hotline. The decontamination stream consisted of a marked off area in which victims were initially assessed and treated and two tent units with a hard-sided wading pool placed at the exit of each. Victims were to be undressed in the first tent unit, moved to a hard-sided wading pool between tent units where they were sprayed with decontamination solution, and moved to the second tent unit where they were rinsed with water. Then, victims were transferred to the second hard-sided wading pool where drying and dressing were to occur. Patients were then transported over the clean line to waiting personnel. (All of the undressing and decontamination activities were simulated in this exercise.) Given the limited number of staff, fatigue and possibly back strain would quickly be an issue in an incident. This would create the real possibility of non-ambulatory patients being dropped or personnel being injured.

Staff members were noted violating the integrity of decontamination line. One staff member took PPE off in the contaminated area to adjust it. Such issues appear to practice and training related. Familiarity with the equipment and practice with actual decontamination should resolve these issues.

Recommendation: CSEPP planning personnel should work individually with hospitals in the community to develop consistent decontamination procedures (like access control, victim flow, and contamination control procedures) and provide training on those procedures. Such training should be recurrent and provided at times and frequencies acceptable to employers and providers to encourage maximum participation of staff across all shifts.

Hospital staff are encouraged to continue refining their skills and knowledge of decontamination procedures. Frequent exercises to apply these skills and knowledge would help to make the procedures smoother, eliminate errors, increase confidence in them, and increase judgment and flexibility in responding to specific circumstances.

Observation

Description: Inadequate Facility Security.

Discussion: During play, security staff were not available to control access to the parking lot and Decontamination Area or to lock down the hospital completely. The ED Charge Nurse assigned ED staff to implement a partial lock-down procedure by standing at the two doors, preventing entry and exit.

When this observation was made during the hot wash, staff advised evaluators that the facility did not have 24-hour security coverage. The staff also noted that available personnel may be active in other assignments during a CSEPP incident, limiting their availability to cover security needs. They intend to call local police for security assistance if a real incident occurs. However, since police response may be delayed, hospital staff must be available for rapid deployment to entrances and perimeters for hospital lock-down and traffic control.

Failure to secure entrances could result in facility contamination seriously jeopardizing vital community medical resources by shutting down the hospital until facility-wide decontamination can be completed. This danger was demonstrated in the present exercise when mock victims presented unexpectedly before the ED received notification of the exercise incident. Thus, the mock victims contaminated the ED waiting area. Uncontrolled access to that area resulted in movement of people who would have become contaminated to other areas of the hospital and community. (Some of these contaminated people were identified by Decontamination Team or ED staff and decontaminated. This added to the number of people who had to be decontaminated.)

Recommendation: As discussed in the hotwash, the hospital needs to develop a Chemical Incident Response Plan describing procedures to control access to the

Decontamination Area and hospital during exercises and incidents. If they plan to rely primarily upon local police department assistance, they should work further with police staff to refine notification and contact procedures and the roles policemen will play. A memorandum of understanding (MOU) and written protocols should be included as an appendix to the Chemical Incident Response Plan. Police staff that will perform such roles such be encouraged to exercise them with hospital staff.

Observation

Description: Non-Simulated Training.

Discussion: It is very important for Decontamination Team members to exercise their skills without simulating parts of them. For example, initial assessment and treatment prior to Decontamination was simulated and not actually played by non-suited staff in this exercise. Team members will not appreciate the psychomotor limitations imposed by being suited in PPE until they actually exercise these elements in PPE. This hospital had no MARK I kits and initial treatment was simulated by writing the doses of atropine and 2PAM to be given on colored round stickers placed on the victim scenario tags. The difficulty in drawing up appropriate doses and reconstituting powdered agents while in PPE will not be appreciated until these tasks are realistically played. Furthermore, the potential role of Pharmacy support in having doses drawn up and powdered agents reconstituted will not be appreciated or appropriately integrated into response activities until these roles are exercised with Pharmacy personnel. In the event of a real incident, these limitations may become critical.

Recommendation: Decontamination Team and ED staff members should physically exercise (without simulation) as many elements of response activities as possible. Specifically, they should exercise initially assessing (for example, assessing vital signs and pupils) and treating victims while suited in PPE. They should also exercise integrating Pharmacy support staff into initial treatment activities.

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ANNISTON COMMUNITY CSEPP EXERCISE 2002
(ACE 02)

EXERCISE REPORT

APPENDIX 1. ACTION PLANS

This Appendix contains the action plans of the Anniston Community exercise findings identified in ACE 02, to include previous Anniston Community and/or jurisdictions findings identified and/or unresolved from ACE 01 and ACE 00:

Anniston Army Depot/Anniston Chemical Activity 1-3
Alabama Department of Public Health 1-5
State of Alabama 1-11
Calhoun County 1-13
Etowah County 1-15

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ACTION PLAN FOR ANNISTON ARMY DEPOT/ANNISTON CHEMICAL ACTIVITY
ACE 02
(March 6, 2002)

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
AN02A13.1	Tracking of Toxicological Agent Protective (TAP) Clothing Wear Time	John Harsch ANCA,CMOD	19 June 2002

CORRECTIVE ACTION/COMMENT: A tracking log has been established and placed in the FCP for this purpose and will be utilized in the future. A re-check of this finding will be conducted during the next scheduled CAIRAX.

Areas needing improvement (check all that apply):

	Training		Staffing
	Equipment		Plan(s)
	Facilities	X	Procedures
	Other (specify)		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
AN02A13.2 ~~**AN01A13.1**~~	SOP for the Mobile Personnel Decontamination Station (MPDS)	ANCA/Rosser	19 June 2002

CORRECTIVE ACTION/COMMENT:

An SOP for Hotline Operations has been finalized. A thorough review and sign off was completed on 19 Feb 2002. A re-check of this area of CAIRA response will be conducted during the 19 June 2002 CAIRAX~~.~~

Areas needing improvement (check all that apply):

	Training		Staffing
	Equipment		Plan(s)
	Facilities	X	Procedures
	Other (specify)		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
AN02A13.3 ~~**AN01A13.2**~~	Protective Clothing/Personnel Decontamination	EOD/S/Sgt. Stiles	19 June 2002

CORRECTIVE ACTION/COMMENT: EOD Personnel conduct RSP, IAW, EOD established procedures and requirements, which call for the use of protective equipment in conflict with the requirements of AR 385-61. Resolution will require a command level decision. A re-check of this area will be conducted during the 19 June 2002 CAIRAX.

Areas needing improvement (check all that apply):

	Training		Staffing
X	Equipment		Plan(s)
	Facilities	X	Procedures
	Other (specify)		

ACTION PLAN FOR ALABAMA DEPARTMENT OF PUBLIC HEALTH FINDINGS
ACE 02
(March 6, 2002)

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ADPH02C12.1	Decontamination Team Members Should Be Monitored.		

CORRECTIVE ACTION/COMMENT:

Areas needing improvement (check all that apply):

	Training		Staffing
	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify)		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ADPH02C12.2	PAPRs Were Improperly Used.		

CORRECTIVE ACTION/COMMENT:

Areas needing improvement (check all that apply):

	Training		Staffing
	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify)		

FINDING		RESPONSIBLE FOR	COMPLETION

NUMBER	SHORT TITLE	CORRECTION	DATE
ADPH02C12.3	Inappropriate Dosage of Medications		

CORRECTIVE ACTION/COMMENT:

Areas needing improvement (check all that apply):

	Training		Staffing
	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify)		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ADPH02C04.1 ~~**ADPH01C04.1**~~	Incident Commander and Safety Officer		

CORRECTIVE ACTION/COMMENT:

ADPH has not provided the action plans for this report at time of publication. Addendums to the action plans will be published when received~~.~~

Areas needing improvement (check all that apply):

	Training		Staffing
	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify)		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ADPH02C12.4 ~~**ADPH01C12.1**~~ ~~**ADPH00C12.1**~~	Management of Atropine		

CORRECTIVE ACTION/COMMENT:

ADPH has not provided the action plans for this report at time of publication. Addendums to the action plans will be published when received.

Atropine in the higher concentration has been included in the FY 2001 budget. All hospitals will be included in the acquisition of higher concentrations of atropine~~.~~

Areas needing improvement (check all that apply):

	Training		Staffing
	Equipment		Plan(s)
	Facilities		Procedures
X	Other (specify)		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ADPH02C12.5 ~~**ADPH01C12.2**~~ ~~**ADPH00C12.2**~~	Safety Officer for Decontamination		

CORRECTIVE ACTION/COMMENT:

ADPH has not provided the action plans for this report at time of publication. Addendums to the action plans will be published when received.

Safety Officer will oversee decontamination operations for safety of staff~~.~~

Areas needing improvement (check all that apply):

	Training	X	Staffing
	Equipment		Plan(s)
	Facilities	X	Procedures
	Other (specify)		

FINDING		RESPONSIBLE FOR	COMPLETION

NUMBER	SHORT TITLE	CORRECTION	DATE
ADPH02C12.6 ~~**ADPH01C12.3**~~ ~~**ADPH00C12.3**~~	Little Command of Staff Exhibited		

CORRECTIVE ACTION/COMMENT:

ADPH has not provided the action plans for this report at time of publication. Addendums to the action plans will be published when received.

Work with hospitals to improve their command and control.

Areas needing improvement (check all that apply):

X	Training		Staffing
	Equipment		Plan(s)
	Facilities	X	Procedures
	Other (specify)		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ADPH02C12.7 ~~**ADPH01C12.4**~~ ~~**ADPH00C12.4**~~	Inadequate Decontamination Performed		

CORRECTIVE ACTION/COMMENT:

ADPH has not provided the action plans for this report at time of publication. Addendums to the action plans will be published when received.

Work with hospitals to improve their decontamination procedures through training~~.~~

Areas needing improvement (check all that apply):

X	Training		Staffing
	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify)		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ADPH02C12.8 ~~**ADPH01C12.5**~~ ~~**ADPH00C12.5**~~	Antidote Stockpile		

CORRECTIVE ACTION/COMMENT:

ADPH has not provided the action plans for this report at time of publication. Addendums to the action plans will be published when received.

Atropine in the higher concentrate has been included in the FY 2001 budget. This is a duplicate observation. All hospitals will be included in the acquisition of higher concentrations of atropine~~.~~

Areas needing improvement (check all that apply):

	Training		Staffing
	Equipment		Plan(s)
	Facilities		Procedures
X	Other (specify) Supplies		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ADPH02C12.9 ~~**ADPH01C12.6**~~ ~~**ADPH00C12.6**~~	Patient Contact Prior to Donning PPE		

CORRECTIVE ACTION/COMMENT:

ADPH has not provided the action plans for this report at time of publication. Addendums to the action plans will be published when received.

Provide for additional training in patient contact procedures.

Areas needing improvement (check all that apply):

X	Training		Staffing
	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify) Supplies		

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ADPH02C12.10 ~~**ADPH01C12.7**~~ ~~**ADPH00C12.7**~~	Lack of Safety Officer		

CORRECTIVE ACTION/COMMENT:

ADPH has not provided the action plans for this report at time of publication. Addendums to the action plans will be published when received.

Assign a safety officer to oversee actions. There was a safety officer on the decontamination team~~.~~

Areas needing improvement (check all that apply):

	Training	~~X~~	Staffing
	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify) Supplies		

ACTION PLAN FOR STATE OF ALABAMA FINDINGS
ACE 02
(March 6, 2002)

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
AL02C01.1 ~~**AL01C01.1**~~	Notification of AEMA was not Timely		

CORRECTIVE ACTION/COMMENT:

Change the warning point from the Montgomery Trooper Post to the Capital Police. A request for a state-of-the-art computerized calldown system in our FY 02 CSEPP budget will be submitted. Negotiate with FEMA to get the FTE support to man the State EOC for 24 hour operations 7 days a week.

Areas needing improvement (check all that apply):

	Training	X	Staffing
X	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify) Supplies		

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ACTION PLAN FOR CALHOUN COUNTY FINDINGS
ACE 02
(March 6, 2002)

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
CH02C05.1 ~~**CH01C05.1**~~	Initial Notification to the Public		

CORRECTIVE ACTION/COMMENT:

The exercise showed that the current system of one person on duty at Calhoun County could not accomplish the initial notification to the public in the 8-minute time frame. Calhoun County has requested approval for 3 additional FTEs in order to place 2 people on shift during non-duty hours. Notification to the public could also be reduced if additional staff were located at ANCA to provide warning to the "pink zones" of Calhoun County.

Some modification to the existing Alert and Notification Systems would also help to alleviate the time to warn in Calhoun County.

Areas needing improvement (check all that apply):

	Training	X	Staffing
X	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify) Supplies		

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ACTION PLAN FOR ETOWAH COUNTY FINDINGS
ACE 02
(March 6, 2002)

FINDING NUMBER	SHORT TITLE	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ET02C03.1 ~~**ET01C03.1**~~	Untimely Initial PADs		

CORRECTIVE ACTION/COMMENT:

Etowah County EMA has hired additional staff and is in the process of training the new staff. Etowah County will demonstrate this objective at the 4th Quarter CAIRA exercise~~.~~

Areas needing improvement (check all that apply):

	Training	X	Staffing
	Equipment		Plan(s)
	Facilities		Procedures
	Other (specify) Supplies		

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ANNISTON COMMUNITY CSEPP EXERCISE 2002
(ACE 02)

EXERCISE REPORT

APPENDIX 2. ACRONYMS AND ABBREVIATIONS

AAR	After-Action Review
ACE	Anniston Community CSEPP Exercise
ACP	Access Control Point
AEMA	Alabama Emergency Management Agency
ALS	Advanced Life Support
ANAD	Anniston Army Depot
ANCA	Anniston Chemical Activity
ANS	Alert and Notification System
AOC	Army Operations Center
AR	Army Regulation
ARC	American Red Cross
ARES	Amateur Radio Emergency System
ARNG	Army National Guard
CAC	Crisis Action Center
CAIRA	Chemical Accident/Incident Response and Assistance
CBMC	Citizens Baptist Medical Center
CCM	Clay County Hospital
CEA	Civilian Executive Assistant
CFR	Code of Federal Regulations
CLA	Chemical Limited Area
COBRA	Chemical, Ordnance, Biological and Radiological training center at Ft. McClellan, AL
COO	Chief Operations Officer
CSEPP	Chemical Stockpile Emergency Preparedness Program
CSM	Chemical Surety Materiel
DA	Department of the Army
DD	Deputy Director
DHR	Department of Human Resources
DO	Duty Officer
DON	Director of Nursing
DOT	Department of Transportation
DPH	Alabama Department of Public Health
D2PCw	Computer Model for Chemical Hazard Dispersion
EAS	Emergency Alerting System
ECL	Emergency Classification Level
ECP	Evacuation Control Point

ED	Emergency Department
EIS	Emergency Information System
EM	Emergency Manager
EMA	Emergency Management Agency
EMD	Emergency Management Director
EMIS	Emergency Management Information System
EMT	Emergency Medical Technician
ENDEX	End of the Exercise
ENF	Electronic Notification Form
EOC	Emergency Operating Center; Emergency Operations Center
EOD	Explosive Ordnance Disposal
EONC	Enhanced On-Site Container
EOP	Emergency Operation Plan
EPA	Environmental Protection Agency
ER	Emergency Room
ESF	Emergency Support Function
ESMI	Enhanced Storage Monitoring Inspection
FAX	Facsimile
FCP	Field Command Post
FEMA	Federal Emergency Management Agency
FEMIS	Federal Emergency Management Information System
FM-ARNGTC	Ft. McClellan Army National Guard Training Center
FRC	Federal Response Center
GB	Nerve Agent
GMO	Game Management Office
GPS	Global Positioning System
GRMC	Gadsden Regional Medical Center
HAZMAT	Hazardous Material
HAZWOPER	Hazardous Waste Operations and Emergency Response
HEICS	Hospital Emergency Incident Command System
HF	High Frequency
HVAC	Heating, Ventilating and Air Conditioning
ICU	Intensive Care Unit
IDLH	Immediately Dangerous to Life and Health
IOC	Industrial Operations Command
IRF	Initial Response Force
IRZ	Immediate Response Zone
ITMP	Interstate Traffic Management Plan
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
JIC	Joint Information Center
JIS	Joint Information System
JRMC	Jefferson Regional Medical Center

LEPC	Local Emergency Planning Committee
LOI	Letter of Instruction
MCE	Maximum Credible Event
MEOC	Medical Emergency Operations Center
Mg	Milligrams
MHz	Megahertz
MIC	Medical Incident Commander
Mk	MARK
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPDS	Mobile Personnel Decontamination System
MSDS	Material Safety Data Sheets
NAWAS	National Warning System
NIOSH	National Institute for Occupational Safety and Health
NTSB	National Transportation Safety Board
ONC	On-Site Container
OR	Operating Room
OSC	On-Scene Coordinator
PAD	Protective Action Decision
PAM	Pamphlet
PAO	Public Affairs Office(r)
PAPR	Powered Air-Purifying Respirator
PAR	Protective Action Recommendation
PAZ	Protective Action Zone
PDS	Personnel Decontamination Station
PIO	Public Information Office(r)
PNP	Primary Notification Point
POR	Point of Review
PPE	Personal Protective Equipment
PTV	Patient Transport Vehicle
PZ	Protective Zone
RACES	Radio Amateur Civil Emergency Service
RADS	Restricted Area Descriptive System
RMC	Regional Medical Center
RTAP	Real Time Analysis Platform
SCBA	Self-Contained Breathing Apparatus
SCCRH	St. Clair County Regional Hospital
SEOC	State Emergency Operations Center
SOP	Standard Operating Procedure; Standing Operating Procedures
SRF	Service Response Force

START	Simple Triage and Rapid Treatment/Transport
STARTEX	Start of Exercise
TAP	Toxicological Agent Protective
TAR	Tone Alert Radio
TCM	Training Center Manager
TCP	Traffic Control Point
TCTC	Toxic Chemical Training Center
UHF	Ultra High Frequency
USAMRICD	United States Army Medical Research Institute of Chemical Defense
USAMRIID	United States Army Medical Research Institute of Infectious Diseases
USPHS	United States Public Health Service
VHF	Very High Frequency
VX	Nerve Agent

ANNISTON COMMUNITY LETTER IDENTIFIER CODES

AN	Anniston Army Depot/Chemical Activity	AI	Anniston Community
AL	State of Alabama	CH	Calhoun County
CL	Clay County	CB	Cleburne County
ET	Etowah County	FM	Fort McClellan
JF	Jefferson County	HM	Huntsville-Madison County
LE	Lee County	ST	St. Clair
TA	Talladega County	ADPH	Alabama Department of Health

ANNISTON COMMUNITY CSEPP EXERCISE 2002
(ACE 02)

EXERCISE REPORT

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