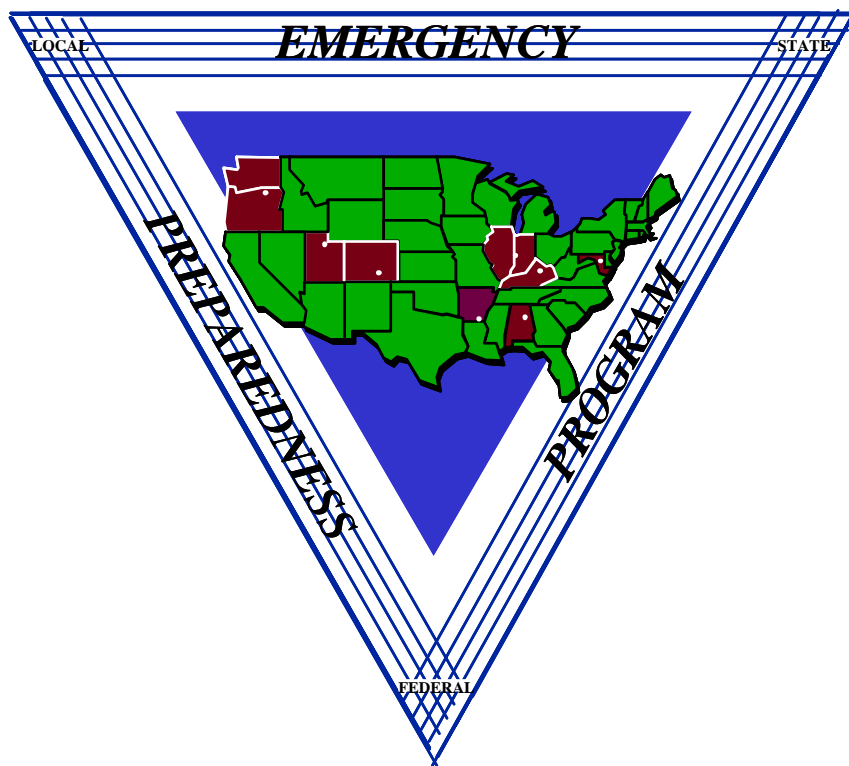

NEWPORT COMMUNITY CSEPP EXERCISE 2006 (NECD CSEPP EX 06)



April 5, 2006



CHEMICAL STOCKPILE



EXERCISE REPORT

June 9, 2006

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

**NEWPORT COMMUNITY CSEPP EXERCISE 2006
(NECD 06)**

April 5, 2006

EXERCISE REPORT

Report Date: June 9, 2006

INSTALLATION:


Newport Chemical Depot, Newport, Indiana

RESPONSE ORGANIZATIONS:

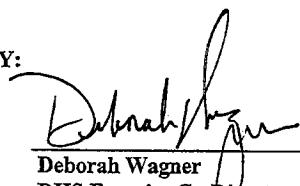
**State of Indiana
Vermillion County
Parke County
Fountain County**

**State of Illinois
Edgar County
Vermilion County**

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NEWPORT COMMUNITY CSEPP EXERCISE 2006
(Newport CSEPP Exercise 06)

EXERCISE REPORT

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SECTION 1 – INTRODUCTION

The Newport Community CSEPP Exercise 2006 (NECD CSEPP EX 06) was conducted on April 5, 2006, to demonstrate the emergency response capabilities of the Newport Community CSEPP and to validate correction of findings identified during past CSEPP exercises.

The requirement for conducting Chemical Stockpile Emergency Preparedness Program (CSEPP) exercises was established in the August 1988 Memorandum of Understanding (MOU) between the Federal Emergency Management Agency (FEMA) and the U.S. Army (DA). Exercise design, planning, evaluation, and reporting guidance is contained in the *Chemical Stockpile Emergency Preparedness Program Exercises* document, dated September 7, 2004.

Exercise design and planning for Newport CSEPP EX 06 were accomplished for DA by the Army Exercise Planning Co-Director and representatives from the Newport Chemical Depot (NECD). Design and planning for off-post play were accomplished by the Department of Homeland Security (DHS) Chicago Field Office Co-Director and representatives from, the State of Indiana, Parke County, Vermillion County (IN), Fountain County, and the State of Illinois, representing Edgar County and Vermilion County (IL).

The exercise was evaluated using the Integrated Performance Evaluation (IPE) methodology and Emergency Response Outcomes (ERO).

- 1 Prevention and Preparedness
- 2 Emergency Assessment
- 3 Emergency Management
- 4 CAI Hazard Mitigation
- 5 Protection
- 6 Victim Care
- 7 Emergency Public Information
- 8 Remediation and Recovery

The scope and substance of play for the Army and off-post jurisdictions are described in individual Extent of Play Agreements included in this Exercise Plan. Two exceptions to the Extent of Play Agreements were granted by the Co-Directors. Illinois Emergency Management Agency participated on a limited basis because of real-world events. Vermilion County, Illinois, opted to host and conducted a facilitated community planning discussion with representatives from nine response agencies.

EXERCISE SCENARIO

Newport Chemical Depot (NECD) stores a portion of the nation's chemical weapons. Included in the munitions category are VX-filled ton Containers (TCs). NECDF requested a load of 4 TCs from NECD. On the morning of April 5, 2006 NECD made preparation for transporting the 4 TCs to NECDF for processing. Real world meteorological data was used for this exercise.

At 0900 an earthquake registering 6.5 on the Richter scale occurred with the epicenter near Covington, Indiana along the Wabash fault line. A (electric powered) fork lift fell against the transport vehicle ripping the side of the transport vehicle's diesel fuel tank. Fuel splashed around the area and poured out of the side of the tank. The boom also struck one of the TCs on the transport vehicle knocking off the bonnet and a valve. There was a heavy stream of agent gurgling out of the valve. The friction of the fork lift striking the transport vehicle caused a spark and a fire ignited.

There were 3 side scenarios that occurred on-post as a result of the earthquake.

1. A light pole on the upwind side of the 3300 Area fell on the outer security fence collapsing the fabric.
2. In the south end of Building 713A a bookcase fell and trapped the Purchasing Supervisor.
3. The telephone operator in Building 7700 was hit by a large book falling off of a bookcase

There were a total of five on-post injuries. The fork lift driver suffered a broken left leg, lacerations across the left arm, a possible concussion and exhibited symptoms of inhalation exposure. One of the ground guides experienced symptoms of inhalation exposure within 5 minutes of the accident. One of the safety personnel suffered a heart attack. The Purchasing Supervisor in Building 713A sustained a broken right arm, bruised left shoulder, and broken right ankle. The telephone operator in Building 7700 experienced a concussion.

SIGNIFICANT EVENTS TIMELINE

Actual Time	Jurisdiction	Activity	ERO
0903	ALL	STARTEX	
0903	NECD	Initial notification from field to EOC of chemical accident	2,4
0904	NECD	EOC determines event is a reportable emergency and assigns CENL	2
0904	NECD	Sirens initially sounded on-post	5
0904	NECD	Initial PAD for post population made	5
0906	NECD	EOC determines on-post areas at risk	2
0906	NECD	EOC determines off-post areas at risk	2
0906	NECD	Initial on-post PAD disseminated	5
0906	NECD	Depot Commander notifies CMA Deputy for Operations	2
0908	NECD	Off-post 24-hour warning points notified of CENL, agent type, wind direction, and PAR (completed)	2,5

Actual Time	Jurisdiction	Activity	ERO
0908	Fountain	Notification completed to 24-hour warning point of CENL, agent type, wind direction, and PARs	2
0908	IDHS	Notification completed to 24-hour warning point of CENL, agent type, wind direction, and PARs	2
0908	IEMA	Notification completed to 24-hour warning point of CENL, agent type, wind direction, and PARs	2
0908	Parke	Notification completed to 24-hour warning point of CENL, agent type, wind direction, and PARs	2
0908	Vermillion	Notification completed to 24-hour warning point of CENL, agent type, wind direction, and PARs	2
0908	Vermillion	Initial Protective Action Decision (PAD) made	5
0909	Parke	Initial Protective Action Decision (PAD) made	5
0909	Fountain	Initial Protective Action Decision (PAD) made	5
0910	Fountain	Sirens and IAS activation, PA from EOC	5
0910	IEMA	IL PAD passed to counties	5
0910	Vermillion	County EOC activated	3
0911	NECD	HQDA (AOC) notified	2
0912	IDHS	EOC activated	3
0912	Vermillion	County sirens activated at V.C. EOC w/PA	5
0913	Edgar	Initial notification and PAD received from State of Illinois	2,5
0915	IEMA	EOC activated	3
0915	IEMA	EOC fully operational	3
0915	NECD	Cdr decided to activate the JIC	
0915	NECD	CMA OC notified	
0916	Vermillion	IAS activated	5
0916	Vermillion	County EOC fully operational	3
0918	NECD	National Response Center notified	
0919	Parke	County EOC activated	3
0919	Vermillion	County IAS verbal on NWS	5
0920	Edgar	County EOC activated	3
0920	Edgar	Decon @ Edgar County Airport - First unit on-scene	6
0920	Vermillion	Collective Protection System activated at the County Jail	5

Actual Time	Jurisdiction	Activity	ERO
0921	NECD	Initial D2Puff™ plume projection broadcast off-post	2
0922	Vermillion	EAS message released	5
0923	NECD	First Army news release distributed (received by media)	7
0923	NECD	Updates of PARs to off-post	2,5
0925	Parke	County sirens and IAS activation simulated via system test	5
0925	Vermillion	EOC notified West Central Community Hospital	3
0927	JIC	JIC Activated	7
0929	Parke	Initial IAS & Siren broadcast notification complete	5
0929	NECD	NECDF Accountability completed	5
0930	Edgar	County EOC fully operational	3
0930	NECD	AMC OC notified	2
0932	Fountain	County EOC activated	3
0934	IEMA	Sent Plume information to Edgar County via e-mail	5
0935	Fountain	EAS message released	5
0935	Fountain	Issues first news release	7
0935	Vermillion	Issues first news release	7
0937	Edgar	Activates TCPs	3
0937	NECD	Shelter-in-place bldg 7700	5
0938	IDHS	EOC fully operational	3
0940	Parke	County EOC fully operational	3
0940	Edgar	Initial Protective Action Decision (PAD) made – contacted the National Weather Service to indicate “No Protective Action” required for Edgar County.	5
0940	Fountain	County EOC fully operational	3
0940	NECD	Updates of PARs to off-post	2,5
0943	NECD	Fire burned itself out	
0952	Edgar	Call to SIMCELL to activate Local Radio Stations Message	5
0956	NECD	Departure of last person from accident site from initial work crew	5

Actual Time	Jurisdiction	Activity	ERO
0957	NECD	Updated PAD disseminated on post to lift shelter-in-place	5
1011	Fountain	Decon patients at St. Vincent's Hospital	6
1013	Edgar	Medical/EMS demonstrated @ Edgar County Airport-Medical/EMS ready to go	6
1016	NECD	Updates of PARs to off-post	2,5
1017	Fountain	Shelter established at Covington High School	5
1020	Parke	Issues first news release	7
1021	Fountain	St. Clare Medical Center begins decontamination	6
1025	Vermillion	Demonstration of medical play at West Central Community Hospital	6
1029	IEMA	Contacted NECD regarding the discrepancies between the NANS and the D2Puff Run Reports	2
1040	JIC	First JIC news release distributed (received by media)	7
1041	JIC	JIC fully Operational	7
1045	NECD	Health Clinic notifies off-post medical facilities (WCCH) of possible transport of chemical agent injuries	6
1045	Parke	Shelter at Rockville High School	5
1050	NECD	Termination of agent release (90%)/mitigation of hazard	4
1056	Edgar	Crestwood School Shelter fully activated	5
1120	NECD	Update PARS to off-post – exit shelter	2
1130	JIC	Issues announcement of News Conference	7
1220	NECD	Patients arrive at WCCH	6
1223	NECD	Next-of-kin telephonic notifications complete	3
1315	JIC	News Conference starts	7
1430	All	ENDEX	

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SECTION 2 – COMMUNITY ANALYSIS

EMERGENCY RESPONSE OUTCOME 1 – PREVENTION AND PREPAREDNESS

This outcome encompasses all tasks associated with actions taken to prevent, prepare for, or reduce the impact or consequences of a chemical accident or incident, including but not limited to ensuring daily information exchange; maintaining coordinated emergency plans, participating in a continuous exercise program; conducting ongoing training; maintaining an active public outreach and education program; and verifying emergency operations center (EOC) equipment operational status.

The entities that participated in the Newport community exercise were the Indiana Department of Homeland Security (IDHS), with three counties (Fountain, Parke, and Vermillion), the Illinois Emergency Management Agency (IEMA), with two counties (Edgar and Vermilion) and the Newport Chemical Depot (NECD). Vermilion County, Ill., participated in a community planning discussion with nine response agencies during the scheduled normal Chemical Stockpile Emergency Preparedness Program (CSEPP) community exercise. Sufficient information was available at NECD to make protective action decisions. The NECD Chemical Accident/Incident Response and Assistance (CAIRA) Plan was last updated in October 2005. Information was appropriately exchanged between NECD and the surrounding communities on a daily basis. Only the three Indiana counties have access to the daily work plans and can receive NECD protective action recommendations (PARs) from which counties can develop protective action decision (PADs). The Illinois counties receive such information during an event from IEMA.

An active joint exercise program that meets CSEPP guidance to support the on-post and off-post jurisdictions was in place. All Indiana counties participate in Chemical Accident/Incident Response and Assistance (CAIRA) exercises. The Newport jurisdictions participated in the Integrated Process Team (IPT) exercise planning meetings.

Credentialing of personnel and knowledge of position-specific requirements was up to date. Training was conducted on a routine basis. Equipment in the NECD Emergency Operations Center (EOC) was fully operational.

The Newport Community supported an outreach program at different levels within each county and state. All jurisdictions provided CSEPP information to their populations. Some publish and disseminate CSEPP information through booklets, calendars, news releases, and speaking at festivals or other community functions. Indiana publishes a yearly calendar.

EMERGENCY RESPONSE OUTCOME 2 – EMERGENCY ASSESSMENT

This outcome includes all tasks associated with identifying the hazard, classifying and providing notifications of the hazard and appropriate protective action recommendations (PARs) to offsite

agencies, and coordinating and conducting monitoring and sampling operations to further specify the hazard.

Hazard analysts did not use the correct data when making plume projections. The initial and subsequent runs were made using the source of the fire as 25 percent of one ton container (TC) when the worst case scenario of 100 percent of the TC should have been used. In addition the hazard analyst did not use the correct start time to model the plume resulting in incorrect plotting of the plume location at any given time. No one in the NECD EOC questioned the output of the model. The hazard analyst was new and was not familiar with the procedures for attaching PAR/PAD tables to the run report. This required the NECD EOC to use the Newport Alert and Notification System (NANS) to provide updates on the initial estimate given to the off-post warning points. The off-post 24-hour warning points and/or EOCs were notified of the chemical event notification level (CENL) and PAR within prescribed time limits.

NECD notified IDHS, Vermillion, Parke and Fountain Counties, and IEMA at 0904, via NANS that a Category III post-only emergency occurred at 0903. Within 45 seconds, and during the initial NANS call, this was upgraded to a Category IV community emergency because of a fire. IEMA relayed this message to Edgar and Vermilion Counties at 0913. All jurisdictions received the accident information required from NECD.

Acute Exposure Guideline Levels (AEGL) were reported for Levels 1 and 2, as required by the NECD Alert and Notification Memorandum of Agreement. For the most part, each jurisdiction was able to verify the information and execute readiness requirements in accordance with their Emergency Operations Plans. There were apparent conflicts between D2-PuffTM run reports versus information provided over NANS. NECD inappropriately sent Parke County a PAR to shelter Penn Township. The plume plot sent off-post never did identify the AEGL2 risk envelope, which is the criterion for the PAR.

NECD's monitoring and sampling equipment was operational and ready for deployment. The real-time analytical platform (RTAP) coordinator was unable to establish reliable communication between the RTAPs and the EOC. This greatly hampered the effort to collect information and accurately characterize the hazard area.

EMERGENCY RESPONSE OUTCOME 3 – EMERGENCY MANAGEMENT

This outcome includes all top-level decision-making, coordination, and direction and control of the response, including mobilization and operation of the EOC, and coordination at the management level of any activities involving logistical support.

The NECD EOC achieved a full operational status quickly and maintained this level of effort for the duration of the response. Direction and control of depot response activities was established by the Initial Response Force (IRF); activities of responders were coordinated. Command and control for the response was established; however, the flow of accurate information to the key

decision makers was not as sufficient as desired. Not all data on the status board was accurate or up to date; this could contribute to less than optimal decisions. Depot response assets were mobilized; the Army chain of command was informed that the IRF was activated. The Installation Commander, as the Federal On-Scene Coordinator (FOSC), discharged Department of Defense obligations under the National Contingency Plan, except that there was no accurate record of the public address system announcements. Appropriate installation support was not always provided for protecting the on-post population inside the predicted hazard area until all personnel were accounted for and safe. The next-of-kin of ill, injured, and exposed persons were promptly notified, and their immediate needs were supported. Information about the victims or their next-of-kin were not reported or released unless authorized.

Sufficient equipment, vehicles and supplies were available to control and mitigate the release and to perform related support tasks.

Each off-post jurisdiction alerted and mobilized their emergency operations and response staff, activated their respective EOCs, and conducted required notifications. Each EOC was operational in a timely manner, conducted regular briefings, and maintained operations for the duration of the emergency. Effective use of communications systems was demonstrated to achieve command and control of response activities.

The community should ensure that protective action orders are made at the appropriate levels to maximize public safety.

Where sheltering-in-place was selected as a PAD, consultation with NECD hazard analysts would ensure a coordinated time for the population to vacate shelters. EOC staffs supported decisions through emergency operations to include effective use of traffic and access control. The status and location of patients was effectively tracked in EOCs. County EOCs effectively directed at-risk schools to shelter or evacuate and continued to aggressively consider school protection. Each jurisdiction reviewed the need to issue emergency declarations and did so where appropriate. Limited assistance was requested of the States. No federal assistance was requested by the States.

Observation

Subject: Protective Action Decisions

Discussion: Protective action decisions were frequently over-conservative for the risk presented to the community population. Use of the AEGL-1 as an action level to shelter or evacuate the public created the potential to confuse the public and divert valuable resources away from the population facing greater risk. Decision makers understandably were ready to take proactive, and even aggressive actions, to protect their citizens. However, using AEGL-1 as a protective action decision-making guide led to frequently changing orders to shelter-in-place or to evacuate the public.

Reference: Newport Alert and Notification MOA, March 2005

Recommendation: Use of AEGL-2 as a protective action level is more consistent with community emergency planning and will benefit public safety. Training opportunities can be scheduled to ensure thorough understanding of hazard analysis for protective action decision making. Clear instructions for desired public action for AEGL-1 predicted areas should be developed in the emergency planning process and shared with NECD.

EMERGENCY RESPONSE OUTCOME 4 – CAI HAZARD MITIGATION

This outcome, conducted exclusively on post, includes all response tasks at the accident scene to contain the source and limit the magnitude of the hazard’s impact. It includes all tasks at the accident scene except for those specifically associated with the *Victim Care* outcome.

Prompt and accurate immediate reports were made from the accident scene. The security cordon was established and enforced. Conditions at the accident scene were recorded; records that documented the decisions and operations associated with the response were secured and preserved. Emergency responders were properly prepared and ready for employment. Additional equipment and staff were requested for response operations. The release was mitigated at its source by plugging the container, damming the run off, and covering the spill.

EMERGENCY RESPONSE OUTCOME 5 – PROTECTION

This outcome includes all activities related to assuring protection of on- and off-post general and special populations through making appropriate PADs, using sirens and other warning methods, disseminating warning messages, providing access control and security, and providing screening and decontamination.

Army officials correctly assessed the event as a community emergency, decided on shelter-in-place as the best choice of protection for the post population, and directed this action via several communications systems. The execution of this protection was generally good, although the protection provided by several buildings appeared to be compromised by lackadaisical implementation. Staff in the NECD EOC notified the appropriate off-post warning points through the NANS that an area immediately adjacent to the depot was at risk, and recommended shelter-in-place protection in this area. This initial notification was followed by subsequent updates that were less frequent and complete than expected and somewhat inconsistent over time. Contamination discipline at the accident site to prevent the spread of contamination was very effective.

Officials in Vermillion and Parke Counties made early decisions to expand the area that was predicted by the Army to be at the greatest and most immediate risk. This seemed to be a prudent course of action, but the result was an apparent delay in alert and notification of the

population in the critical area, a loss of focus on the conditions and circumstances facing this population (to include the special population in the Vermillion County jail), and a dilution of assets to assist the population in greatest need.

The demonstration of the capability of the Crestwood School Reception Center and Shelter in Edgar County was successful, as was the demonstration of decontamination at the Edgar County Airport. Similarly, the shelter established at the Covington High School in Fountain County was impressive. The shelter of students in the Rockville High School and the evacuation of students from the Turkey Run Elementary School in Parke County also were timely and effective.

EMERGENCY RESPONSE OUTCOME 6 – VICTIM CARE

This outcome includes all activities related to treating on-post contaminated casualties at the accident site and installation; screening, treating, and decontaminating off-post victims; victim transport; treatment at off-post medical facilities; patient tracking; and handling and tracking disposition of human remains.

The NECD Community demonstrated both decontamination efforts and medical care for potentially exposed victims. A number of consistent Observations and Findings continue to manifest within the community, and a cohesive effort must be made to ensure the safety of the community in any hazardous materials response, CSEPP or otherwise.

Communitywide, major improvements were made in specific areas, such as accountability, Incident Command System implementation, and tracking of worker stay times. However, significant issues with operating site practices were observed throughout the community. These issues, like the successes mentioned, arose both at field activities and medical facilities. Several issues recurred in the same locations over several years; other issues continue to arise in different locations. This demonstrated a lack of continuity in training and a need for systemic attention to operating site practices across the community. While these issues are evaluated in the context of the CSEP Program, they are equally applicable in the much more likely event of a hazardous materials emergency at a fixed facility or in transportation, as demonstrated in this exercise through the use of side scenarios involving hazardous materials.

Among the repeated issues are a lack of exclusion criteria for the wearing of personal protective equipment (PPE) and a lack of management and practice in donning and doffing PPE. Lack of clarity in these processes, along with minimal (if any) documentation directly places responders at risk and may violate applicable laws and regulations. The potential effects of the former deficiency were illustrated when, in more than one location, responders required medical attention while wearing PPE.

The safety and security of response personnel and others in the area of an emergency response incident site should be of primary concern to the Incident Commander. The use of a site safety

and control plan could greatly assist those in charge of ensuring the safety and health of employees on the site.

The community should ensure that appropriate job aids and checklists are developed to guide workers through PPE donning and doffing and that the appropriate procedures are included in each response organization's internal standard operating procedures.

According to 29CFR1910.120, Appendix C, a site safety and control plan should include "standard operating procedures and safe work practices" among other requirements. The community should ensure that each site conducting operations completes a site safety and control plan that includes the necessary information to ensure worker safety. This should include written standard operating procedures and relevant guidelines for each phase of the operation. The component of the site safety and control plan delineating the site layout will help reduce the site layout and cross-contamination issues that have repeatedly occurred across the community.

The community should choose, define, and document exclusion criteria as a part of a medical monitoring program in addition to the medical evaluations required as a component of a respiratory protection program. In addition, responders should have evidence of their medical clearance to wear a respirator available on site at any time for review by appropriate authorities. The community should ensure that appropriate job aids and checklists are developed to guide safety officers and medical group supervisors through the pre-entry screening process and that the respiratory protection plan used by the organization and other appropriate procedures are included, by transcription or reference, in each response organization's internal standard operating procedures.

Community hospitals globally demonstrated appropriate patient care; however, staffing shortages and/or training issues were noted. Antidote stockpiles were sufficient to support likely events, although much of it remained inside the facilities instead of being taken to the decontamination area for immediate patient care. A standardized identification process to indicate decontamination or Mark I Antidote Kit administration continued to be an issue. Incident Command structures within the facilities were clearly and effectively demonstrated.

Community Emergency Medical Services (EMS) were appropriately equipped and trained not only to provide patient care, but also to support the decontamination teams in medical screenings. There was a marked separation between EMS and fire department resources at the sites; few EMS personnel demonstrated dressing out to provide patient care, and the fire department resources had limited capability to do so. The level of awareness between medical emergencies and potentially exposed patients was astute, with true medical emergencies quickly recognized and treated.

Communication among outside agencies and the hospitals continued to require attention. Some facilities had limited communication with their respective EOCs. One hospital sent a representative to the County EOC; this improved, but did not completely open, communication. It is vital that all agencies involved understand the availability of multiple communications

resources within the hierarchy, as well as ensuring that pathways are in place for appropriate notification.

The NECD medical staff demonstrated proper care for potentially exposed patients, as well as the transfer of those to definitive care. The NECD EOC demonstrated an excellent patient tracking capability, not only following movement on post, but also off post. Ensuring open communication pathways is a critical aspect of patient care for all entities involved, and must be a part of this community's focus.

The community should review the common operating procedures developed for CSEPP and ensure that a systems approach to site operations is used to run responses as integrated and coordinated wholes, realizing that each function at a decontamination and screening site is dependent on every other function for overall success. Each agency and jurisdiction also bears responsibility for this task and should be encouraged to extend the same mindset to every other operation they undertake. Each agency will be considered an "employer" under applicable regulations because they bear legal responsibility for the workers' welfare. As a component of this planning, each agency should ensure that workers are adequately protected should an injury occur. Volunteer agencies should be especially cognizant because workers' compensation laws vary from state to state and may not cover volunteers.

Many of the agencies in the Newport community have made significant steps toward documenting and ensuring worker safety by maintaining strict accountability for workers operating in PPE. They have made similar strides in identifying key workers on the scene and, individually, in other areas. This level of attention to detail is commended, and agencies are encouraged to extend this performance level to all aspects of their response in a systemic manner. They also are encouraged to share the many successes that each have achieved individually. With refinement, the Newport community's processes for CSEPP will become a model for other incidents, and will enhance response while ensuring worker safety long after CSEPP is gone.

Observation

Subject: Donning and Doffing of PPE

Discussion: Donning and doffing of PPE are two of the most important processes in ensuring worker safety. These processes ensure that workers' PPE is not compromised and that once work concludes, potentially contaminated PPE is removed without contaminating the worker. In some instances in the community, PPE was not donned or doffed properly. In others jurisdictions, the PPE was donned properly but procedures were not institutionalized to ensure that each member's ensemble was checked and that all workers were ready at the same time.

Recommendation: Develop PPE donning and doffing checklists. Existing lists from concepts of operation and training materials should be reviewed and converted to a checklist for use as job aids. Ensure that the donning process is supervised by a worker who will not be part of the entry/decontamination team to ensure that PPE is donned in a

coordinated manner. Ensure that PPE doffing is monitored from a safe location by the safety officer or an assistant safety officer so that doffing is done correctly and used PPE is appropriately segregated.

Observation

Subject: Medical Monitoring Program

Discussion: According to the regulations governing respiratory protection, the employer must ensure that appropriate medical evaluations are provided: 29 CFR 1910.134 (e) (7) states that “the employer shall provide additional medical evaluations that comply with the requirements of this section if: (i) an employee reports medical signs or symptoms that are related to ability to use a respirator.”

Medical monitoring, pre- and post-entry, according to Chapter 10 of NFPA 471, Recommended Practice for Responding to Hazardous Materials Incidents, is performed:

- (1) To obtain baseline vital signs and physical assessment
- (2) To identify and preclude from participation in the hot zone and warm zone activities individuals at increased risk for sustaining injury and illness as a result of on-scene activities
- (3) To provide early recognition and treatment of personnel with adverse physiological responses as a result of on scene activities

Medical monitoring is one of the few methods the employer (hospital, fire department, EMS agency, or other organization) has available to determine if signs or symptoms related to the ability to use a respirator exist prior to actual injury because an individual is unlikely to realize that they are, for example, hypertensive at any particular moment. Determining if problems exist through use of an accepted industry practice may help reduce an agency’s potential for liability, as well as help reduce potential liability for individual incident commanders.

Recommendation: The Newport community should agree on common protocols for medical monitoring, including exclusion criteria. Common protocols are essential to ensure that agencies can operate together in mutual aid situations. Some agencies already have and use defined criteria. The community could meet this need through the IPT process by:

1. Adopting an existing standard already in use in the community, or
2. Adopting a national consensus standard such as NFPA 471, or
3. Tasking the medical directors of community EMS agencies to collectively determine appropriate criteria, or
4. Convening another group of competent medical professionals to collectively determine appropriate criteria.

In addition, a card or other documentation of medical clearance for respirator wear with the signature of a physician or licensed healthcare provider and applicable fit test information should be issued to every responder and be present with them when PPE is to be worn.

Observation

Subject: Communications

Discussion: The notification of patient transfers from one medical entity to others remains inconsistent. While EMS regularly contacts hospitals regarding incoming patients, it is rare that the receiving facility receives notification from any other source in a consistent manner. With the presence of medical representatives in county Emergency Operations Centers (EOCs), an additional avenue of information flow is available for use.

Recommendation: Especially in a potential chemical event, it is imperative that facilities are notified as early as possible so that they may prepare for reception. Ensure that each medical entity not only has a notification plan, but also promotes information sharing with other areas resources. Establish standardized contact numbers and personnel so that information flow is well defined and utilized regularly.

Observation

Subject: Patient Tracking and Identification

Discussion: Upon presenting to decontamination sites and hospitals, patients were assessed for exposure and symptoms of chemical agent exposure. Mark I Antidote Kits were administered as necessary; however, there was no consistent method to identify which patients had received the antidote. Similarly, once a patient was deemed “clean” by the decontamination team, there was not a consistent identification process.

The Newport medical community (including first responders, EMS and hospital personnel) has resources in place to resolve the patient identification issue. Bands that identify the amount of antidote administered and bands indicating that a patient has been decontaminated (or certified clean) should be used to expedite patient care.

Reference: Indiana CSEPP Community Chemical Event Field Response Concept of Operations

Recommendation: As outlined in the above document, a standardized form of banding should be implemented to identify patients who have been decontaminated and given antidote. A simple blue wristband indicates decontaminated (or clean) and one orange wristband for each Mark I Antidote Kit administered is the protocol that is outlined. All medical personnel should become familiar with the procedure to ensure both provider safety and expedient medical care. In addition, standardized triage tags should be used to

enhance the information flow for all providers. The tracking of a patient's belongings can be closely integrated with this program. Commercial examples are readily available in the form of numbered tags or bar coded system. Such implementation should include ALL community entities, including NECD, first responders, EMS, hospitals, reception centers and shelters.

Finding Requiring Corrective Action NJ06.6.1

Subject: Site Safety and Control Plan

Discussion: Federal regulations governing emergency response to hazardous materials incidents state that:

The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following to the extent that they are not addressed elsewhere:

- (i) Pre-emergency planning and coordination with outside parties.
- (ii) Personnel roles, lines of authority, training, and communication.
- (iii) Emergency recognition and prevention.
- (iv) Safe distances and places of refuge.
- (v) Site security and control.
- (vi) Evacuation routes and procedures.
- (vii) Decontamination.
- (viii) Emergency medical treatment and first aid.
- (ix) Emergency alerting and response procedures.
- (x) Critique of response and follow-up.
- (xi) PPE and emergency equipment.

Appendix C to 29 CFR 1910.120 encourages the use of a site safety and control plan as a compliance and safety tool.

A comprehensive site safety and control plan should include the following: summary analysis of hazards on the site and a risk analysis of those hazards; site map or sketch; site work zones (clean zone, transition or decontamination zone, work or hot zone); use of the buddy system; site communications; command post or command center; standard operating procedures and safe work practices; medical assistance and triage area; hazard monitoring plan (air contaminate monitoring, etc.); decontamination procedures and area; and other relevant areas. This should be a part of the employer's emergency response plan.

Use of a site safety and control plan will:

- Help the community address operational coordination issues,
- Enable the community to fix the control/exclusion zone problems by providing a common reference for all personnel,
- Organize functions at sites in a systematic manner as integrated site operations,
- Ensure that all required parts of the emergency plan are present, and

-
- Collect all the needed procedures and documentation in one place at each
 - operation to facilitate shift changes, integration of mutual aid resources, and regulatory compliance recordkeeping.

Reference: 29 CFR 1910.120(q)(2) (directly or as included by reference under 40 CFR 311)

Recommendation: The community should ensure that a site safety and control plan is developed as a part of any site operation using a standard community format. Much existing documentation will serve as building blocks. Examples include: accountability sheets used by some agencies to track workers' pre-entry medical monitoring and stay times, or the planned site layouts in agency plans. Procedures already used in specific agencies in the community, references such as Chapters 6 and 9 of NFPA 471, Recommended Practice for Responding to Hazardous Materials Incidents, and the ICS-208-HM form and related training materials from California FIRESCOPE (www.firescope.org) may assist the community in determining the best method for common community use.

EMERGENCY RESPONSE OUTCOME 7 – EMERGENCY PUBLIC INFORMATION

This outcome includes all tasks related to the dissemination of public health and safety information following the initial alert and notification. It includes the dissemination of information to the media from individual EOCs and the Joint Information Center (JIC), the staffing and logistics to operate a JIC, the operation of a Joint Information System (JIS), and the dissemination of information to the public from the JIC.

The NECD Emergency Public Information community, including on- and off-post public affairs officers (PAOs) and public information officers (PIOs), continued to make improvements in establishing and maintaining a functioning Joint Information System (JIS). This resulted in more timely and accurate dissemination of public health and safety information in most cases. The JIC team effectively worked around the issue presented when real-world weather pushed the nerve agent plume over parts of the depot. The plume prevented about 80 percent of the depot JIC workers from leaving for the JIC for more than 45 minutes. This could have caused a delay in opening the JIC, but JIC management overcame the situation by redistributing staff already present at the JIC to cover vacant positions.

The JIC continues to be well staffed. The largest JIC issue appears to be training of call takers. Even with online smart books available, call takers often had to find a PIO to get answers to media questions. PIO time is a critical resource, and measures taken to better train call takers in handling routine calls will help protect the PIO's time.

The one communitywide weakness of note, concerning the JIC, the Depot, and IRZ counties, involved a lack of standard naming protocol for emergency public information products. It is critical that emergency alert system (EAS) messages and news releases indicate clearly what

kind of products they are, what their sources are, and include a time of release. This is important so that the JIC can track how information is disseminated and reported to key audiences.

Information sharing among all participants was the best it's ever been in this community, and the community should continue working relentlessly on improving the JIS.

EMERGENCY RESPONSE OUTCOME 8 – REMEDIATION AND RECOVERY

This outcome includes all tasks associated with the immediate post-emergency period, out to about 48-hours after the event. They are intended to dovetail with the existing response-phase evaluations in outcomes 1-7.

Procedures for environmental assessment and cleanup were initiated in compliance with environmental requirements. Evidence was preserved and a collateral investigation was initiated to determine causation, assess liability, and prevent similar occurrences in the future. Requirements and priorities were established, resources secured, and interagency coordination accomplished for recovery phase monitoring and sampling. Appropriate and timely decisions on protective action decisions were made by designated public officials. Unrestricted re-entry to formerly restricted zones was implemented in a safe and timely manner. Information was provided in a timely and complete fashion to the media and the public regarding residual hazards, protective actions, care and services available to the public, and cleanup, remediation, and claims procedures.

SECTION 3 – JURISDICTIONAL ANALYSIS

NEWPORT CHEMICAL DEPOT

EMERGENCY RESPONSE OUTCOME 1 – PREVENTION AND PREPAREDNESS

Historically, sufficient baseline information has been available and actions have been taken to prevent maximum credible events (MCE). Sufficient information was available at Newport Chemical Depot (NECD) to make protective action decisions. Evidence indicated that coordinated on- and off-post emergency plans were in place and synchronized. The NECD Chemical Accident/Incident Response and Assistance (CAIRA) Plan was last updated in October 2005. Information is appropriately exchanged between NECD and the surrounding communities on a daily basis. An active joint exercise program is in place that meets Chemical Stockpile Emergency Preparedness Program (CSEPP) guidance. Credentialing of personnel and knowledge of position-specific requirements is up to date. Training is conducted on a routine basis. Equipment in the NECD Emergency Operations Center (EOC) was fully operational. Evidence indicates that EOC equipment is checked on a routine basis. Materials are distributed and programs are in place to ensure that the public has opportunities to learn about CSEPP emergency preparedness through the local Outreach Office. Prevention and Preparedness were not evaluated in detail on the installation. These elements are routinely examined in detail by higher headquarters' inspections, reviews and assistance visits.

EMERGENCY RESPONSE OUTCOME 2 – EMERGENCY ASSESSMENT

Hazard analysts (HA) assessed the seriousness of the Chemical Accident or Incident (CAI), made an initial estimate of the CAI's impact using the agreed upon Protective Action Recommendation/Protective Action Decision (PAR/PAD) Matrix and produced subsequent hazard assessments and predictions using D2-Puff™. Hazard area plots showed the risk areas and a predicted hazard envelope for Acute Exposure Guideline Levels (AEGL)-1, -2 and -3. The AEGL-1 plume and risk envelope were displayed in the EOC. This may portray an incorrect understanding of the hazard area to EOC staff. The initial PAR was determined using the previously Initial Response Force (IRF) Commander-approved PAR/PAD Matrix. The IRF Commander confirmed the PARs for off post after the initial notification to off-post jurisdictions. Off-post EOCs were notified of the Chemical Event Notification Level (CENL) and PAR within the prescribed time limit. Federal, state, and local notification requirements were fulfilled; local government officials and local Congressional offices were informed about the CAI and significant changes to the situation. Reports submitted to headquarters were complete, comprehensive, and on time. Monitoring and sampling equipment was operational and ready for deployment when needed. Monitoring systems (real-time analytical platforms [RTAP]) were deployed to collect information. The RTAPs were staffed by a lone operator/driver.

Finding Requiring Corrective Action NE06.2.2

Subject: Safety Buddy System

Discussion: An RTAP operator drove the RTAP to begin chemical vapor monitoring operations in potentially hazardous areas without a second person on the vehicle. A qualified partner or buddy should have been assigned to work with the RTAP operator prior to departure. There was not a local understanding that two people were needed for safety reasons. The operator could have been exposed to agent hazard without the benefit of a second person to help.

Reference: DA PAM 385-61 “Toxic Chemical Agent Safety Standards” March 27, 2002, page 28, paragraph 6-10h

Recommendation: A minimum of two people knowledgeable in agent exposure symptoms, self/buddy aid, and treatment should be present during agent operations. They should remain in visual contact with each other at all times or within the immediate access area when communication is provided.

Finding Requiring Corrective Action NE06.2.3

Subject: Timely and Consistent PARs

Discussion: NECD did not provide adequate PARs to the off-post community. The HA did not send initial or updated D2-Puff™ model runs to the off-post community in a timely manner. PARs that were sent off post (either through Newport Alert and Notification System [NANS] or D2-Puff™) frequently were inconsistent with recommendations given previously. As a consequence of errors associated with the hazard modeling, incorrect PARs were given.

As an example of the relatively slow manner in which model runs were provided to the off-post community, at 0905 the HA was informed that one ton container (TC) was involved in a fire, but he did not send the initial D2-Puff™ run off-post until 0921 (NECD003). Sixty-two minutes elapsed between sending run #3 (NECD019) and run #4 (NECD034) off-post, even though there were considerable fluctuations in wind readings during this period.

Inconsistencies in PARs include zones Vermillion East, Liberty, and Reserve, which were included in the 0906 NANS call, but were not included (no PARs given) in the initial D2-Puff™ run (NECD003). The only off-post zone within the AEGL-2 risk envelope for the latter run was Vermillion East; however, the 0923 NANS call associated with this run recommended shelter-in-place (SIP) for Liberty, Reserve, and Penn. Liberty and Reserve Townships were included on the PAR based on the community PAR/PAD Matrix agreement. Because no PARs were sent with the D2-Puff™ run, and because Penn was

an AEGL-1 affected zone, Parke County officials could assume that the depot was recommending SIP for all AEGL-1 affected zones. At 1120 a NANS call recommended exit shelter times for four townships based on D2-Alarm™ for the current model run; the run was not broadcast off post. This resulted in two zones (Helt East and Helt West) receiving exit shelter time recommendations without ever having received a shelter PAR. Other inconsistencies arose because the HA did not always send PARs with runs or save PARs after the runs.

Reference: DA PAM 50-6, “Chemical Accident or Incident Response and Assistance (CAIRA) Operations,” March 26, 2003, page 25, paragraph 3-5c(3)(b)2; “Memorandum of Agreement Among Newport Chemical Depot, Vermillion, Parke, and Fountain Counties, Indiana, the State of Indiana and the State of Illinois for Alert and Notification,” March 2005, page 8, paragraph V.A.9.f.

Recommendation: When new information is available that changes the hazard assessment, off-post officials should be informed of the change as soon as possible. While it may not always be possible to send a model run immediately when information comes in from the field, timely updates are important to the off-post decision making process. The policy regarding consistency between the initial PAR/PAD matrix-based recommendations and subsequent D2-Puff™ PARs should be clearly defined for HAs. For example, should zones receiving a matrix-based PAR of SIP also receive the same recommendation in subsequent D2-Puff™ runs? Also, if a zone received a recommendation of SIP in a previously published D2-Puff™ run, should this recommendation be continued in subsequent runs sent to the off-post community?

Revise the working relationship among EOC team members and determine priority for tasks to insulate the HA from requests for information that can be obtained elsewhere. This change would expedite the process and accuracy of updating information. Other team members should be responsible for providing information to field crews. Having a partner for the main HA could reduce errors and ensure the consistency of PARs being sent off post by both NANS and D2-Puff™. A clear delineation of the duties of the HA to include only updating hazard, meteorological and PAR information is necessary. Finally, frequent practice with the off post while in the event mode is recommended.

Finding Requiring Corrective Action NE06.2.4

Subject: Hazard Analysis Modeling Concepts and Implementation

Discussion: After a fire was reported at 0905, the HA modeled a fire with a duration of 60 minutes. The HA set up this scenario in D2-Puff™ at 0913 and used 0913, not 0905, as the release time. In addition, he should have assumed a release quantity of one TC, rather than 1/4 of a TC. At approximately 0949, the Headquarters (HQ) Chemical Materials Agency (CMA) HA called the NECD HA to discuss the scenario being considered. During this phone call, the NECD HA realized that the release time should be adjusted from 0913 to 0905 and made the adjustment.

The HA learned at 0944 that there was agent flowing out of a TC onto the pavement. The resulting puddle was described as being 8 to 9 feet wide and 20 feet long. At 0948, the HA began to add this source term to the scenario by adding 1/4 of a TC evaporating, but not adding information on the size of the puddle. It appeared that the HA was not readily able to identify where to enter puddle size. The HA canceled out of the source term window without adding it to the scenario. At 1032, it was announced that the puddle was being covered. At 1038, the HA added the source term for the puddle but incorrectly calculated the surface area of the puddle as 72 square feet, rather than 180 square feet. Because of the very small hazard associated with an evaporative release, incorrectly modeling puddle size, and delaying the addition of the evaporative source term only impacted the hazard assessment in very close proximity to the accident site.

While the HA was checked exit shelter times displayed in D2-Alarm™ with the Commander and Senior EOC Team Leader, there was confusion for approximately 15 minutes as to why D2-Puff™ recommended exit shelter for NECD when the EOC display view showed a plume over NECD. The Senior EOC Team Leader then recalled the distinction between AEGL and concentration views, noting that the former corresponded to the final time step and was not appropriate for estimating exit shelter times.

Despite incorrectly defining the source term and time, the PARs associated with the initial D2-Puff™ run (NECD003) were correct. However, for subsequently sent runs, (e.g., NECD009, NECD019, NECD046) source term errors resulted in significant discrepancies in AEGL-2 affected zones. For example, Run NECD019, with the correct source term and time, would have identified NECD, Reserve, Liberty, Vermillion East, Vermillion West, Eugene East, Eugene West, Helt East, Helt West as affected AEGL-2 Zones, rather than only NECD, Vermillion East and Vermillion West, which were the affected zones using the incorrect source term and time.

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

Recommendation: Provide additional training and opportunities for practice, with respect to understanding D2-Puff™ model outputs, for all HAs and decision makers. Two HAs should be dedicated to the hazard assessment function. Rearrange the EOC staff organizational procedures so that other staff will be asked miscellaneous questions. The RTAP coordinator should sit adjacent to the HA for coordination.

Status of Previous Findings

❖ **Finding Requiring Corrective Action: NE05.2.1**

Subject: Planning and Coordinating RTAP Placement

Resolved: No

New Finding Number NE06.2.1

❖ **Finding Requiring Corrective Action: NE05.2.2**

Subject: Hazard Analysis Modeling – Accident Site Location

Resolved: Yes

❖ **Finding Requiring Corrective Action: NE05.2.3**

Subject: Hazard Analysis Modeling Concepts

Resolved: Yes

EMERGENCY RESPONSE OUTCOME 3 – EMERGENCY MANAGEMENT

The EOC achieved a full operational status quickly and maintained this level of effort for the duration of the response. Direction and control of response activities were established by the Initial Response Force (IRF); activities of responders were coordinated. Command and control for the response was established; however, the flow of accurate information to the key decision makers was not as sufficient as desired. Not all data on the status board was accurate or up-to-date; this could contribute to less than optimal decisions. Depot response assets were mobilized; the Army chain of command was informed that the IRF was activated. The Installation Commander, as the Federal On-Scene Coordinator (FOOSC), discharged Department of Defense obligations under the National Contingency Plan, except that there was no accurate record of the public address system announcements. Appropriate installation support was not always provided for protecting the on-post population inside the predicted hazard area until all personnel were accounted for and safe. The next-of-kin of ill, injured, and exposed persons were notified promptly, and their immediate needs were supported. Information about the victims or their next-of-kin was not reported or released unless authorized. Sufficient equipment, vehicles and supplies are available to control and mitigate the release and to perform related support tasks.

Strength

Subject: Radio Communications

Discussion: The radio discipline was extraordinary. Radio operators used the method to listen and repeat back messages to ensure completeness and accuracy. No matter how hectic the situation, they focused completely on the task at hand, communicating clearly and distinctly. As a result the chance for errors was minimized.

Reference: DA PAM 50-6, "Chemical Accident or Incident Response and Assistance (CAIRA) Operations", March 26, 2003, page 20, paragraph 3-4c(2)

Recommendation: Continue the practice and train new personnel on it as they come on board.

Observation

Subject: NECDF Protective Posture

Discussion: Personnel at the Newport Chemical Disposal Facility (NECDF) were told to don their masks and SIP as a protective measure at 0909. At 0933 the NECDF Control Room (CON) announced via its internal public address system that all NECDF personnel should unmask but remain sheltered. At 0942, employees were told they could return to work. However, personnel at the site should have remained masked, as well as sheltered, until released by the NECDF EOC. The Plant Shift Manager made the decision to unmask without coordinating with, and receiving permission from, crisis managers in the EOC. Casualties would likely have occurred had this action been taken during an actual chemical accident response.

Reference: "NECDF CAIRA Plan", October 1, 1991, Revised: October 31, 2005, page A-2-1, paragraph 4a(1) and page G-2, paragraph 6d.

Recommendation: The protective posture at NECDF must remain under the direct control of the NECDF EOC.

Observation

Subject: Information Flow

Discussion: Critical information from various sources was not passed in a timely manner to the senior decision makers. Furthermore, there was no process in place that ensured that each functional area would brief senior decision makers in the EOC as to the what, where, when, and how their areas were responding or the impact of their actions.

For example, downwind hazard changes were not communicated within the EOC when they occurred. This prevented decision makers from considering how to react to the changes and resulted in several responders unknowingly being in a downwind hazard area without being relocated to a safe area. Furthermore, the Field Command Post Officer (FCPO) was never advised that he was in a hazardous location. Additionally, the JIC Team located in Building 717A was released to leave the installation prior to the SIP order being lifted for that area. The lack of information flow resulted in actions being taken that may have caused exposure of personnel.

Recommendation: All pertinent information that could be helpful in making critical decisions should be given quickly to appropriate decision makers in order to properly manage the response to the accident. This information also should be considered for inclusion in EOC updates.

Observation

Subject: EOC Status Board

Discussion: The NECD EOC status board was not completely accurate. Examples included: times when events occurred were not listed consistently for each event, three chemically exposed personnel were not listed as “Injured”, and the number of TCs that fell off the truck at the accident site was not updated properly when more accurate information was received. Guidelines for specific responsibilities and procedures for accurate status board maintenance did not exist. Inaccurate information can cause misunderstanding by personnel trying to glean information from the board.

Reference: “Chemical Accident/Incident Response And Assistance (CAIRA) Plan, October 1, 1991, Revised: October 31, 2005,” page A-2-7, paragraph 5b(10); page A-2-8, paragraph 5e(6); page A-2-12, paragraph 5o(6); page A-3-2, paragraph 5a(16).

Recommendation: The status board can be a valuable tool for viewing the response at a glance only if it is maintained with accurate information. Therefore, EOC personnel must be attentive to updating it as appropriate. Ensure the information on the status board is accurate; assign clear responsibility and develop procedures for doing so. Demonstrate proper, timely, accurate status board information on the next quarterly CAIRA.

Observation

Subject: Public Address System Records

Discussion: A public address system is used to communicate the on-post PAD to occupied facilities on NECD (except the NECDF). Of note, the public address system at the Tennessee Valley Authority (TVA) site is recognized as unreliable; therefore, a phone call is made to TVA to ensure that critical messages are received. All phone and

radio transmissions are recorded to support the required administrative record. However, public address system transmissions were neither tape recorded nor written in the EOC log. They should be recorded by some manner to support the National Contingency Plan requirement for the establishment by the Installation Commander (as the FOSC) of an administrative record of response actions after a reportable event. A review of all available hand-written notes revealed only one document that may have related to public address announcements – a note indicating that SIP had been lifted at 1012. In fact, the public address announcement to lift SIP at Building 7700 and all shops occurred at 0957. Failure to follow regulatory requirements could adversely affect post-accident review and possible litigation.

Reference: Part 300 – National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan – NCP)”, September 15, 1994, paragraph 300.800.; DA PAM 50-6, “Chemical Accident or Incident Response and Assistance (CAIRA) Operations,” March 26, 2003, page 23, paragraph 3-5

Recommendation: Documentation of the public address system must be made. Consider either recording the public address system announcements or, as a minimum, public address announcements must be entered into the EOC log. This should be demonstrated on the next quarterly CAIRA exercise. Also, consider better maintaining the public address system in TVA to make it reliable. Alternate systems could be considered, such as the Indoor Alert System.

Status of Previous Finding

❖ **Finding Requiring Corrective Action: NE05.3.1**

Subject: Heat Stress Control

Resolved: Yes.

EMERGENCY RESPONSE OUTCOME 4 – CAI HAZARD MITIGATION

EOC

Conditions at the accident scene were recorded; records that documented the decisions and operations associated with the response were secured and preserved.

Field

Prompt and accurate immediate reports were made from the accident scene. The security cordon was established and enforced. Except as noted, the workers in and around the Chemical Limited Area (CLA) were accounted for and evacuated safely. Records that documented the decisions and operations associated with the response were secured and preserved. Activities of responders were properly coordinated to ensure maximum efficiency of response operations. Emergency responders were properly prepared and ready for employment. The fire at the

accident scene was not fought but burned itself out. The release was mitigated to a large degree by plugging and decontaminating the leaking container, and by covering areas and equipment where neat agent might remain pending subsequent remediation and removal.

Observation

Subject: Placement of the Mini-Hotline

Discussion: The Mini-Hotline, set up close to the work site and established as part of the pre-operational procedures, was located behind the transport vehicle in front of the igloo and within 50 meters of the operation. When the accident occurred, the Mini-Hotline was then too close to the accident. The work crew was processed through the Mini-Hotline following the accident, with the last person departing the area at 0956, 54 minutes after the accident.

The ground truth was that while the crew was present, the airborne concentration at the Mini-Hotline during the fire was immediately dangerous to life and health (IDLH), but there was no significant aerosol deposition. After the fire burned out at 0943, the agent concentration remained at approximately 26 times the short-term exposure limit (STEL) while the crew was present.

After processing through the Mini-Hotline, and while still masked, the involved personnel remained in the vicinity awaiting the set up of the Mobile Personnel Decontamination Station upwind and outside the CLA.

Reference: DA PAM 385-61, "Toxic Chemical Agent Safety Standards," March 27, 2002, page 58, paragraph D-2a(2); page 20, paragraph 5-1g(5) and (6)

Recommendation: Continue to set up an operational decontamination area close to the work site. This decontamination area could contain step pans, bleach bottles, etc. This would allow setting up the Mini-Hotline further away from potential accident sites. The Mini-Hotline should have been moved further away from the source of the plume (transport vehicle) prior to processing personnel and declaring them clean. At a minimum, distance to the Mini-Hotline should be at least 50 meters from the accident site.

In the event of an accident during a normal operation, perform hasty decontamination at the site, using step pans containing bleach and water prior to using the Mini-Hotline. The pre-staging of the Mini-Hotline and positioning of decontamination equipment may be determined based on the operation performed on each specific day.

Observation

Subject: Personal Respiratory Protection

Discussion: The Safety representative at the work site made the initial report of the accident without first donning his mask. He should have masked immediately and then reported the accident. He unnecessarily risked potential exposure to hazardous vapors.

References: DA-PAM 385-61, "Toxic Chemical Safety Agent Safety Standards", March 27, 2002, page 14 figure 4-1 Appendix C and page 17, 4-6 e; DA PAM 50-6, "Chemical Accident or Incident Response and Assistance (CAIRA) Operations," March 26, 2003, page 43, 7-2, paragraph c(1)

Recommendation: All personnel should protect themselves immediately in accordance with personal protection procedures stipulated in the guidance. Demonstrate proper respiratory protection after the next quarterly CAIRA.

Observation

Subject: Accident Site Evacuation

Discussion: The near real time (NRT) monitor operator in the monitoring shack at the igloo did not leave the shack until 40 minutes after the accident despite being close to the fire and leaking agent. The operator did not contact the site crew for personnel accountability or assist the crew with the injured or with Mini-Hotline operations. The operator contacted the monitoring organization coordinator for accountability.

The NRT monitoring operator was not considered part of the site operating crew and followed a separate reporting format. This denied the Mini-Hotline crew a helper and increased the potential for the NRT operator to have agent symptoms without assistance.

Reference: DA PAM 50-6, "Chemical Accident or Incident Response and Assistance (CAIRA) Operations," March 26, 2003, page 19, paragraph 3-4b(1)(a), and 7-2a; and DA PAM-R 385-61, "Toxic Chemical Safety Agent Safety Standards", March 27, 2002, page 22 paragraph 6.1 and page 29, paragraph 7-3g.

Recommendation: NECD procedures and training for the operations crew and monitoring personnel should include direction for both the operating crew and the monitoring operator to immediately contact each other in case of emergency. All site personnel should have immediately accounted for each other, assisted with the injured and Mini-Hotline operations, performed safety monitoring of each other, and evacuated upwind. The monitoring operator should then join the crew at the Mini-Hotline for personnel accountability, safety monitoring, assistance with Mini-Hotline operation, and eventual evacuation.

EMERGENCY RESPONSE OUTCOME 5 – PROTECTION

EOC

Accurate recommendations for the CENL and PARs and PADs were not always provided to the IRFC (*See ERO 2*). Recommendations to adjust or cancel CENLs, PARs and PADs were made. The IRFC made the PAD for the post and announced the decision for implementation. All persons initially in the predicted hazard area were instructed on protective actions within eight minutes of the PAD. At risk post population was sheltered. Sufficient transport vehicles and drivers were available where and when needed to evacuate all or part of the post population.

Field

Staffed traffic control points (TCP) and unstaffed barricades were in place in time to prevent access to hazardous areas. Contaminated protective clothing was prevented from leaving the accident scene. Personnel in the clean area were protected from contamination. Tools and equipment used inside the contamination control line were prevented from leaving the accident site.

Strength

Subject: Unique Hotline Setup

Discussion: NECD Hotline operations were conducted with new equipment. The new Mobile Personnel Decontamination Trailer (MPDT[II]) and the use of a smaller enclosed trailer provided safer and more efficient operations. The smaller trailer was used for confirmation of individual personnel decontamination. The use of this new equipment allows for the Hotline to be operated in a smaller footprint. This setup uses a unique Hotline formation from the typical straight line hot side/cold side to an “L” shaped hot side/cold side line. The line separates the known/suspected contaminated personnel from the probably uncontaminated personnel. This allows faster processing of personnel. This unique operation can be used only for VX chemical agent operations because of the persistency of the agent.

Observation

Subject: Protection of On-Post General Population

Discussion: Personnel in the shops area were directed to SIP at 0906; personnel in Building 7700 were instructed to SIP at 0937. The following issues related to this protective action were noted:

1. The D2-Puff™ model prediction indicated agent concentrations that were high enough (i.e., well over IDLH) so that SIP, even if properly taken, would not have offered adequate protection to their personnel to avoid significant agent exposure. Alternative means of protection were not considered (e.g., evacuate, mask and evacuate,

SIP and mask). Three personnel in Building 717A showed (simulated) signs of agent despite being sheltered-in-place.

2. Personnel in some locations (e.g., Buildings 717A and 7700) did not properly set up (e.g., shut off HVAC, seal doors and windows) or maintain the integrity of their shelter (e.g., keep doors closed).

Reference: DA PAM 385-61, "Toxic Chemical Agent Safety Standards," March 27, 2002, page 4, paragraph 2-6a; Department of the Army, Office of the Assistant Secretary Installations and Environment, Memorandum, Subject: "Implementation Guidance Policy for New Airborne Exposures Limits for GB, GA, GD, GF, VX, H, HD, and HT, Appendix A," June 18, 2004, page 29 of 30, paragraph 5-3e(3); and NECD CAIRA Plan, October 1, 1991, Revised: October 31, 2005, Appendix G, page G-2, paragraph 6c and d

Recommendation: Crisis managers must consider all available protective measures, not just SIP. In addition, crisis managers should direct personnel sheltered-in-place to use available respiratory protection while sheltering to enhance protection. Guidance and training should be provided to all personnel on effectively taking and maintaining SIP.

Status of Previous Finding

❖ **Finding Requiring Corrective Action: NE05.5.1**

Subject: Concept for Deciding When to End Shelter-in-Place

Resolved: Yes

EMERGENCY RESPONSE OUTCOME 6 – VICTIM CARE

EOC

Patient tracking in the EOC was exceptional. The Commander exhibited appropriate concern for the injured workers, and gave this matter the highest priority. The IRF Commander was satisfied the patients' identities were confirmed, that their medical needs were taken care of, and that accurate information was available to notify patients' families. No patient's identity or information was mistakenly released in reports or news releases.

Field

Victims were saved from additional trauma, injury, and agent exposure. The crew and victims immediately evacuated the accident site upwind. Appropriate life-saving self aid and first aid were accomplished. Two injured personnel were decontaminated and treated appropriately at the Mini-Hotline, then transported to the depot medical center in time to prevent death or permanent incapacitation. Another worker up wind in the CLA, experiencing (simulated) chest

pain and shortness of breath, was rushed into the ambulance without chemical monitoring or decontamination. The medical facility was prepared for the arrival and treatment of patients. Patients were given appropriate medical treatment consistent with their injuries, illness, or extent of exposure. This patient's decontamination and personnel protective equipment (PPE) removal was accomplished at the medical center. All three patients were stabilized and promptly transferred to off-post medical treatment facilities. The IRF Commander had current information about the location and status of all victims of injury or agent exposure.

Observation

Subject: Movement of Patients

Discussion: Two chemical workers attempted to lift a large victim from the ground to move him across the Mini-Hotline. Two attempts to lift the patient were made using poor body mechanics before additional personnel came to assist. Improper handling of a victim can result in injury to the rescuers as well as the victim. Heavy victims require more personnel to safely lift victims, proper lifting of patients and simple body mechanics will reduce occupational injuries.

The chemical workers retrieved a field litter without litter straps from their crew truck. The crewmembers did not know how to properly lock the litter open, and litter straps were not available. This caused a slight delay while a backboard was obtained from an ambulance.

Reference: FM 8-10-6, "Medical Evacuation in the Theater of Operations, Tactics, Techniques, and Procedures," Chapter 9, page 9-1, paragraph 9-2,a. and Annex J; DA PAM 50-6, "Chemical Accident or Incident Response and Assistance (CAIRA) Operations," March 26, 2003, page 39, paragraph 6-3a.(3) and pages 41-42 paragraph 6-5.

Recommendation: Personnel should be trained on the correct use of all equipment. Litter straps are a component of a field litter and should be with the litter at all times. Train personnel on proper lifting body mechanics and the need to request assistance when the load exceeds their capabilities. Demonstrate the effectiveness of this procedure at the next quarterly CAIRA.

Observation

Subject: Patient Decontamination

Discussion: A decontamination team member donned PPE inside the rescue van. While exiting the vehicle to assist decontamination personnel, he collapsed with (simulated) shortness of breath and severe chest pain. The patient never crossed the pre-established Mini-Hotline and was moved directly to the ambulance. Partial removal of PPE was necessary to start medical care.

After arrival at the medical center, the patient was moved directly into the sniffing vestibule because the paramedic told the medical staff the patient was clean. The patient was not decontaminated or checked for contamination in the field. The chemical agent monitor at the medical center detected VX and the patient was moved back out onto the apron and then into the decontamination chamber. Cardiac arrest occurred during decontamination. Cardiac defibrillation was conducted. After decontamination, the patient was moved back into the sniffer vestibule. PPE should have been completely removed prior to leaving the accident area or removed en route. When the individual went into arrest, he should have been moved out onto the apron and treated definitively before decontamination continued.

Reference: DA PAM 50-6, "Chemical Accident or Incident Response and Assistance (CAIRA) Operations," March 26, 2003, page 41, paragraph 6-5b(1).

Recommendation: All depot personnel need to train to the same standard: hasty decontamination: all PPE removed, checked for gross contamination, and treatment regardless of contamination should be accomplished prior to arrival at the medical center. Demonstrate this procedure at the next quarterly CAIRA.

Status of Previous Finding

❖ **Finding Requiring Corrective Action: NE05.6.1**

Subject: Self Aid, Buddy Aid and Victim Evacuation

Resolved: Yes

EMERGENCY RESPONSE OUTCOME 7 – EMERGENCY PUBLIC INFORMATION

The news media were informed about the event and the response as soon as possible and to the full extent that credible information from within the installation was available. The first news released was issued at 0923. The public affairs staff at NECD acted quickly to establish and maintain information flow to the Joint Information System (JIS). Army PAO staffs at all levels had the latest confirmed information about the event, the response, and associated public health and safety information. The NECD Public Affairs Officer (PAO) coordinated with the NECD staff to ensure that all were fully informed of ongoing media issues. After evaluating the situation, the NECD Commander made a timely decision to activate the JIC. The JIC was made operational as soon as possible.

Strength

Subject: Effective NECD Staff/Depot PAO Information System

Discussion: The Newport Chemical Depot EOC, Mason & Hanger Corporation personnel and the depot PAO quickly established and maintained an effective flow of information within the JIS. The depot PAO quickly identified that the injury of the depot telephone operator was an impediment to efficient disposition of media and public inquiries and quickly resolved the issue. The PAO support staff did an excellent job tracking down information, answering news media inquiries and running interference for the PAO to enable her to concentrate on occasional erupting issues the required personal attention. The EOC staff and other depot staff routinely updated the PAO with essential elements of information, status updates and clarifications, or to consult with her for recommendations regarding public communications issues.

This unrestrained sharing of information provided the depot PAO, and subsequently the overall JIS, with information critical for public safety and assurance.

EMERGENCY RESPONSE OUTCOME 8 – REMEDIATION AND RECOVERY

Access by non-authorized personnel to the restricted area was denied by road blocks and TCPs. Procedures for environmental assessment and cleanup were being planned when the exercise ended. Requirements and priorities were established; resources were being identified to perform recovery phase monitoring and sampling. A collateral investigation that might determine causation, assess liability and prevent similar future occurrences was not begun before the end of the exercise.

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VERMILLION COUNTY, INDIANA

EMERGENCY RESPONSE OUTCOME 1 – PREVENTION AND PREPAREDNESS

Vermillion County receives a daily work plan from the Newport Chemical Depot (NECD) through WebPuff™. The county has Emergency Plans in place in the event of a chemical accident at NECD. The current plan is dated April 2005.

Vermillion County participates in NECD's quarterly Chemical Accident/Incident Response and Assistance (CAIRA) exercises through telephonic notification. The county also participates in the annual Chemical Stockpile Emergency Preparedness Program (CSEPP) exercise. The county personnel regularly review areas for improvement and then take these issues to the exercise planning team for inclusion in the next exercise.

Vermillion County has an active education program that provides required training to county personnel. Each fire department is responsible for training their own personnel and maintains these records. Additionally, the Indiana Department of Homeland Security maintains "by name" records for all state and county emergency management agency (EMA) personnel involved in CSEPP. These records are updated quarterly.

The county has an active public outreach program. This is accomplished through the county CSEPP calendar and other printed public information publications. The county also distributes information at county fairs, the public outreach office, and presentations to the public schools and at senior citizen day programs.

The county conducts daily siren checks of the outdoor warning system (sirens) and weekly tests of the Indoor Alert System (IAS) through the National Weather Service (NWS). The county also checks radio systems and land lines with the depot and other EMA agencies.

EMERGENCY RESPONSE OUTCOME 2 – EMERGENCY ASSESSMENT

The Vermillion County EOC received notification of a community level event at NECD via the Newport Alert Notification System (NANS). The essential elements for the chemical event notification level (CENL) and protective action recommendation (PAR) were provided during the call. The information provided during the notification from NECD followed established procedures.

Vermillion County officials requested response phase monitoring and sampling with NECD.

The Vermillion County Emergency Operation Center (EOC) received notification through the Newport Alert Notification System (NANS) at 0904 that a CENL III (post only) event occurred at the Newport Chemical Depot. The event was described as a ton container of VX falling from a truck. Before the call was completed, at 0906 the event category was changed by NECD

to a Category IV (Community Emergency). The Protective Action Recommendation (PAR) was to shelter-in-place in Vermillion Township East. The county emergency manager agreed with the NECD PAR and made a Protective Action Decision (PAD) accordingly. He also made a PAD to shelter-in-place in Vermillion Township West, Eugene Township East, and Helt Township South because of wind direction fluctuations. The call was completed at 0908 after a roll-call of participants.

Observation

Subject: Initial Alert and Notification

Discussion: Initial alert and notification of the population in Vermillion East was not accomplished within the expected eight minutes from the time a decision was made that the public was in danger. The initial alerting of the public is to be initiated within two minutes and completed within five minutes of the time that a decision has been made that the public is in danger. Initial notification is to start immediately after the completion of the initial alerting and should be completed within three additional minutes. The activation of the sirens was two minutes late, and the completion of the notification to the public was one minute late.

Reference: Planning Guidance for the CSEPP, 17 May, 1996, appendix F, Section F.1

Recommendation: Improvement in the alert and notification process should be made to ensure alert and notification is timely.

EMERGENCY RESPONSE OUTCOME 3 – EMERGENCY MANAGEMENT

The Emergency Management (EM) Director was notified at 0908. Immediate verification was requested of the accident. Verification was accomplished via commercial phone service at 0910. The initial NECD PAR recommended shelter-in-place (SIP) for East Vermillion Township only. Clarification was provided during the call that the PAR included both East and West Vermillion Townships. Initial wind direction contained in the NANS notification and the corresponding WebPuff™ compilation were as much as 45 degrees different. Based on the apparent wind shift, the EM Director, without hesitation, directed the county to SIP for East and West Vermillion Townships, Eugene and Helt Townships. The EM Director notified county staff of the EOC's activation at 0910, and the EM Director immediately called the County Commissioner requesting and receiving authorization to declare a County Emergency. The entire county was alerted via the siren warning system at 0912. Confirmation of the siren activation lasted for three minutes. The Indiana State EOC was notified by the county at 0912. The County Sheriff simulated activation of the indoor alert system (IAS) Radios at 0916. In addition to normal NANS, commercial telephone, fax and 800 MHz radio communications, the county activated multiple Radio Amateur Civil Emergency Service (RACES) resources internal as well as external to the EOC.

The EOC was declared fully operational at 0916. An alternate Coroner participated in the exercise. The EM Director briefed the EOC staff on the status of the accident and current response activities at regular intervals. The EM Director exercised command and control. He communicated with NECD, Fountain and Parke County EM Directors.

Information about ongoing events and decisions in the EOC were posted on a status board with grease pencil. There were some delays in the prompt posting of data. The presence of new computer systems in the EOC allowed Law, Fire, American Red Cross, and Health representatives to use computerized WebPuff™ formatted message and event logs at their workstations. These teams made extensive use of the computerized support, but the EOC automation support appeared to lack the necessary technical knowledge to support the elements of the EOC. Support was provided by a knowledgeable member of the Law Enforcement team who willingly assisted, even showing the County automation manager features of WebPuff™. There was no centralized electronic posting of logs.

The EOC made extensive use of their RACES resources. The first communications with the Joint Information Center (JIC) was made between RACES operators and constituted the official notification of the JIC opening. The RACES team established and maintained communications with the counties' mobile EOC thus reducing the communications load on the 800 MHz radio system. Of note is that RACES established communications between the EOC and South Vermillion High School. This was worked out with the cooperation of the school administration. Additionally, RACES had operators in Terre Haute and Dana.

County fire and law enforcement elements made wise use of IDHS. Requests were forwarded to IDHS for additional security resources (National Guard) and decontamination team personnel and equipment by 1000. IDHS responded promptly regarding the request for National Guard troops by assigning an entire battalion for security. However, the communication status regarding the first request for an additional decontamination team was not provided by IDHS. The county fire element queried IDHS 55 minutes later for a status update; it took another 10 for IDHS to say that Task Force (TF) 7 was en route and should arrive around 1130. A second decontamination team and resources were requested at 1223 to ensure that NECD personnel and equipment leaving the Depot were not contaminated. County law enforcement and fire representatives could not find a policy or procedures in the EOP covering the departure of personnel and equipment from NECD after a chemical agent release.

The hospital liaison located at the Vermillion County EOC provided excellent coverage and tracking of all patients transferred to medical facilities within the county. The Deputy EM Director was used as such in a limited capacity and functioned primarily as the automation technician. Security of the EOC was maintained at all times.

Observation

Subject: WebPuff™ Knowledge

Discussion: The County received the new version of WebPuff™ approximately four weeks prior to the exercise and the automation staff did not appear to be fully knowledgeable of the capabilities of the updated application. The presence of a member of the law enforcement team was very knowledgeable and supported the EOC staff on the logging and printing capabilities of the new version. The EOC Automation Manager was unsure of many of the new enhanced WebPuff™ plume abilities and made extensive use of the responsible support contractor help desk staff.

Recommendation: The automation staff should not only download the NECD work plan daily, but also run the plume model. This will provide greater familiarization with WebPuff™ for the staff by providing a potential scenario in advance of a possible event.. The automation staff also should use the WebPuff™ logging functions daily to better understand the capabilities of the application so they can support EOC staff.

EMERGENCY RESPONSE OUTCOME 4 – CAI HAZARD MITIGATION

Not Applicable.

EMERGENCY RESPONSE OUTCOME 5 – PROTECTION

EOC

The Vermillion County EOC was activated at 0911. IDHS was notified at 0912. All decisions regarding the PAD and notification were announced to the Vermillion County EOC staff. Sirens were activated at 0912 and the indoor alert system (IAS) was activated at 0916. A test message was utilized for the sirens and IAS. The logistics officer confirmed that the actual message would be, “Warning this is an actual emergency. Shelter-in-place immediately. There has been an accident at the NECD. Shelter immediately.” The message also stated, “Close all doors, windows, vents and turn off air conditioners, furnaces, and fans. Seal all windows and doors with plastic and tape and avoid the outside air as much as possible. Remain inside until further notice. Tune to your local radio and television stations for more information.”

Notification of special population was accomplished through individual telephone calls. Reactivation of the indoor and outdoor warning systems with the test message was simulated at 12 minute intervals. EAS messages were prepared based upon pre-scripted protective action message. Five EAS messages were developed and disseminated. Two of the EAS messages were actually news releases.

Observation

Subject: EOC Notification Procedures

Discussion: The Cayuga Clinic was notified by the Vermillion County EOC that a “fire was burning 44 miles away and that they needed to shelter in place” at 0940. The clinic never received the notice that was sent out at 1015 from the EOC to exit shelter-in-place.

If the clinic is not notified to exit shelter-in-place, excessive discomfort will ensue for the clinic staff and their patients. The selected room for sheltering at the Cayuga clinic is appropriate. The staff expects no more than five to eight people in their shelter room. With the heating, ventilation and air conditioning turned off, this room will become stifling quite rapidly.

Recommendation: The county EOC procedures should be reviewed for notification of PADs to the Cayuga Clinic. Notification procedures should include exiting shelter information and/or evacuation information.

Three traffic control points (TCP) were established around Clinton. The TCP at Highway 63 and North Main Street was staffed by the Indiana State Police. Two more TCPs were simulated by the Vermillion County Sheriffs Department: Highway 63 and US 36, and State Road 234 and Highway 36.

Vermillion County Courthouse

The Vermillion County Courthouse in Newport, IN, is approximately three miles northeast of NECD. Newport has a population of about 800 residents. The courthouse is a three-story masonry building which housed several governmental offices. The courtroom is located on the third floor and is designed to operate as a shelter in the event of a community-level accident/incident (CAI). This room is large enough to shelter all of the occupants working in the facility as well as members of the general public who are there doing business. The court offices are equipped with the HVAC control unit that closes all air intakes. This unit includes 36 green light indicators confirming the system is functioning properly. There are also three large floor fans that provide additional air movement within the courtroom. IASs are positioned throughout the facility.

The facility policy is to lock down the courthouse within four minutes from the time of initial notification. There are Floor Captains on each floor, and the basement is cleared by the custodian. People inside the courthouse are given the option to vacate the building or to shelter in place in the third floor court room. This policy is posted throughout the facility.

At 0940, the Chief Probation Officer/Safety Officer received notification from the Vermillion County Sheriff’s Office that there was a CAI at the Newport Chemical Depot and instructed the courthouse to shelter in place. He initiated a building wide page through the phone system and immediately proceeded to the first floor. Along the way he instructed three citizens in the hall on the third floor that an emergency had been declared and they needed either to leave the building or to take shelter in the court room. On the second floor, he spoke with the floor captain who directed people to the third floor. On the first floor, he instructed the custodian to clear the bathrooms and the basement. Notifications of people on all three floors were completed at 0942. Two individuals entered the building at 0943 and were directed to the third floor.

At 0944, the

basement was confirmed cleared, all entry/exits were locked and the remaining individuals moved to the third floor court room and secured the doors. One of the secretaries in the court room office had turned on the HVAC control unit and turned on the portable fans in the court room at 0943. At 0945, everyone had entered the courtroom and the doors were secured.

The outdoor warning system could not be heard in the courthouse and the IAS was simulated. This confused personnel entering the courthouse. Discussion with the Chief Probation Officer and EOC personnel confirmed that the outdoor warning system is not intended for internal courthouse notification and the IAS would be activated and would provide proper instruction in a real event.

Observation

Subject: VC Courthouse SIP

Discussion: The capability to implement the shelter process depends on the presence of a knowledgeable operator. The current policy is written to instruct the occupants of the building and the general public what to do in the event of a CAI, but does not address the specific responsibilities of the Safety Officer or who is in charge of shelter in place operations.

Recommendations: Develop and document an internal policy identifying the actions needing to take place and the sequence of those actions. Identify backup staff for the Safety Officer responsibilities and ensure their familiarity with these duties.

Ernie Pyle School

At 0937, the Ernie Pyle Elementary School principal was notified by phone of a chemical emergency at NECD. The Vermillion County EOC instructed the school to shelter-in-place. The principal told all students and staff to shelter-in-place. All students and staff proceeded to the designated areas, while the principal and custodian checked to ensure all outside doors were locked. The school was swept to make sure no students were outside the secured area. At 0944, all students had been accounted for and the enhanced filtration system was activated. All green lights indicated that there was no breach in the system. The principal attempted to contact the Superintendent from the shelter by the 800MHz radio to inform the Superintendent they had sheltered-in-place. The communication in the designated area could not be made with the radio; however, there was a telephone in the shelter area that could have been used. Teachers demonstrated activities that would be done with the children until the emergency was over.

Snacks, water, restroom facilities, and medications were in the shelter area. All medical records were kept in the computer system and were accessible in the designated area. The EOC had supplied the school with shelter-in-place bags for each classroom that included: first aid kits, flashlights, tape and blankets. As a backup, the principal also keeps the plastic and duct tape that was used before the school's enhanced filtration system was installed.

Cayuga Clinic

The Cayuga Clinic staff demonstrated sheltering-in-place by turning off the heating, ventilation and air conditioning system, performing a room-by-room sweep of the clinic, posting signs on the doors and correctly placing plastic and tape on doors, windows, outlets and vents. These procedures were completed in less than 15 minutes by three staff members.

Vermillion County Jail

The Vermillion County Sheriff's Department is responsible for the operation of the Vermillion County 24-hour warning point and 911 emergency communications. This function is carried out in the Vermillion County Jail's control room. Because of the close proximity of the jail to NECD, the jail is equipped with a fully over-pressured collective protection system that is monitored and operated from the jail control room.

At 0904, the 911 dispatcher was alerted via the NANS of a CENL IV at NECD. The dispatch center also received a faxed a copy of the NANS notification form from NECD.

According to a jail employee, the collective protection system should be activated when NECD notifies the jail of a chemical release. However, jail employees were unable to produce any written documentation or procedures supporting their actions. Notification of a chemical release occurred at 0908, but the collective protection system was not activated until 0924 when the Sheriff instructed a jail employee to activate the system.

Last year the dispatcher notified the lead jailor of the emergency and requested a lock down of the facility. Jail personnel were moved within the protection zone, doors were secured, and the collective protection system was successfully activated within two minutes. Similar activities were not observed this year.

Three outside door locks (the indoor recreation room, the lobby and the garage) malfunctioned last year and again this year. It was noted previously that these three locks are part of the jail security system and are electronically activated. Repair of these locks are not part of the collective protection system maintenance contract. The previous explanation was that the jail contractor was having problems finding replacement parts. Last year, jail staff verified that the doors were manually locked. This did not occur this year.

A red indicator light indicating low fuel for the generator was also observed. There should be more attention to detail and generator maintenance to make sure critical equipment remains in a constant state of readiness.

Finding Requiring Corrective Action VR06.5.1

Subject: Electronic Door Locks

Discussion: This year, the jail staff did not verify that the doors were manually locked, as they had last year. The failure to confirm the doors were closed potentially compromised the collective protection system. The lock malfunction on doors leading to

the recreation area, the lobby and the garage were noted as an Observation in the 2004 and 2005 CSEPP exercise. Last year, monthly collective protection maintenance records were analyzed and it was determined that the doors were reported out of order on September 30, 2004.

Reference: “Planning Guidance for the Chemical Stockpile Emergency Preparedness Program”, May 17, 1996. Appendix E; “Planning Guidelines for Protective Actions and Responses for the Chemical Stockpile Emergency Preparedness Program”, Section E.4.

Recommendation: The malfunctioning door locks need to be repaired or replaced as soon as possible.

Finding Requiring Corrective Action VR06.5.2

Subject: Activation of Collective Protection System

Discussion: Jail employees on duty seemed unfamiliar with or unaware of procedures that are required to implement the collective protection system. Approximately 16 minutes after notification of a release at NECD the system was activated and only after the sheriff gave the order. The use of checklists and documentation during the exercise was not observed. The Vermillion County Jail is across the highway from NECD. If an actual release were to occur, a 16-minute lapse could significantly affect the life and safety of persons at the jail.

Reference: “Planning Guidance for the Chemical Stockpile Emergency Preparedness Program”, May 17, 1996, Section 8.9, pages 23-26

Recommendation: Policy and procedure need to be readily accessible and understood by all jail staff. Procedures to facilitate execution of required activities should be developed. Employees need to receive training or refresher training on procedures required to protect institutional population and jail staff.

Finding Requiring Corrective Action VR06.5.3

Subject: Familiarity with Policy and Procedures

Discussion: Jail staff did not demonstrate the ability to be a 24-hour warning point for the Newport Community because the event occurred during normal operating hours. By policy, these duties were carried out in the Vermillion County EOC.

Even though the jail staff was able to articulate this critical responsibility, they were unable to produce critical documents such as the PAR/PAD matrix. More important, the lack of policy and procedures, and the failure to use checklists and document activities, impair the ability of the jail staff to consistently and effectively protect the off-post community during a CSEPP event if it were to occur outside normal operating hours.

The failure of Vermillion County jail staff to execute these requirements potentially places the entire Newport Community at risk.

Reference: “Planning Guidance for the Chemical Emergency Preparedness Program”, May 17, 1996. Appendix F, page F-4

Recommendation: Written procedures need to be readily accessible and understood by all jail staff. Checklists to facilitate execution of required activities should be developed and posted where they are readily available. Employees need to receive training or refresher training on activities required to protect the Newport Community.

EMERGENCY RESPONSE OUTCOME 6 – VICTIM CARE

EOC

Victim care activities in the EOC were successfully demonstrated by the fire coordinator and hospital coordinator. Victim care field activities were conducted at the West Central Community Hospital (WCCH), South Vermillion High School, the North Vermillion High School/Perrysville Fire Department, Vermillion Convalesce Center, and Heritage House. The WCCH representative in the EOC was in continuous radio/telephone contact with WCCH and provided excellent patient tracking.

The Vermillion County Coroner was interviewed and it was determined that there was a written plan that was several years old for the management of fatalities who were exposed to hazardous materials. The coroner said this plan needed to be updated. Furthermore, the coroner and staff have had limited involvement in chemical exercises and subsequent involvement in the Incident Command System. There was no training on the use of PPE or the management of the remains and belongings of decedents who are contaminated. No formal Coroner agreements with surrounding counties exist if situations merit mutual aid.

Strength

Subject: Community Teamwork

Discussion: Clinton Township Volunteer Fire Department performs decontamination for West Central Community Hospital. The Vermillion Convalescent Center and Heritage House have agreed to accept potential overflow of patients from WCCH. It is obvious that positive relationships exist and collaboration has occurred among these agencies.

Recommendation: WCCH and these other agencies should continue to train and exercise together to maintain this positive momentum within their community.

South Vermillion High School Decontamination Site (out of sequence)

Personnel from the Clinton City and Fairview Park fire departments were dispatched and set up a decontamination and screening site at South Vermillion High School (SVHS). Command and

control were well organized with an Incident Command System. An incident commander and a safety officer were designated and were clearly identifiable by appropriately-labeled reflective vests. Other key positions were established and identifiable using the same system. Personnel from different departments integrated and operated effectively as a team. While accountability for workers on the decontamination line was excellent, use of the departments' normal fire ground accountability system for all personnel arriving at the site would assist in overall resource management.

It took just over 30 minutes to set up the site. Water supply was adequate, with 2,650 gallons available from apparatus on scene and nearby hydrants. Additional units from Lyford were staged in Clinton. Physical setup of the decontamination area was done quickly; all personnel were aware of the tasks to be performed and were trained appropriately. A strong sense of urgency was evident and some tasks were hurried. Details, such as weights to secure tents, were overlooked. The need for mass decontamination was considered, and necessary equipment (a ladder truck with a water tank and pre-piped aerial master stream device) was available. If this is a part of the plan, it should be fully practiced. The establishment of the gross decontamination capability would provide the workers setting up the technical decontamination corridor with the knowledge that victims arriving prior to full setup of the decontamination line could be handled. This would allow them to perform final detail checks on their setup with the confidence that the time required would not adversely affect patient care.

Hot, warm, and cold zones were clearly delineated with flags; barrier tape was placed to control victim and responder access to the work. Cables and hoses were clearly labeled; different colored extension cords were used for specific purposes to allow easy identification. While cables and hoses were grouped for routing to avoid clutter, the overall routing should be looked at to eliminate potential trip hazards. This is especially essential in the area where workers in personal protective equipment (PPE) are operating because PPE wear reduces field and quality of vision. While workers were generally conscientious about remaining in their designated areas, some crossing of lines did occur. Safety officer(s) and supervisors should ensure that this does not occur. In addition, mock media personnel were allowed unrestricted access to the work area, possibly impeding workers and potentially endangering themselves. A public information officer should be tasked to control media access without impeding their ability to cover the story.

Personnel tasked to work in PPE were appropriately tracked and were medically screened before and after working in PPE. PPE was worn properly. Those wearing PPE participated in a minimum of other work prior to donning PPE. Processes for donning and doffing require improvement. Donning was not well coordinated and it was apparent that further practice was required when doffing. Review of best practices and incorporation of documented procedures into the operation would ensure that donning and doffing are conducted with the same care used for worker accountability.

The site handled six patients: four ambulatory with injuries, one non-ambulatory, and one asymptomatic. The victims were involved in a vehicle accident involving two trucks carrying hazardous material, a corrosive liquid and a pesticide respectively. Patients were handled and triaged appropriately. Some areas for improvement in patient care and safety were noted:

Trip hazards in the work area need to be controlled;

1. Workers' equipment should be secured so that it does not strike patients;
2. A rolling stretcher for movement of the non-ambulatory between decontamination stages would enhance patient safety and reduce the potential for responder injury and exhaustion;
3. Workers would benefit from additional practice in handling non-ambulatory patient; and
4. The decontamination line supervisor should ensure that both lines are being used efficiently; if there are no non-ambulatory, that line should be used for any backlog of ambulatory patients until it is needed for non-ambulatory patients.

Strength

Subject: Cold, Warm and Hot Zones

Discussion: There was visible improvement in the demarcation of the Cold, Warm and Hot Zones with the use of a colored flag system. Three colors of flags; red, yellow, and green were attached to wooden stakes, placed in traffic cones and positioned at the entrance to each zone.

Recommendation: The demarcation provided adequate notice to the responders within the decontamination zone. The continued use and practice should improve the recognition of these established areas and internal control of contaminates.

Observation

Subject: Decontamination Site Setup

Discussion: One of the two tent shelters assembled at the decontamination site reception area was blown over by the wind prior to the arrival of any victims. The setup team recovered the undamaged tent. The team devised a method to weigh down the tents by securing them together with duct tape and duct taping five gallon plastic buckets filled with water to the legs of the tents.

Recommendation: The securing of the tents to avoid them being overturned needs to be a planned activity. The securing of the tents to the surface or a weighting system (e.g., sandbags or filled buckets) should be routine. This would avoid damage to equipment and possible personnel injury to victims or responders.

Observation

Subject: Patient Tracking and Identification - Personal Belongings

Discussion: Although a more secure process was implemented from last year, it delayed the treatment of contaminated and injured victims. The handwritten completion of a form in two copies was time consuming. The first victim showing signs of contamination took

two to three minutes to complete the forms. This process delayed the processing of a victim with a compound fracture (presented in the form of moulage) that was unable to write with the broken arm. The suited Security Officer completed the form, delaying further processing of victims. The form that was provided to the victim was then processed through the decontamination line and would likely have been destroyed in the process. If presented with mass casualties, this process could delay decontamination and treatment for extended periods.

Recommendation: The use of a simple number system of identifying victim and their belongings needs research. The process must provide a receipt to the victim; the receipt must survive the decontamination process so that the victim may use it to reclaim belongings. Possible solutions might include rubber wristbands or water-proof markers.

Observation

Subject: Donning of PPE

Discussion: The initial preparation for the suiting of decontamination teams improved from the previous year. The selected responders were medically checked prior to entry. The first member was provided with a folding chair while donning of PPE. Members that were dressed later found the dressing area crowded and not all were able to be seated to prevent overexertion. One member stood to don the suit and stepped on the inner leg of the suit against the asphalt. Another member kneeled on the asphalt in PPE. This could breach the protective skin of the suits.

Recommendation: The site selection for the dressing area needs to provide adequate space for several members to dress at the same time. The location needs to be separated from any high traffic area to avoid congestion. Seating that is available needs to be pre-positioned to accommodate those donning suits and avoiding possible accidental falls or damage to the suit. A tarp or other protective covering over asphalt needs to be used, and responders should be trained not to kneel in PPE. Responders dressing out should be assisted by other workers not tasked to wear PPE.

Observation

Subject: Team Decontamination and Doffing

Discussion: When doffing PPE, there was no established routine for the disposition of the removed equipment. The first suit was placed into the barrel with the victims contaminated clothing. After that, suits were left on the ground outside of the shower stalls.

Recommendation: A routine operation for the doffing and the disposition of used equipment should be considered. The utilization of a container to store the used suits until they can be properly disposed of is essential to prevent cross contamination.

Observation

Subject: Decontamination of One Patient at a Time

Discussion: The line used for non-ambulatory patients was not being used. During this time frame, there were patients waiting to be processed. This caused a delay in decontamination and medical treatment to those particular patients.

Recommendation: Ambulatory patients could use the non-ambulatory side of the decontamination line while there is no active decontamination being done to such patients. This would expedite the decontamination and treatment of multiple patients.

Finding Requiring Corrective Action VR06.6.1

Subject: Site Safety and Control Plan - SVHS

Discussion: Decontamination team members were moving non-ambulatory patients from one set of rollers to another set of rollers while walking backwards. This could injure the decontamination team and/or the patient. Decontamination team members were tripping over tarps that were on the ground and at the entry and exits of the tents.

While processing a litter bound victim, the litter team had difficulty carrying the litter through the decontamination site. Several trip hazards (i.e.: AC power cords, open spray chemical decontamination retention ponds, enclosed decontamination shower stall) presented a safety concern.

Reference: 29 CFR 1910.120(q)(2) (directly or as included by reference under 40 CFR 311)

Recommendation: The use of a portable stretcher would allow the patient to be transferred from one set of rollers to another, i.e. from the decontamination tent to the medical treatment tent, or to the ambulance service without having to walk backwards and excessive lifting. The expansion of the processing area for litter bound victims should be considered. A gurney at the exit of the shower roller system would aid in safe handling and transfer between zones and would reduce work stress on the decontamination team. The procurement of long, wide shower tents to provide more working room for responders and patients in a mass casualty situation should be considered. The rerouting of cables needs to be researched to ensure a safe working environment.

North Vermillion High School EMS (Moved to Perrysville Fire Station) (out of sequence)

The Perrysville and Cayuga volunteer Fire Department demonstrated the operation of a decontamination and screening site at the Perrysville Fire Station in Vermillion County. There were no victims available and all play was simulated. The responders conducted operations in a professional manner and demonstrated the ability to appropriately decontaminate victims. At 1845 the Perrysville and Cayuga Volunteer Fire Department arrived, set up a command post, and

initiated the Incident Command System. The Incident Commander (IC) was identified, and assignments were made in a timely manner. The Safety Officer position was filled. Effective communications were maintained throughout the entire emergency. There were a total of 16 responders at the scene with two additional responders on an ambulance from Vermillion Emergency Medical Service (EMS). Each team member, including fire personnel and EMS personnel from both jurisdictions, clearly knew their assignment and were familiar with the equipment on scene.

Under the direction of the IC, decontamination was established with flowing hot water and was operational at 1927. A corridor was established to direct patients to the decontamination site. The fire personnel efficiently established a decontamination line. The hot, warm and cold zones were clearly identified. Safety was a priority. Clearly marked vests were used to designate key positions such as Incident Commander, Safety Officer and Medical Officer. Personnel working in the decontamination line were dressed out in standard CSEPP PPE. Entry blood pressures were taken and documented for those working in the decontamination line. One person was not allowed to don PPE because of an elevated blood pressure reading.

Continuous air monitoring was maintained with two new Multi-Rae™ IR monitors, and a roller system was in place and available for patients needing to be decontaminated on a backboard. Victim care operations were conducted using acceptable industry standards. The Perrysville and Cayuga volunteer Fire departments efficiently demonstrated the use of resources and displayed appropriate safety practices.

A lack of actual patients limited the demonstration of decontamination and medical processes. Since, the extent of play included a minimum number of five players to perform the role of contaminated individuals, team members served as the volunteer victims. Emergency medical resources on hand included one emergency medical technician (EMT)-paramedic, five EMT-Basics and five first responders from the Perrysville Volunteer Fire Department. Medical support consisted of an EMT providing medical pre-screening to personnel donning Level C PPE, and two EMTs in Level C PPE located at the decontamination station entrance to provide hot-side triage of patients. In addition, two EMT-Intermediates responded to the decontamination site with Vermillion County Emergency Medical Services ambulance Medic-13. The ambulance was staged in the cold zone, and ambulance personnel did not have PPE beyond standard medical precaution protection items.

Medical screening of PPE-donning decontamination personnel was limited to recording of blood pressure. The EMT performing this function did not know of a specific medical standard for exclusion but stated that persons with blood pressure readings exceeding 160/90 would be excluded from PPE activities. One prospective team member whose pre-screening pressure was 165/100 was barred from donning PPE. Individual team member blood pressure readings and time of screening were maintained on a visual reader board. These times are used as the basis for stay times. The accountability board included a laminated placard of acceptable PPE work/rest cycles based on ambient temperature.

While the lack of victims prevented the demonstration of triage activities, the two responders charged with pre-decontamination triage appropriately verbalized criteria that would cause them to designate a patient as immediate versus minimal during a chemical incident. The triage team staffed a screening station that included zip-seal plastic bags and markers with which to secure patient personal items, trash bags to hold discarded clothing, and red, yellow, green, and black arm bands to designate triage categories. The triage station also had orange armbands to designate the administration of Mark I Antidote Kits at this location. (The Perrysville Fire Department has no live Mark I Antidote Kits, but displayed four training injector kits. Cayuga Fire Department personnel advised that they have approximately 180 live Mark I Antidote Kits at their fire station). The decontamination team's equipment trailer includes a large placard designating the color of all armbands and their meanings. Patient belongings were not tracked.

The Medic-13 ambulance medical equipment included oxygen and oxygen administration devices, bag-valve-masks, intravenous fluid bags, start supplies and administration tubing sets, trauma treatment supplies and equipment, and 60 live Mark I Antidote Kits (expiration June 2007). The crew presented written protocols for use of the Mark I Antidote Kits from the medical program director physician at West Central Community Hospital. They knew appropriate chemical casualty triage and treatment. They specifically said that because they lacked PPE and because their unit was one of only four available ambulances for the county, they would not attempt to treat chemical casualties prior to patient decontamination. The ambulance crew contacted the West Central Community Hospital Emergency Department. At 1926, approximately 40 minutes after decontamination station setup, Medic-13 received a real-world emergency medical assistance call and departed the scene.

Chemical Agent Pharmaceutical Inventory			
	Dosage amt	# of	Exp. Date
Mark I Antidote Kits (Vermillion County Emergency Medical Services)		60	June 2007

Observation

Subject: Medical Monitoring Program

Discussion: The EMT providing decontamination crew pre-PPE medical screening was not aware of a specific standard for exclusion of personnel from PPE operations based on vital signs and other medical information. While the EMT did implement an ad hoc standard for exclusion, the chosen value for exclusionary blood pressures was in excess of that designated in CSEPP guidance. In addition, screening was limited to blood pressure only.

Reference: CSEPP Planning Guidance 8.10.1, Appendix H (2)(D)

Recommendation: The team should establish a standard for eligibility for PPE operations and should implement it uniformly. Implement a short pre-PPE entry questionnaire to capture any important medical information (such as recent illness, skin rash, or other condition related to heat-stress tolerance), and include pulse check in addition to blood pressure check. Such a questionnaire would not only decrease the chances of personnel injury or illness because of working in the PPE environment, but also would serve as additional hard-copy documentation for historical, medical, and/or legal reference.

Observation

Subject: Powered Air Purifying Respirators Hoods

Discussion: Decontamination personnel who wore OSHA Level C protective ensembles with powered air purifying respirators (PAPR) equipped with tight-fitting masks said they were told two to three years ago that they would be given loose-fitting hoods for the PAPRs. Personnel were concerned because some wear eyeglasses but do not have optical inserts, and have impaired vision while wearing tight-fitting masks.

Recommendation: Changing from tight to loose-fit masks would also eliminate mask fit-testing requirements for the team. The team should be provided with loose-fitting PAPR hoods if feasible, or compatible eye-glasses

Emergency Medical Services at South Vermillion High School

Vermillion County Emergency Medical Service (EMS) responded to South Vermillion High School near Clinton to treat 12 patients injured in a motor vehicle accident. Vermillion County EMS unit Medic-12, a type-III box ambulance, was staffed by two intermediate-level Emergency Medical Technicians (EMTs). Upon simulated arrival at the scene at 0944, they were advised that the patients would pose no decontamination hazard to EMS personnel or equipment. Because of the number and condition of patients, Medic-12 requested (simulated) mutual aid EMS resources from north Vermillion County and Fountain County. They began triaging patients at 0946 and divided the patients into four immediate patients and eight delayed or minimal patients.

Eight minor and delayed casualties and two immediate casualties who would have been cared for by mutual aid resources departed the scene en route to the hospital via school district van and private vehicle at 0959. Medic-12 personnel placed a head trauma patient on a backboard and loaded the patient and a patient with shortness of breath into the unit.

The ambulance crew re-evaluated both patients, obtained actual pulse, blood pressure and respiration information, simulated applying oxygen, started normal saline intravenous lines, and attached a heart monitor. The crew had 10 Mark I Antidote kits (expiration June 2007). At 1008, Medic-12 departed the high school for West Central Community Hospital, and at 1009 successfully contacted the hospital Emergency Department by radio to report on both patients. The ambulance arrived at the hospital at 1014, and offloaded and staged patients at the hospital

decontamination area. Responsibility for the patients was assumed by hospital decontamination area triage personnel.

West Central Community Hospital

West Central Community Hospital (WCCH) is a 25-bed acute care facility, Critical Access Hospital (CAH) located approximately 25 miles south of the Newport Chemical Depot (NECD). Because WCCH is a designated Critical Access Hospital, any influx of patients above the 25 limit requires written justification and approval by the State of Indiana. As a result of this stipulation, hospital officials have devised a procedure to be able to transfer patients to pre-designated facilities within the community.

The Emergency Department (ED) has eight treatment rooms and sees approximately 10,000 patients annually. The ED is routinely staffed with one Registered Nurse (RN) and one other patient care provider 24 hours a day. The hospital contracts with an outside agency for physician coverage and has one physician on duty at all times. Although WCCH is not a Joint Commission Accredited Hospital, they received federal accreditation through the Healthcare Facilities Accreditation Program (HFAP) in March of 2005.

The Disaster Manual was available and is updated annually which is another CAH requirement. WCCH nerve agent antidote included:

Chemical Agent Pharmaceutical Inventory			
	Dosage amount	# of	Expiration date
Atropine	20cc/vial 4mg/cc	225	April 2008
Atropine	1cc/vial 4mg/cc	525	April 2007
2-PAM Chloride	1 Gram	768	August 2008
Mark I Antidote Kits	1 kit	510 133	June 2004 May 2009
Diazepam	10cc/vial 5mg/cc	170	July 2007

WCCH follows “Pediatric Dosing Guidelines” however at the time of this survey they did not have any Pediatric Antidote Kits.

WCCH officials noted that there has been no additional training associated with CSEPP this past year; however, all decontamination is performed by local Emergency Medical Services (EMS). The hospital staff does not assist. Blood for Acetylcholinesterase levels are drawn for baseline studies on patients suspected of having been exposed to nerve agent; however, these studies are done outside of the hospital with a turn-around time of approximately three or four days.

At 0925, WCCH was notified of an accident at the NECD by the Vermillion County EOC. The hospital Administrator notified the hospital operator to page via the overhead speaker system to “Prepare for Signal D”. Upon this announcement, hospital staff immediately began preparing for

potential patients. All staff members involved were given orange armbands upon reporting to a pre-designated area. Specific departments were issued newly purchased hand-held radios to communicate throughout the facility. The administrative secretaries initiated call downs to all local hospitals to assess current bed availability for potential transfers. Staff recall procedures were begun.

The Vermillion County EOC called at 0927 to ask for a hospital representative to report to the EOC. The hospital assigned their Risk Manager to that role. At 0930, the ED Charge Nurse was notified of a motor vehicle accident in the community that would require decontamination of patients. The ED Charge Nurse immediately notified the hospital EOC, the hospital Incident Commander (IC), and the County EOC. An overhead page was made at the IC's direction to notify hospital staff of "Signal D". Hospital lockdown was simulated. The Clinton Township Volunteer Fire Department (CTVFD) was requested to prepare for decontamination operations at the hospital.

The hospital IC called for a representative from each department at 0940 and briefed hospital staff. The hospital EOC frequently communicated with their County EOC representative to relay pertinent emergency and patient information. The hospital Public Information Officer (PIO) handled multiple requests for statements in a timely and appropriate manner.

Upon notification of the chemical involved in the motor vehicle accident, toxicological information for the pesticide identified at the scene was quickly acquired by the pharmacist from a medical database. This fact sheet was provided to the ED staff for reference. Having information promptly, prior to patient arrival, allowed the nursing staff and physician to prepare for the types of injuries sustained by the incoming casualties.

The CTVFD arrived to WCCH at 0945 and set up the decontamination area in 11 minutes, but they were unable to establish the flow of hot water to the tent. Hoses from the heating system to the shower were not set up properly. Because hot water could not be established, no actual patient decontamination occurred.

Personnel who were donning PPE had pre-entry vital signs taken by EMS personnel. These personnel did not know of any designated preclusion limits for donning PPE. All of these personnel had recorded blood pressures above 160 systolic, but continued to don PPE. Under the supervision of the Safety Officer, personnel properly donned PPE.

At 1025, patients were staged at WCCH from the motor vehicle accident. Patients in the triage area did not receive triage tags or categorization by priority of illness. Patients were sent through decontamination (simulated) without supervision or instruction of decontamination procedures. Patients were then met by a responder from the hot zone who relocated to the cold zone and provided patients with clean suits. Patients were not banded to indicate that they had gone through decontamination and were clean. Patients were then escorted to the ED entrance by this responder who left the triage area. No responders were left at the decontamination tent to assist additional patients.

One firefighter experienced mild heat illness after being dressed out in his suit and PAPR for approximately 45 minutes. Decontamination operations stopped at 1040.

When patients were assessed prior to going through the decontamination process, hospital personnel were not made aware of the extent of injury or the status of each individual patient. Patients then arrived without notice at the ED, and hospital personnel could not ascertain if patients had been decontaminated or if any had received medical treatment. Safety for hospital staff became an issue and appropriate measures were taken to ensure that these patients received proper decontamination prior to being allowed into the facility. WCCH personnel identified and tracked patients once they were admitted into the hospital. Patient tracking prior to entering the hospital was minimal.

Patient tracking was further complicated with the arrival of a patient from NECD who was in (simulated) full cardiac arrest. Hospital personnel could not ascertain if this individual had been properly decontaminated because of the lack of banding. Hospital personnel were made aware that this individual had been in full PPE, further increasing the need for adequate information concerning the administration of medication and adequate decontamination. Nursing care for these patients once in the ED was performed in a timely and appropriate manner.

The second victim from NECD had multiple traumatic injuries. The patient had a percutaneous liquid VX exposure with symptoms of fasciculations (fine tremors below the skin) and sweating on the right arm. In addition, the patient complained of nausea, vomiting and diarrhea. This was followed in a few minutes with shortness of breath and runny nose. The difficulty breathing became progressively worse. The nurse attending this patient provided the appropriate evaluation and treatment with nerve agent antidote and supportive therapy while the physician was unavailable to direct the patient care.

Pertinent information was quickly and effectively passed to the hospital IC and nursing staff. However, 30 minutes after the "Signal D" was announced, the physician was aware only of the NECD accident. The single physician in the ED was very busy with multiple actual patients and was available only briefly from time to time to answer questions and acquire situational awareness.

The event was used very effectively as a training vehicle for newly assigned personnel in the ED and several nursing students in training. These individuals were integrated without interfering in the response and care for the patients. The staff provided guidance and assisted these individuals in procedures and addressing events as they unfolded.

Strength

Subject: Toxicological Information

Discussion: Toxicological information for the pesticide identified at the scene was quickly acquired by the pharmacist from a medical database. This fact sheet was provided to the ED staff immediately for reference. Having information promptly, prior

to patient arrival, allowed the nursing staff and physician to prepare for the types of injuries sustained by the incoming casualties.

Recommendation: The hospital pharmacist should continue to participate with the WCCH staff and provide resources.

Observation

Subject: Communications

Discussion: Hospital personnel identified and tracked patients once they were admitted into the hospital, but patient tracking prior to entering the hospital was minimal. Often hospital personnel were not made aware when patients were about to complete the decontamination process or their status until they arrived outside the ED.

Recommendation: Establish lines of communication between decontamination site and those individuals within the hospital who will be allowing entry into the facility. These lines of communication need to be tested routinely to ensure that patient information flows seamlessly.

Observation

Subject: Patient Tracking and Identification

Discussion: It could not be determined if a patient had been medicated at the appropriate level based on signs and symptoms because of the lack of banding. Hospital staff could not determine if patients had been processed through the decontamination corridor. This became a safety issue for hospital personnel, and they are commended for maintaining a safe environment.

Recommendation: The proper banding of decontaminated patients would allow the hospital staff to determine those patients that had received decontamination and those that had not. It is recommended that an identification procedure be implemented for patients that have received medication as well as decontamination. This should be coordinated with pre-hospital providers and hospital staff to reduce any confusion that may occur.

Observation

Subject: Medical Monitoring Program

Discussion: One firefighter experienced mild heat illness after being dressed out in his suit and PAPR for approximately 45 minutes. Although this was not an inordinate amount of time for the temperature and weather conditions, the firefighter complained of dizziness and was removed from the area. The members of the fire department assisted him in removing the outer garment, and he was transported into the ED via stretcher

where he was evaluated and treated. EMS personnel did not have written procedures or established limits to preclude members from donning PPE.

Recommendation: Firefighters and EMS personnel required to don PPE must meet medical screening standards. A heart rate, blood pressure or current medical condition that does not meet these standards will predispose an individual to heat stress. The individual who became a heat casualty was wearing his PPE prior to the decontamination area being prepared to process patients (no hot water). Allowing the decontamination crew to rest with the PPE partially on (to the waist) in a shaded area while drinking fluids will permit maximum performance when needed. A work-rest cycle should be utilized by the supervisor with the time reduced as needed for the recognized physical capabilities of personnel.

Observation

Subject: Physician Awareness

Discussion: Pertinent information was quickly and effectively passed to the hospital IC and nursing staff. However, 30 minutes after the “Signal D” was announced, the physician was aware only of the NECD accident. The single physician in the ED was very busy with multiple actual patients and was available only briefly from time to time to answer questions and acquire situational awareness.

Recommendation: Without interfering with actual patient care, the physician should be kept abreast of exercise play. On several occasions he would have been required to make medical decisions for incoming ‘patients’ if the injuries were real.

Observation

Subject: Communications

Discussion: WCCH purchased multiple portable hand-held radios to communicate throughout the hospital. The responding decontamination personnel did not use these radios to provide pertinent patient information to the staff at the ED entrance. Limited information was received about the two depot patients who were transported to WCCH.

Recommendation: Decontamination personnel should provide pertinent patient information to ED staff with the radios. WCCH should continue to exercise with all entities to ensure proper communications occur.

Finding Requiring Corrective Action VR06.6.2

Subject: Site Safety and Control Plan -- WCCH

Discussion: Decontamination teams had problems with the decontamination water heating system and were not able to produce hot water for the tent. Patients were sent through simulated decontamination for one minute, and decontamination personnel did not provide patients with instructions for showering. The responder at the front of the decontamination tent moved to the clean zone and then back to the hot zone. Patients evaluated by triage personnel did not receive banding to indicate triage category or if any treatment was rendered on site. In addition, patients did not receive any banding to indicate if they had been decontaminated.

Reference: 29 CFR 1910.120(q)(2) (directly or as included by reference under 40 CFR 311)

Recommendation: Decontamination personnel need to remain in one area of decontamination, not multiple zones. To help with each stage of the decontamination process, personnel should be assigned to triage, the shower area, the clean clothing donning area, and for transportation of patients to ED. Personnel should train frequently with the equipment and perform regular maintenance checks to ensure proper operation of the heating unit. It might be helpful to establish a hot water source from the hospital to aide in maintaining hot water for decontamination. Decontamination personnel assigned to the shower should provide detailed instructions or visual aides to patients on the proper way to decontaminate themselves.

Vermillion Convalescent Center

Two patients were transferred to Vermillion Convalescent Center (VCC) from West Central Community Hospital. The staff at VCC was very supportive in receiving patients. Patients were assessed and taken to Unit 400, the Special Care Unit, where they received appropriate treatment. Current patients were actually moved to a different area of the facility to make space for these transferred patients. .

Heritage House

Following the completion of patient transfer coordination and documentation by West Central Community Hospital (WCCH), two elderly stable patients were transferred from WCCH to Heritage House under a standing agreement between the facilities as part of the hospital's surge capacity activation plan. The (simulated) patients and documentation arrived at Heritage House at 1243. WCCH personnel advised that under actual emergency response conditions, these transfers would be accomplished by inter-facility ambulance transport.

Heritage House personnel had clearly labeled the facility's entrances to guide transferred patients to the proper location, and the patients were immediately referred to the Director of Nursing. Heritage House is developing a written protocol for receiving disaster-condition transfers from WCCH; the facility's main dining room is the designated transfer patient reception and processing area. The documentation and patients were taken to this area, patients were assessed and required care was initiated. Patient records were started (simulated), and that the patients were moved to available beds. The facility has a maximum capacity of 113, and 26 beds were available.

The Director of Nursing described the disaster management resources available at Heritage House: a limited number of additional call-in nurses and an Assistant Director of Nursing to fulfill additional management duties. The facility has three trauma treatment carts, a central store of medical supplies, an emergency standby electrical generator, and a three-day food supply onsite.

EMERGENCY RESPONSE OUTCOME 7 – EMERGENCY PUBLIC INFORMATION

The Vermillion County Public Information Officer (PIO) gathered and disseminated information about the emergency, the initial response and public health and safety information. The PIO used pre-scripted messages to write EAS messages and news releases. Vermillion County issued seven news releases/EAS messages with a variety of important information such as shelter-in-place locations and instructions, traffic control points and instructions to county residents. The PIO gathered the necessary information and had a streamlined approval process for releasing news releases and EAS messages. Each news release or EAS message included a time stamp, which was an improvement over last year. There was some confusion about which items sent out by the county were intended for use as EAS messages and which items were intended for news releases.

The PIO maintained regular telephone contact with the Joint Information Center (JIC) through a county liaison working in the JIC. The PIO also relayed important information and answers to specific questions to the county EOC liaison in the JIC.

The PIO conducted one on-camera interview at the EOC and several telephone interviews from the EOC. The PIO remained proactive and returned calls to media with updated information. However, some of the information released by the county was vague or confusing.

Observation

Subject: Public Health and Safety Information

Discussion: Information providers did not focus on health and safety as perceived by the listening audience and on occasion gave inaccurate information. Baseline facts were provided without accurate supporting detail to assure the listener of his/her safety. For example, a reporter asked “How will people know it’s safe to come out of SIP?” The PIO replied, “Once the plume has passed the danger is gone.” This is not necessarily true and could be misleading or confusing to the public.

Recommendation: Emergency information provided to the media for public consumption should be clear and comprehensive so that residents have the knowledge necessary to make accurate and informed decisions about their personal safety.

Observation

Subject: Labeling of Emergency Information

Discussion: Labeling of emergency information messages was at times inconsistent and confusing. Vermillion County issued seven messages, of which three were labeled EAS messages, two were labeled news releases and two were vaguely labeled “message, for immediate release.” The distinction is important because an EAS message is intended to be read exactly as written on the air while a news release is often not disseminated verbatim by the media. In particular, protective actions should be issued as EAS messages. For example, message number 2 (unspecified), issued at 0928, instructed three townships to shelter in place; this should have been issued as an EAS message. On the other hand, EAS message number 4 “Traffic Control Points,” is not a protective action and need not be issued as an EAS message. Message number 5, the county’s disaster declaration, is particularly confusing; it is labeled “News Release” but is disseminated to four EAS stations who are directed to repeat it every five minutes. Using wrong or inconsistent formats could confuse both the media and the public about the appropriate response to take.

The last two EAS messages (numbers 6 and 7) also could be confusing. Message number 6 states: “Attention all residents of Eugene Township. Officials are recommending that you open all doors and windows to vent your homes.” The use of “you” here might not be clear to listeners. Message number 7 is identical, except directed to residents of Helt Township.

Recommendation: The County should determine the appropriate method for disseminating specific categories of information and state the information clearly. EAS messages should be pre-scripted and limited to protective action instructions to the public, while news releases should be used to expand on this information or for other important but non-instructional information. In addition, all information releases should be clearly labeled with source, time, subject and a number to call for further information.

Observation

Subject: Information Sharing

Discussion: Vermillion County sent out seven EAS messages and news releases. However, none of these news releases were received in the JIC. While the county maintained regular contact through a liaison in the JIC, the failure to share written materials released to the media with the JIC caused a breakdown in the Joint Information System.

Recommendation: EAS messages and news releases should be shared with the media and other participating agencies, especially the JIC. Doing so will ensure that information released to the public remains clear and consistent.

EMERGENCY RESPONSE OUTCOME 8 – REMEDIATION AND RECOVERY

Not Applicable.

PARKE COUNTY

EMERGENCY RESPONSE OUTCOME 1 – PREVENTION AND PREPAREDNESS

The Parke County Emergency Management (EM) Director receives the daily Newport Chemical Depot (NECD) work plan with Maximum Credible Event (MCE) via D2-PuffTM. The Emergency Management Agency (EMA) staff possesses the expertise to determine the protective action decision (PAD).

The existing Emergency Operations Plan was promulgated by the County Commissioner in 2001. The new plan is under review and expected to be approved by the fall of 2006.

EMERGENCY RESPONSE OUTCOME 2 – EMERGENCY ASSESSMENT

Parke County received the Newport Alert Notification System (NANS) call at 0904 notifying the agency of a CENL Category III accident at the Newport Chemical Depot (NECD) involving a ton container falling off a truck during transport. During the call, the accident was upgraded to a Category IV Community Emergency because of a fire. The Protective Action Recommendation (PAR) for Parke County was to shelter in place (SIP) Liberty and Reserve Townships. The NANS call concluded at 0908.

The Emergency Management (EM) Director reviewed and understood the NANS information, and accepted the protective action recommendation (PAR) as the PAD at 0909.

Updates from NECD via D2-PuffTM came without a PAR. Parke County relied on NANS to support hazard assessment decisions and D2 alarm for tip to tail times as a backup. The automation specialist simulated activating the sirens and indoor alerting system at 0925, 16 minutes after the PAD was made, by selecting the appropriate group of sirens and IAS radios using programmed pre-scripted messages. The initial protective action instructions were received by the public at risk. The automation specialist simulated the activation of the appropriate warning message every 12 minutes for the first hour and every 20 minutes thereafter. During the 0923 NANS call Penn Township was inappropriately added to the PAR and the county accepted the PAR and made the PAD to Shelter in place.

The PCEM director evaluated the SIP PAR using D2-PuffTM modeling and PAR/PAD matrix.

EMERGENCY RESPONSE OUTCOME 3 – EMERGENCY MANAGEMENT

At the end of the NANS call, the Emergency Management (EM) Director accepted the PAR as the PAD at 0909, immediately commenced call down, activated the Emergency Operation Center (EOC) at 0919, and declared the EOC operational at 0936. The EM Director conducted the first EOC briefing at 0923 to notify the staff of the accident at NECD. Briefings were held periodically throughout the emergency. Security was posted at the entrance of the EOC at 0910.

The PCEM director at the EOC requested her staff to begin the call down of designated personnel and by 0940 the EOC was declared operational.

Visual aids displayed in the EOC included: plume projection on two large monitors, projected event log, reader board location and maps, three televisions displaying world and local news and the weather channel, and large wall maps outlining the entire county and local agencies.

At 0908, the Parke County EM Director called the county commissioner and informed him of the emergency at NECD and asked permission to activate the EOC and to accept the PAR for the townships and their corresponding schools. Decisions were made for locations of the traffic control points (TCPs). Sirens and Indoor Alert Systems (IAS) were simulated for IRZ townships. It was decided for the following schools to SIP: Turkey Run, Montezuma, Rosedale Elementary, Riverton Junior and Senior High Schools.

The EM Director ordered the Public Information Officer (PIO) to prepare news releases and emergency alert system (EAS) messages advising Liberty and Reserve Townships' residents to SIP. The county commissioner signed an Emergency Disaster Proclamation, at 1022, which was disseminated to the public and the media via a news release.

An update was received via the NANS at 0923 that added Penn Township to the SIP PAR. Penn was ordered to shelter in place even though this action was over-conservative and not required by the PAR matrix. Decision makers constantly monitored D2-Puff™ information and changed protective actions accordingly. Liberty's SIP was lifted at 0945, and Wabash was ordered to shelter. Then at 1020, residents in Liberty, Penn, Reserve, and Sugar Creek were ordered to SIP. The subsequent PAD at 1123 was made to release all Townships from SIP except for Liberty and Reserve. They were released from SIP at 1226.

Observation

Subject: County and NECD Communication

Discussion: More information was available to the county decision makers on D2 regarding the projected hazard areas and related impacts. Except for the NANS calls down, and hazard analysis calls to NECD requesting updated plume plots there was no clarifying communication. This resulted in potential public confusion when the county made the decision to release people from shelter only to put them back in shelter within 30 minutes.

Recommendation: Proactive communication between Parke County and NECD decision makers is appropriate to ensure all information is considered in public protective actions.

EMERGENCY RESPONSE OUTCOME 4 – CAI HAZARD MITIGATION

Not Applicable.

EMERGENCY RESPONSE OUTCOME 5 – PROTECTION

EOC

The PCEM director evaluated the SIP PAR using D2-Puff™ modeling and PAR/PAD matrix. The initial PAD was made at 0909 based on the NANS call of 0906. The sirens and indoor alert system (IAS) were activated at 0925. The automation specialist simulated activating the sirens and indoor alerting system at 0925, 16 minutes after the PAD was made, by selecting the appropriate group of sirens and IAS radios using programmed pre-scripted messages. The initial protective action instructions were received by the public at risk and completed at 0929. The automation specialist simulated the activation of the appropriate warning message every 12 minutes for the first hour and every 20 minutes thereafter. During the 0923 NANS call Penn Township was inappropriately added to the PAR by NECD and the county accepted the PAR and made the PAD to Shelter in place.

It was decided for Turkey Run, Montezuma, Rosedale Elementary, Riverton Junior and Senior High Schools to all SIP. At 0945, the County Commissioner lifted the Liberty Township SIP and added Wabash Township including Riverton Junior and Senior High and Rosedale Elementary Schools. Then at 0952 the SIP was lifted for Rosedale Elementary. The Commissioner contacted the Turkey Run (TR) School Superintendent at 0955 to lift the SIP and to ask them to evacuate the elementary school. The Principal at TR Elementary notified the Commissioner at the EOC at 1012 that the evacuation was completed and they were headed for their destination. Liberty and Sugar Creek were added at 1018 to SIP based on a recent plume sent to the EOC showing a shift in the wind. Wabash and its respective schools were released. Correction was given at 1026 asking the Wabash schools of Riverton and Montezuma, though clear, should remain SIP. The Parke County Sheriff Depart (PCSD) at 1027 requested Turkey Run School to return to SIP.

The sirens were simulated at 1028 for Washington Township to SIP. The PCEM director announced at 1040 that they were simulating SIP of the Amish Schools in Washington Township. The PAD at 1123 released all Townships from SIP except for Liberty and Reserve. They were released from SIP at 1226.

The PIO completed 10 Emergency Alert System (EAS) messages and five news releases; copies of EAS messages and news release messages were provided to NECD. JIS/JIC and adjacent jurisdictions were sent these by fax and email.

Observation

Subject: Protective Action Decision and Implementation

Discussion: It took approximately 20 minutes between the time the County made the PAD to shelter persons in Liberty and Reserve Townships and the population in these townships were notified of the protective action. It is expected that decisions on protective action will be made promptly when NECD provides a PAR. Appropriate alert and notification systems should be activated within two minutes after a PAD is made, and

the population at risk should be informed about the action they need to take within eight minutes after the PAD. Therefore, the expected time requirement was exceeded by 12 minutes.

Reference: CSEPP Planning Guidance, May 17, 1996, section 8.7 and Appendix F

Recommendation: Improve the process involved in deciding PADs and activating alert and notification systems to meet CSEPP guidance.

Traffic Control Points

The Parke County Sheriff's Department (simulated) activated traffic control points (TCP) at 0930, including the closure of US 36 in Montezuma, US 36 and US 41 in Rockville, Catlin Road 1050 North and US 41 and the Lodi River Bridge. In addition the Sheriff's Department activated TCPs at State Road 47 and the Parke/Montgomery line at 1038. Sheriff's Deputies notified the EOC that the TCPs were established and functional by 1039. The Deputy was in position at 1104. At 1120, the EOC directed Deputies to move the TCP from State Road 47 and the Parke/Montgomery line to State Road 47 and US 41. All activation orders and their corresponding calls were simulated from the EOC.

Rockville High School Reception Center

The representative of the Wabash Chapter of the American Red Cross (ARC) at the Parke County EOC called the Rockville High School at 1013 to request the use of their facilities as a reception center. Two ARC volunteers arrived at 1029 and set up the reception center. The vice principal and an ARC volunteer conducted a safety walk around of the area before opening the reception center. It was operational at 1045.

The reception center was located in the lobby of the gymnasium. Each evacuee filled out reception registrations forms prior to being accepted. Evacuees starting arriving at 1052, and 10 were processed by 1113. This site could accommodate up to 900 evacuees as a shelter.

Turkey Run Elementary School, Shelter-in-Place

The superintendent of the Turkey Run Community School Corporation (TRCSC) was notified by the school resource officer at 0930 of an accident at NECD. The protective action required sheltering-in-place (SIP) of all elementary students.

A school representative at the Parke County EOC notified the superintendent by phone at 0955 that they could release students from SIP and proceed with the planned evacuation. The superintendent immediately instructed staff to begin the call down for bus drivers to station their buses at the front of the school and wait for students. Previously, school administrators and teachers had decided to evacuate the entire elementary school of 369 students. Six school buses had arrived by 0958, and the seventh arrived shortly thereafter.

At 1005, students boarded the buses which were fully loaded by 1010. The school principal and resource officer locked down the school and evacuated with the students.

Strength

Subject: Evacuation Drill

Discussion: The Turkey Run Community School Corporation under a grant from the US Office of Safe and Drug Free Schools recently completed a two-year process to update their Community Emergency Response and Crisis Management Plans. Their plans addressed an all-hazards approach by identifying four key elements of prevention, preparedness, response and recovery. The School District Emergency Response and Crisis Management Plan will enhance the well being and safety of the students, staff and community by implementing the best known practices for protecting school environments.

EMERGENCY RESPONSE OUTCOME 6 – VICTIM CARE

Marshall Decontamination Site (out of sequence)

The Marshall Volunteer Fire Department established a decontamination site inside the fire house area at the fire station in Marshall. The fire chief assumed the role of Incident Commander (IC) and a medical/safety officer was appointed. The command post was set up in the cold zone. An accountability board was set up and used by the IC. Radio communications were conducted with 800 MHz portable radios with earpieces and microphones.

The fire department had the following supply of antidote:

Chemical Agent Pharmaceutical Inventory			
	Dosage amount	# of	Expiration date
Mark I Antidote Kits	1 kit (Lot 1)	50	June 2007
	1 kit (Lot 2)	20	May 2009

Setup of the decontamination site was started at 1807; everyone was familiar with the equipment. Two decontamination lines were set up for ambulatory patients; a third line was set up for non-ambulatory patient. A tent for dressing and patient observation was set up at the end of the decontamination line. All areas were taped off to determine safety lines. Pre-entry vitals were taken on five entry personnel who then dressed in OSHA level C PPE. Accurate medical records were kept on all entry personnel. The decontamination became operational at 1852.

The first patients arrived at the decontamination site before the responders were completely suited. It took nine minutes for the first patient contact from a protected responder. Three ambulatory patients showed signs of agent exposure; one ambulatory patient showed signs of trauma and agent exposure; one non-ambulatory patient showed signs of trauma and agent exposure, one non-ambulatory patient had unknown agent exposure, and one psychosomatic patient had no signs of trauma or agent exposure. The first arriving ambulatory patients were directed to the decontamination shower with little or no instruction as to what to do when they got there. The first three ambulatory patients were sent through the shower without disrobing. The remaining two ambulatory patients and the two non-ambulatory patients were disrobed and

given better direction. Upon disrobing, clothing was put into a single over-pack drum with no effort made to keep clothing separate and no means of identifying personal items. Patients were not given soap or sponges in the ambulatory showers.

The non-ambulatory patients were placed on backboards and taken to the non-ambulatory decontamination area. There were no scissors, sponges, or soap. The responders stated that they would get scissors from the medical personnel as needed. The non-ambulatory patients were then taken to the treatment area where they received further care. The patients were then sorted into transport categories and simulated transport with the most critical patients leaving first.

Observation

Subject: Washing Technique (Repeat)

Discussion: The first ambulatory patients to arrive at the decontamination site were not disrobed before they entered the shower; there were no sponges or soap available. This resulted in the patients not being adequately decontaminated. In addition there were no supplies of any kind in the non-ambulatory decontamination line resulting in the responders being unable to remove clothing or adequately wash patients.

Recommendation: Provide supplies including trauma scissors, buckets, soap and sponges for the non-ambulatory area. Provide decontamination solution for the ambulatory showers. Consider providing laminated instruction cards for exposed victims.

Observation

Subject: Patient Belonging Tracking

Discussion: All personal items removed from the patients were put in a common overpack drum with no way to distinguish what items belonged to whom. There was no method of segregating valuables so they could be returned to the patients after decontamination.

Recommendation: Provide a system where patients are tracked and their clothes and valuables are identified. For example, provide sealable bags and label them with permanent marker for items such as drivers license, jewelry etc. Use larger bags for clothes, shoes etc.

Observation

Subject: Patient Tracking and Identification

Discussion: Patients were met at the start of the decontamination lobby and immediately directed to either the ambulatory showers or taken to the non-ambulatory decontamination area. There was no initial screening or triage. Patients exhibiting

moderate agent exposure were not treated until they reached the clean treatment area. Patients were not banded or otherwise identified as being clean. The IC said that they had the materials to do this but forgot to use them.

Recommendation: Provide a medically-trained person in PPE to initially screen patients for agent exposure. Use the existing banding system to indicate that patients have been through decontamination.

Observation

Subject: Water Heater

Discussion: The heaters did not work. The IC said the water heater did not work last year.

Recommendation: Establish a preventive maintenance program with documented monthly inspections for the hot water heater.

Montezuma Decontamination Site (out of sequence)

Personnel from the Montezuma Fire Department, Hillsdale, Mecca Wabash Volunteer Fire Departments, Parke County Sheriff's Office and Parke County emergency medical services (EMS) arrived at the Montezuma Fire Department to establish a decontamination site. The area was cleared for site setup of the decontamination trailer, one engine, and an EMS unit. The Incident Command System was established upon arrival of the fire chief. Safety, operations, decontamination, and EMS functions were established. The accountability system was established.

Two deputy sheriff's officers for Parke County set up a traffic control point (TCP). They were knowledgeable of procedures for operating this post.

Personnel set up two technical decontamination lines. Hot, warm and cold zones were marked. Medical evaluation and dress out was started on the decontamination personnel. The new pre-entry screening protocol corrects the issues observed last year. The safety officer attempted to maintain the heat stress index on personnel suit times for each person in the decontamination corridor. Because of personnel constraints and communication issues, decontamination personnel were in suits for one and a half hours.

There were six ambulatory victims and one non-ambulatory with varying degrees of injuries and symptoms from a simulated Hazmat Incident. There were two decedents. Wet decontamination was simulated because of operational problems with the hot water heater. This is a consistent problem, and a preventive maintenance program needs to be implemented.

Technical decontamination became operational and victims were directed to the proper decontamination line. A MSDS sheet for TEMIK (a carbamate) was given to the IC and he conveyed the information to decontamination personnel in a safety briefing. TEMIK protocol

calls for the administration of atropine and not to administer 2- Pam or narcotics. One patient was placed on a backboard face down and moved into decontamination area. This practice can become very problematic and cause serious harm to the patient and does not follow EMS protocols for the handling of a patient with a possible spinal injury. When this patient was placed on the non-ambulatory roller system for decontamination, there was considerable concern from the evaluators about the safety of the patient due to the handling procedures of the decontamination team. A decontamination person should be placed inside the collection pool for stabilization and the log roll procedure should be used.

Donning and doffing of Personal Protective Equipment (PPE) was inconsistent this year. It was observed that during donning some personnel were put on air before the rest were ready. There was confusion in putting on the respirators on over the hoods of the suits. When doffing the PPE there was no set protocol and it was done haphazardly with continuous crossing between the hot and warm zones.

Coroner

The Parke County Coroner's Office was represented by the county coroner and a deputy coroner. The remainder of the coroner staff consisted of two additional. The Coroner and staff handle all deaths in the Parke County area. If the need arises for a forensic pathologist, the decedents are transported either by ambulance or by a local funeral home to Terre Haute for posthumous investigations.

The county coroner said staff had no training on how to manage expired patients as the result of chemical exposure and that they will not come in contact with the deceased until after the body has been decontaminated. Subsequently, they have no PPE to engage in an investigation within a contaminated area. Although there are no formal plans for mitigation of mass decedents, the coroner does have an informal list of contact numbers for regional Disaster Mortuary resources. The coroner said that such information should be formalized and drafted into a written operating procedure.

The coroner and staff received two expired patients. They interfaced with the Incident Commander at Montezuma and staged while the decontamination teams engaged in their duties. When the two expired patients were deemed clean by the decontamination team, they were banded with a blue band (clean), and brought to the coroner team. The coroner team was unfamiliar with the meaning of the blue band. It was determined that there was a need to retain picture identification for the deceased. Such identification is necessary for the coroner to conduct his investigation.

Deceased Patient #1 had significant traumatic injuries from a motor vehicular collision. These injuries were identified as the cause of death. Deceased Patient #2 was overcome by an organophosphate poisoning. Although he was decontaminated, it was simulated that additional contaminant was found in the patient's oropharynx and gastrointestinal tract. In theory, it proved impossible to completely decontaminate this patient. The decision was therefore made to place the remains in two body bags prior to transport. The coroner (simulated) marked the body bag to identify that the remains could still contain a hazardous substance. In addition, the coroner

contacted the forensic pathologist who would receive the remains to advise that appropriate PPE would be needed when the bags were opened during the investigation. The use of air monitoring equipment also was discussed to ensure that no off-gassing of contaminant would occur during transport.

Observation

Subject: Plans and Procedures

Discussion: The Parke County Coroner's Office did not have formal plans to manage any decedents who were exposed to chemicals. It was clearly recognized that a set of formal procedures was necessary to ensure the safety of the coroner and staff.

Recommendation: A formal procedure must be drafted that outlines the roles of the coroner's office in the event of mass fatalities. Furthermore, training on the management of expired chemical casualties must be made available to the coroner staff. This should include an acclimation to the use of PPE for investigations within a contaminated environment. This plan should include integration of the decontamination team procedures to retain identification of decedents as they are processed through decontamination.

EMERGENCY RESPONSE OUTCOME 7 – EMERGENCY PUBLIC INFORMATION

The newly assigned Parke County's Public Information Officer (PIO) kept the Parke County EOC updated as new information became available. The PIO issued 10 EAS Messages and five news releases.

Observation

Subject: Referral to JIC

Discussion: At 0944, a reporter was told by the Parke County operator that the JIC was open for media calls at phone number (765) 569-4057. A call to the JIC at that time was not answered. At 0945, the county issued a news release announcing "Joint Information Center operational." At 1003, the county PIO told a reporter that the JIC was "up and running," and provided phone numbers for the JIC. However, it was not until the JIC sent out a news release at 1040 announcing "Information Center Activated" that the JIC was actually open for business. Also, a wrong JIC phone number was provided by a county representative to one of the mock media callers.

Recommendation: There should be improved coordination among members of the Joint Information System regarding announcement of the JIC opening; one option would be to limit announcements regarding JIC activation to the JIC itself.

Observation

Subject: Labeling of Emergency Information

Discussion: Parke County issued 10 EAS messages and five news releases. The distinction between the information disseminated in EAS versus news releases was unclear:

All are disseminated solely to the five EAS radio stations and three TV stations and not to other media outlets such as newspapers or news services. All instruct the media to repeat every five minutes. The content distinction is unclear; while most EAS messages appropriately include emergency instructions, EAS message #4, for example, simply announces that the EOC has been activated and #5 announces that the JIC is operational.

Recommendation: News releases and EAS messages serve different purposes and should be formatted and disseminated appropriately. EAS messages should be limited to specific instructions to the public (e.g., evacuate, shelter-in-place, relocation of school children), while news releases should be used to expand on this information or for other important but non-instructional information.

Observation

Subject: Protective Action Instructions

Discussion: Protective action instructions, particularly for Wabash Township and Turkey Run School, were inconsistent and confusing. Parke County EAS messages instructed residents of Liberty, Reserve and Penn townships to shelter-in-place, while news releases also included townships of Sugar Creek and Wabash. In addition, news release #3 addressed protective action instructions to residents of Reserve and Liberty townships to continue to shelter-in-place and “all other townships are being told to stop Sheltering in Place,” a protective action that should be conveyed in an EAS message. And the use of “all” here could be misleading to others in the listening area who might hear this message. Finally, when Parke County decided to lift all the protective actions, it was announced via a JIC news release rather than an EAS message.

Six protective actions were applied to the Turkey Run School, inconsistent in both instructions and format:

0936, EAS message #2: shelter in place
1015, EAS message #7: evacuate
1020, news release #1: evacuate
1027, EAS message #10: shelter in place
1152, news release #3: continue to shelter in place
1346, JIC news release: all shelter in place orders are lifted

In addition to confusing the media about the actions that were taken at the school – particularly with three notices in the 12 minutes between 1015 and 1027 – parents receiving these instructions would likely be confused and distressed about the safety of their children, which likely would generate a flurry of calls to the EOC and the public information hotline, and perhaps attempts by parents to pick up their children prematurely.

Recommendation: All protective actions should be disseminated via EAS messages, not news releases. All should accurately and clearly reflect decisions of public authorities, and should consistently be based on reducing the risk to the public.

Observation

Subject: Public Health and Safety Information

Discussion: Information providers did not focus on health and safety as perceived by the listening audience and on occasion gave inaccurate information. Baseline facts were provided without accurate supporting detail to assure the listener of his/her safety. *Press Release 1 Hotline 1103/FAX 1105* -- The first five paragraphs discuss the opening of the JIC. New and expanded protective actions are provided in the last paragraph with no information on why the protective action has changed. This included a school evacuation with no additional details.

Recommendation: Emergency information provided to the media for public consumption should be clear and comprehensive so that residents have the knowledge necessary to make accurate and informed decisions about their personal safety.

EMERGENCY RESPONSE OUTCOME 8 – REMEDIATION AND RECOVERY

Not Applicable.

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FOUNTAIN COUNTY

EMERGENCY RESPONSE OUTCOME 1 – PREVENTION AND PREPAREDNESS

The Emergency Management (EM) Director had a copy of the Newport Chemical Depot's (NECD) work plan with Maximum Credible Event (MCE) and Protective Action Recommendation (PAR) for April 5, 2006, and the County's Protective Action Decision (PAD) for the daily work plan.

The County's Emergency Operations Plan (EOP) is dated January 2004. The Chemical Stockpile Emergency Preparedness Program (CSEPP) Annex V is dated March 2006. The County is represented in a Memorandum of Understanding among NECD, Vermillion and Parke counties, and the states of Indiana and Illinois for notification during a chemical incident, accident, and other emergencies, dated March 2005.

Fountain County participates in the annual CSEPP Community exercise. The Newport CSEPP Community Integrated Process Team (IPT) develops goals and areas to be exercised. The County participates in exercise planning meetings. Fountain County's participation in quarterly CAIRA exercises is generally limited to staff activation and monitoring of Chemical Accident Incident Response Assistance (CAIRA) responses.

The County has a continuing education program that provides required training to first responders and other county personnel. County provided training is certified and maintained by the County. The Indiana State Training Officer also provides training to first responders and County personnel, which is certified and maintained by the State.

Fountain County maintains an active public outreach program. The County Public Information Officer (PIO) works with the Public Outreach Office and the Newport Community on CSEPP information distribution, such as the CSEPP calendar, quarterly news letters, fliers and media campaigns. The emergency management staff provides CSEPP public information to the community by speaking to people at schools, the county fair and other public gatherings.

EMERGENCY RESPONSE OUTCOME 2 – EMERGENCY ASSESSMENT

Fountain County Emergency Management Agency (EMA) was notified of an accident at the NECD via the Newport Alert and Notification System (NANS). The call was completed at 0908 with a PAR to "Shelter In Place" for the townships of Eugene, Helt and Vermillion, and for Fountain County a recommendation of "none". Wind direction was reported to be from 264 degrees. Fountain County made a PAD for the public to stay out of Parke and Vermillion Counties and listen to the TV and/or radio for additional information. Updated information was available via WebPuff® at 1023. New information regarding direction and length of the

projected plume, which would have affected the planning, was not known because updates were not checked for regularly.

Observation

Subject: Updates not checked

Discussion: Updates are sent by NECD to all of the communities via WebPuff®. It is incumbent on the jurisdictions to check for updates on a regular basis. An unnecessary evacuation PAD was issued. New information was available had the updates been checked. This error was recognized by the Director and discussed with the staff.

Recommendation: Continually checking for updates would prevent missing important information that can effect decisions and protective actions.

EMERGENCY RESPONSE OUTCOME 3 – EMERGENCY MANAGEMENT

Fountain County Emergency Management Agency (EMA) is staffed by the Emergency Management (EM) Director and the Deputy EM Director, who acts as the Emergency Operations Center (EOC) Public Information Officer (PIO). The Director had access to an 800 MHz base station two-way radio and carried a portable radio and a cellular telephone. The Deputy Director has a NANS dedicated telephone on the desk, VHF and 800MHz two-way radio, in addition to a land line phone, and a State issued cell phone. The Deputy Director generally answers the NANS when on duty; but the telephones can be heard in the Director's office. The EOC was at the opposite end of the hall from the emergency management offices. A NANS phone was at the 911 position in the EOC, which was staffed by a pre-staged volunteer.

The call down was initiated at 0911 and ended at 0923. After the notification was complete, the Director and Deputy EM Director relocated to the EOC. At 0932, the EOC was open and the EM Director briefed the assembled staff. A planning discussion established the activity of the EOC in response to the emergency

The initial Protection Action Decision (PAD) was made immediately after receiving the PAR. The PAD was to ask residents to avoid traveling into Parke or Vermillion Counties until the threat from the Newport Chemical Depot has passed.

Updated information was available via WebPuff® at 1023. New information regarding direction and length of the projected plume, which would have affected the planning, was not known because updates were not checked for regularly. At 1103, a county declaration was signed and an evacuation ordered that affected approximately 2,500 citizens. After the evacuation was implemented, new data was retrieved and it was discovered that the evacuation was unnecessary.

The decision to recall the evacuated citizens was made and a PAD was disseminated via an

EAS message at 1254. It was determined that it was now safe for the citizens that had evacuated to return home.

The opening of three shelters and three traffic control points was simulated in the EOC. Two additional TCPs were simulated at US 41 and State Road 234, and Silverwood Road. and State Road 234 for the purpose of handling the traffic congestion caused by the returning citizens.

The protective actions for schools, day cares and special populations were not demonstrated because the projected plume did not impinge on those locations. Fountain County made no requests for supplementary assistance. No reports or follow-up were received from hospitals concerning numbers of injuries, casualties or fatalities. The EOC did not call the hospitals to request such information.

EMERGENCY RESPONSE OUTCOME 4 – CAI HAZARD MITIGATION

Not Applicable.

EMERGENCY RESPONSE OUTCOME 5 – PROTECTION

EOC

The Deputy Director activated the sirens at 0910 with a live test message. Activation of the Indoor Alerting System (IAS) was simulated. The first Emergency Alert System (EAS) message was sent at 0935 and consisted of the PAD information. A second EAS message was sent at 0947 with additional information regarding preparation and planning for an event of this nature. As a precautionary measure, the American Red Cross (ARC) sent people (simulated) to three locations in case residents in Fulton and Mill Creek Townships evacuated. The Sheriff sent (simulated) officers to three traffic locations to establish Traffic Control Points (TCP).

Covington High School Shelter

The Covington High School Shelter was located at 1017 6th Street in Covington. The shelter is a gymnasium equipped with men's and women's restrooms and a concession area that would double as a feeding point. The gymnasium is spacious and could easily house 100 occupants.

The ARC has an agreement in place with an area caterer to provide food for the shelter when it is operational. The services provided include a mobile kitchen in the form of a semi-truck trailer that has the capability to feed 1,000 at each meal.

ARC personnel began arriving at the gymnasium at 0958 and immediately unloaded cots and various other supplies into the gymnasium. As cots were set up on the gym floor, other personnel readied the registration area and placed identification signs outside in front of the

shelter. The registration area was ready at 1017, and the shelter was opened. All ARC personnel wore vests or other items of clothing that clearly identified them as ARC representatives.

ARC personnel set up a first aid station near the registration area. The first aid station, although visible from the registration area, offered access to side rooms for privacy to potentially injured or ill evacuees and the doctors or nurses treating them.

Evacuees could check on the status of loved ones at the Covington School Shelter or at other ARC shelters at the Information Desk. The Shelter Coordinator regularly met with ARC staff to update the situation. The efficiency and working order of the shelter was discussed at each of these briefings. Any items that were brought to the attention of the Shelter Coordinator were addressed to make the shelter function as well as possible.

Approximately 25 evacuees arrived at the shelter. Evacuees were interviewed and assigned cots based on their age, marital status, and whether other family members were present or expected. One evacuee unexpectedly claimed that he had passed through the plume and had not been decontaminated. The Fountain County EOC was notified and the person was segregated from the rest of the evacuees. It was later determined that the evacuee could not have been contaminated or exposed. The ARC shelter would not normally accept anyone who felt like they had been exposed; they would instead direct the person to the reception center for decontamination, care, and further instructions.

Strength

Subject: American Red Cross Team

Discussion: The American Red Cross personnel operating the Covington School Shelter demonstrated a great deal of knowledge and experience while setting up and operating the shelter. Eight of the 10 ARC personnel had spent extended amounts of time working in shelters in areas affected during the 2005 hurricane season. This collective experience was evident. The team was proactive in identifying needs that would arise once the shelter was fully operational and everyone attempted to present solutions when problems arose.

EMERGENCY RESPONSE OUTCOME 6 – VICTIM CARE

Kingman Park Decontamination (out of sequence)

The Kingman and Covington volunteer fire departments arrived at the Kingman Park at 1914 and began to set up their decontamination site. The Incident Command System was initiated. The Incident Commander (IC) designated staff positions including Safety Officer and Accountability Officer. Identification vests were worn by these individuals.

Fire department personnel quickly and effectively set up the decontamination equipment. Effective measures were taken to prevent run-off water from spreading contamination. The water supply system was checked after setup and warm water was flowing. Preparations for night operations also were taken by setting up appropriate lighting. A landing zone was established for air transport helicopters. Light beacons were set up appropriately to identify the landing zone. An emergency decontamination area was properly established.

Personnel that were designated to perform patient triage and decontamination had medical evaluations performed prior to donning their Personal Protective Equipment (PPE). The PPE chosen was appropriate for the incident and all members appeared to be proficient in its use. The personnel had different levels of medical training. Some were First Responders and others were emergency medical technicians. Respiratory clearances were noted to be in place and up to date, allowing the responders to don their PPE.

A safety briefing was given to decontamination team members as they were donning PPE. The potential hazards, symptoms associated with contamination and emergency procedures were explained. The site was operational at 1950.

Patient screening was performed adequately. Individuals were asked appropriate questions and treated accordingly. Mark I Antidote Kits were correctly administered to two patients. Seven patients were appropriately screened, decontaminated and treated. Three of these patients were non-ambulatory. Wristbands of different colors were used to identify individuals that needed to be decontaminated, patients that been administered Mark I antidote kits and patients that had been decontaminated. The last patient exited the decontamination area at 2021. Separation of patient belongings was demonstrated in conjunction with the triage/banding procedures, however individual identification was not placed on the bags.

Patients awaiting transportation to area hospitals were kept out of the elements in an inflatable shelter. The helicopter crew was very professional, interacted with the responders accordingly, and asked pertinent questions regarding decontamination.

Decontamination personnel demonstrated correct technique for decontaminating themselves. After correctly doffing their PPE, personnel had a thorough post-medical evaluation.

Observation

Subject: Patient Tracking and Identification - Kingman

Discussion: While the site correctly used the colored bands indicating decontamination status and Mark I administration, triage tag use was limited. In conjunction with this, limited tracking of patient belongings took place.

Recommendation: Implement a triage system that includes a tracking mechanism for both the patient and their belongings.

St. Vincent Hospital

St. Vincent Hospital (SVH) is 16-bed critical care access hospital. The seven (expandable to eight) bed Emergency Department (ED) is staffed 24 hours a day with one physician and a minimum of one registered nurse. The average daily ED census is 40 patients. A helipad, located adjacent to the ED parking lot, is used to transport patients requiring more intensive treatment to other facilities. The hospital's antidote inventory is outlined in the table:

Chemical Agent Pharmaceutical Inventory			
	Dosage amt	# of	Exp. date
Atropine	0.4mg/ml 20 ml vials	75	December 2007
2-PAM Chloride	1 gm vials	246	August 2010
Mark I Antidote Kits	Autoinjector	11	May 2009
Diazepam	2mg/ml 10 ml vials	55	July 2007

SVH has 12 employees trained in decontamination procedures. There is a core group of four that have had the most training and experience. Two of these personnel also serve on the Warren County Ambulance Service, a hospital-based county ambulance service. The safety officer said they would not implement a full Incident Command System (ICS) because of a small number of patients presenting. Five members of the decontamination team were available; no technical decontamination was done. The decontamination area was located in the ambulance bay in a separate building outside of the ED entrance. Although hot water was available, decontamination was simulated because volunteers were inadequately dressed.

At 0922, the Fountain County EOC notified the ED of the accident at NECD. The ED Medical Director was notified and the Incident Commander (IC) initiated the call-out tree. Hospital lock-down procedures were initiated and off-site sister clinics were notified of the incident. Although the ED staff knew that the chemical was an organophosphate, this information was not passed to the decontamination team. Decontamination equipment had been pre-staged in the ambulance garage. At 0943, the decontamination team arrived and set up an ambulatory decontamination facility. There was no available stretcher or other provision for non-ambulatory victims. Thus they would have been unable to decontaminate a non-ambulatory patient. This inability was recognized by the decontamination team. At 0946, three patients arrived outside the ED. The IC stopped them from entering the facility and brought them to the decontamination area. The IC was not wearing PPE and touched one of the contaminated patients.

At 0951 the triage officer (pharmacist) began initial triage but was not dressed in PPE. The triage officer placed red armbands on each patient to indicate that they were triaged immediate. She determined from the patient's signs of miosis, lacrimation and salivation that administration of a Mark I Antidote Kit was appropriate. Attempted telephone contact with the ED was compromised by technical problems with the land lines. Cellular phones were used. At 1011, the decontamination facility was fully operative. The first patient started (simulated) decontamination. The third patient completed (simulated) decontamination at 1015 and all patients were escorted to the ED. Patient re-triage and treatment was appropriately undertaken

by the ED nursing staff. Physician participation was limited by real-world patients. Pastoral care was provided to all patients. Additional attempts to contact the EOC were undertaken to determine if additional patients were coming. There was no answer at the EOC. It is recommended a plan be developed and practiced for improved communications between SVH and the Fountain County EOC.

Strength

Subject: Pastoral Intervention

Discussion: SVH established an emergency event protocol by which the hospital pastor is immediately available to victims of a disaster event as well as to their attending family. The pastor provided non-denominational emotional support in a very competent and expedient fashion. The pastor has further provided for coverage of this activity in his absence. Such attention to the psychosocial needs of victims and their family has been only very rarely seen in other community (CSEPP) hospital plans.

Recommendation: Continue excellent demonstration of immediate attention to the psychosocial needs of patients. Collect and present these ideas, concepts and obvious value of this program to other venues.

Observation

Subject: Communication Between ED and Decontamination Team

Discussion: Ambulatory patients were intercepted before they entered the SVH ED and escorted directly to the decontamination area by the IC. Patient arrival and associated clinical information was not immediately communicated to the ED.

The ED had specific knowledge concerning the chemical to which the patients had been exposed. This information was not communicated to the decontamination team. Some of the communication difficulties arose from technical problems with land line contact with the ED. Cellular phones were used as a backup resource. The quality of medical care of the patients could have been substantially compromised.

Recommendation: There must be improved quality and timeliness of communications between decontamination team and ED. The telephone technical problems should be corrected. Supplemental radios could serve as a back-up system in the event of failure of commercial systems.

Observation

Subject: Mark I Antidote Kits Protocol

Discussion: The pharmacist, acting as the triage officer, administered Mark I Antidote Kits to three patients (simulated). Although the use of the Mark I Antidote Kit was appropriate, there was no verbal order, standing order or written protocol permitting her use of a Mark I Antidote Kit.

Recommendation: Develop and train to a written protocol for the permitted use of Mark I Antidote Kits.

Observation

Subject: Inability to decontaminate non-ambulatory patients

Discussion: One patient presented to the SVH with a compound fracture of the lower right leg. Since the facility did not have non-ambulatory decontamination capability, decontamination staff splinted the patient's leg and processed much as they would have an ambulatory patient.

Recommendation: Reconfigure the decontamination suite for both ambulatory and non-ambulatory patients, including stretchers, roller systems, backboards and straps.

Finding Requiring Corrective Action FO06.6.1

Subject: Site Safety and Control Plan -- SVH

Discussion: One member of the SVH staff touched a potentially contaminated patient while not wearing PPE. Such contact could have resulted in the production of an additional victim who would then be a personnel loss to the response system. Hot, warm and cold zones were not clearly identified. The triage officer did not have PPE on and crossed back and forth between zones.

Reference: 29 CFR 1910.120(q)(2) (directly or as included by reference under 40 CFR 311)

Recommendation: Further training concerning cross contamination is required for hospital staff with regard to chemical incidents. Develop and train to a protocol concerning direct contact with potentially contaminated patients prior to their decontamination. Develop protocols for the establishment of hazard control zones and train personnel in the importance of zone integrity. Conduct training for decontamination team members and ancillary personnel.

St. Clare Medical Center

St. Clare Medical Center (SCMC) is a 120-licensed bed facility (87 beds currently operational), including an eight-bed intensive care unit (ICU). The 10-bed Emergency Department (ED) sees approximately 19,000 patients annually and has 24-hour physician coverage. Staffing includes

two registered nurses (RNs), augmented by an additional RN or emergency medical technician (EMT)-P and an EMT during peak hours.

Pharmaceutical supplies were housed in the pharmacy and ED. A detailed listing of antidote supplies follows:

Chemical Agent Pharmaceutical Inventory			
Antidote	Dosage Amount	Number	Expiration Date
Atropine	1 mg/ml vials	25	March 2008
Atropine	0.4 mg/ml, 20 ml vials	150	June 2007
2-PAM Chloride	1 gram vials	6	November 2009
Diazepam	10 mg/2ml syringes	27	March 2007
Diazepam	5 mg/ml, 10 ml vials	40	October 2006
Lorazepam	2 mg/1ml vials	15	August 2006
Midazolam	2 mg/2ml vials	96	November 2007
Midazolam	50 mg/10ml vials	15	November 2007

SCMC received initial notification of an event at NECD by telephone communication from Fountain County Emergency Operations Center (EOC) at 0920. A “Prepare for Code Yellow”, designating a potential external disaster, was paged overhead. The switchboard operator notified hospital administrators, and the command center was established in the radiology waiting area.

St. Clare Medical Center processed seven victims. The facility recently received new personal protective equipment (PPE), including powered air purifying respirators (PAPRs). Several personnel were able to demonstrate newly acquired skills from recent training, in compliance with OSHA regulations. Because of staffing, training, and resource issues, only two decontamination team members were able to dress out. The facility currently has three PPE suits. The staff was enthusiastic and interested in refining their operations in mass casualty incidents involving chemical and environmental exposures.

At 0924, the hospital learned of a motor vehicle accident involving a chemical spill with potentially contaminated victims. A “Code Yellow” was paged overhead, and ED staff obtained material safety data sheet information on the chemical involved in the accident. Notification of off-duty ED staff was initiated, and ancillary departments were notified of the need for mobilization of pharmaceutical and equipment resources. Local EMS services and fire departments were contacted for status of additional antidote resources. The command center initiated the process of determining personnel and bed resources. Communication among the command center, ED, and safety director/facilities manager was established via cell phone and walkie talkies.

Personnel responsible for decontamination setup arrived at the ED at 0932. Following some discussion concerning the need to page a “Code Orange”, designating a chemical disaster, the personnel prepared the decontamination equipment.

The decontamination area was established on the ambulance ramp adjacent to the ED entrance. This area was not readily identified as a restricted access area, and did not have clear delineation of hot, warm or cold zones. The employee designated to act as security assisted in setting up the decontamination equipment and a variety of other miscellaneous tasks. A leak in the main assembly water pipe was identified and quickly repaired with duct tape. The shower was ready to receive patients at 0957, complete with hot running water.

Because of staffing, only four people planned to don PPE, all of which had the proper training and respiratory screening. The facility planned to simulate obtaining vital signs and hydrating the decontamination team but actually pre-screened the four. Two of the four staff members' vital signs exceeded the accepted parameters for donning PPE. Donning of PPE was accomplished in a quick, yet safe manner with special consideration to removal of jewelry and other items that could puncture the suits. The responders were updated numerous times pertaining to signs, symptoms, and treatment of agent exposure. The Safety officer was also unaware of the recommended stay times for the decontamination team, to ensure that no heat stress issues arose.

The first exercise victim presented at 1018 but was not immediately identified by security; the victim shouted for attention. Decontamination of patients was accomplished in a thorough fashion. However, there was no triage of symptoms or injuries in the first few patients, resulting in overzealous scrubbing of open wounds and the potential lack of needed treatment. When a patient became non-ambulatory, insufficient staffing and equipment was available for safe management of the situation. Both decontamination team members concentrated on this patient, and were initially unaware of other patients who presented simultaneously. No patient identification bands consistent with the community concept of operations were utilized, nor was there a demonstration of tracking patient belongings.

Victim #6 presented with premature labor and was not stopped by security prior to entering the hot zone. This patient was deemed contaminated and ordered by the decontamination team leader to undergo decontamination prior to entry into the ED.

The final patient, #7 presented to security and was correctly deemed to be manifesting symptoms of a possible myocardial infarction. Because this patient had no history of potential contamination, he was immediately transported via wheelchair to the ED treatment area.

Within the hospital, the patients were promptly triaged and evaluated by the ED staff and attending ED physician. The medical care was appropriate and timely for their simulated illnesses, and the patients were dispositioned accordingly.

Strength

Subject: Staff Enthusiasm

Discussion: The hospital staff exhibited a sincere interest in improving their ability to decontaminate and treat patients arriving at their facility. The staff engaged in an open discussion of issues and areas for improvement in response capabilities.

Observation

Subject: Patient Triage and Treatment -- St. Clare

Discussion: There did not appear to be an effective triage system in place to address prioritization in the event of a multiple patient situation, nor was antidote available for administration in the decontamination area. Once patients arrived to the decontamination area, they were directed to undress and shower. There was no assessment of their signs and systems to determine if decontamination was necessary. In the event of multiple casualties presenting simultaneously, it is important to have a means of differentiating the most immediate patients for the purposes of decontamination and treatment. Lack of a system may result in delayed treatment for the most critical patients.

Recommendation: Personnel trained in triage and decontamination should be stationed near the entrance of the decontamination area.

Observation

Subject: Medical Monitoring Program – St. Clare

Discussion: Two of the four members screened to don PPE had never previously worn PPE. Two of the four staff members had increased blood pressures that could have potentially resulted in their becoming heat strain victims. The staff was not aware of methods to mitigate heat strain while wearing PPE by implementing work/rest cycles or monitoring stay times in the suits. There was no system in place to check PPE on a periodic basis to ensure its operability.

Recommendation: Establishing and following pre-entry screening criteria will help identify individuals for increased risk of heat strain and prevent these types of injuries. Implementing the use of a “Medical Monitoring Worksheet”, would be a useful tool to incorporate in the establishment of a procedure for staff to follow during an incident requiring staff members to don PPE. More staff should be trained to wear PPE.

Observation

Subject: Patient Tracking and Identification – St. Clare

Discussion: Patients who exhibited symptoms or history of chemical exposure were decontaminated but were not tagged with (typically blue) wrist bands. There were no attempts to track patient belongings or account for valuables.

Recommendation: A standardized system for indicating decontamination status should be consistently utilized. The facility should establish a color-coded triage system that allows for visual recognition of the patient’s status. The use of individual patient

belongings collection bags would have eliminated the concern related to tracking of patient clothing and valuables.

Observation

Subject: Patient Movement

Discussion: A patient collapsed after presenting to the decontamination area with complaints of a leg injury and weakness. This patient was initially attended by the only two personnel in PPE. This left the decontamination line unattended. A leg immobilizer was obtained and applied, and the victim was assisted to the decontamination shower.

Recommendation: Training on proper patient immobilization and transfer techniques must be reinforced to all staff personnel. Adequate staffing and equipment should be staged in the decontamination area for management of non-ambulatory patients.

Observation

Subject: Donning and Doffing PPE – St. Clare

Discussion: The decontamination team did not cover their PAPRs while performing self-decontamination, thus potentially exposing the filters to excessive water intake. In addition, the team did not decontaminate their feet prior to exiting the decontamination shower.

Reference: Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120; “OSHA Best Practices for Hospital-Based First Receivers”

Recommendation: The decontamination team members should be trained in proper self-decontamination procedures and practice them regularly. Decontamination team members also should perform periodic checks of equipment.

Finding Requiring Corrective Action FO06.6.2

Subject: Site Safety and Control Plan – St. Clare

Discussion: There was no clear identification of the boundaries of the decontamination area. There were no established traffic control points for cars entering the hospital parking area or delineation of hazard zones. There were also no personnel stationed at facility entrances to prevent possibly contaminated victims from entering the clean patient care areas.

Wastewater was pumped into a large barrel during the decontamination process; this process was effective until the run-off barrel was filled. The overflow liquid ran into the ambulance ramp near the entrance to the decontamination area. PPE donning supplies were staged within the designated hot zone.

Lack of proper security measures may result in contamination of the facility. In addition, treatment delays may result, and unnecessary utilization of scarce decontamination resources may be invested in previously uncontaminated patients.

Reference: 29 CFR 1910.120(q)(2) (directly or as included by reference under 40 CFR 311)

Recommendation: The hospital should declare that facility lock down be incorporated into the disaster response plan. Security and safety personnel should be trained on proper lock down procedure and self protection against contamination. The decontamination area should be clearly marked.

The pump in the decontamination shower was effective, but the water level of the collection drum should be monitored to eliminate the occurrence of run off into an unprotected area when the initial drum becomes full.

The responder dress out area should be in a defined staging area that is not within the hot end of the decontamination area.

EMERGENCY RESPONSE OUTCOME 7 – EMERGENCY PUBLIC INFORMATION

Fountain County provided Public Information Officers (PIO) to the Joint Information Center (JIC) and the County Emergency Operations Center (EOC). The full-time position was recently vacated. The Deputy Emergency Management (EM) Director served as the Public Information Officer during this exercise.

The PIO successfully handled calls and inquiries from citizens and the media. When reporters arrived at the EOC, the PIO followed procedures and arranged an interview for them with a Fountain County Commissioner. The PIO prepared a total of five EAS messages and one news release in a timely manner. The EOC PIO consistently maintained contact with the Fountain County PIO in the JIC and with other jurisdictions in the NECD community.

EMERGENCY RESPONSE OUTCOME 8 – REMEDIATION AND RECOVERY

Not Applicable.

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INDIANA DEPARTMENT OF HOMELAND SECURITY

EMERGENCY RESPONSE OUTCOME 1 – PREVENTION AND PREPAREDNESS

Coordinated emergency plans are in place and synchronized. The most recent Indiana State Comprehensive Emergency Management plan (online version) is dated February 2005. The Emergency Operations Center (EOC) Standard Operating Procedures (SOP) manual, dated April 2005, is current.

The following training courses are offered to CSEPP personnel: decontamination, Act Fast, Integrated Performance Evaluation, Chemical Awareness, and personal protective equipment (PPE). There are currently 350 trained first responders tracked in the Indiana Department of Homeland Security (IDHS) Chemical Stockpile Emergency Preparedness Program (CSEPP) training database which records course description and standard student information.

IDHS fully participates in the annual CSEPP exercise, and limits its play in Chemical Accident/Incident Response and Assistance (CAIRA) exercises to initial alert and notification.

Education programs and training are ongoing to ensure that the public has opportunities to learn about CSEPP emergency preparedness. Public outreach activities include active participation in the Citizens Advisory Commission (CAC), the annual publication of a CSEPP calendar, the distribution of various CSEPP publications at county fairs, and joint public presentations with the Newport Chemical Depot (NECD) Outreach Office.

The EOC receives and reviews the daily work plans from NECD via D2-Puff™.

EMERGENCY RESPONSE OUTCOME 2 – EMERGENCY ASSESSMENT

At 0907, IDHS received notification via the Newport Alert and Notification System (NANS) of a Category III, NECD post-only event; while still on the call, the event was immediately upgraded to a category IV, Community Emergency. The initial notification message described a ton container of VX nerve agent and a fire. The first protective action recommendation (PAR) was for Vermillion Township East residents to shelter-in-place. The status of PARs and protective action decisions (PADs) was updated throughout the emergency. WebPuff™ and D2-Puff™ were both used. The Acute Exposure Guideline Level (AEGL) hazard plume was continuously displayed on a large screen in the EOC.

At 0947, IDHS received a report that the fire was out, but the protective action recommendation (PAR) for Vermillion Townships East and West were to continue to shelter-in-place.

Per the Extent of Play Agreement, IDHS was to demonstrate field monitoring; however, no county requested this support. Therefore, IDHS did not need to demonstrate field monitoring.

EMERGENCY RESPONSE OUTCOME 3 – EMERGENCY MANAGEMENT

IDHS dispatch began notifications per the call down list in the Emergency Operations Plan (EOP). Affected departments were requested to send a representative to the IDHS EOC.

Vermillion County notified IDHS at 0912 that they had declared an emergency because of this accident and that the county PAD was to shelter-in-place.

The Counties of Vermillion, Parke, Fountain and Warren all activated their EOC's in support of this incident. IDHS received information that a Joint Information Center (JIC) was open shortly before 0930.

At approximately 0938, call out was complete and the Chief of EOC Operations announced that the IDHS EOC was operational. The Operations Manager continuously monitored incoming information, making appropriate decisions and revising the hazard assessment as needed. Equipment and systems were activated to capture and reflect data. EOC SOPs and department-specific reference material are kept in the liaison work stations in the EOC.

Radio Amateur Civil Emergency Services (RACES) operators assisted with communications for IDHS. They monitored activities at the depot and within adjacent counties to share with representatives in the EOC upon request.

The EOC Operation's Chief briefed participants that they might receive (real world) calls reporting smoke because of the generator used by NECD. Briefings were held whenever significant events occurred.

IDHS staffs at an operational level around the clock with continuous security. Visitor security badges were issued prior to admittance. IDHS utilizes message handling and tracking system (TracSys®) software to track incoming messages and actions taken by each agency or department. The software also acts as a status board for representatives at the EOC and enables representatives to stay current on accident-related activities. D2-Puff™ was used, and real-world meteorological data was used to reflect projected direction and movement of the plume along with mapping of those counties that were in the predicted hazard area.

Vermillion County submitted a request for decontamination support to IDHS to assist the South Vermillion Fire Department. This request was submitted just prior to the end of the exercise, thus the team was not actually dispatched. IDHS obtained information regarding availability and staging of the resource. NECD requested little support, but IDHS was prepared to assist if requested.

Emergency management liaison officers representing the Indiana Health Services, Indiana State Police, Indiana Natural Resources Law Enforcement, Indiana Department of Human Services, Indiana Environmental Management, Applied Computing Services, Radio Amateur Civil Emergency Services and the Joint Forces Headquarters of the National Guard all responded to the EOC and either monitored or assisted with the emergency.

EMERGENCY RESPONSE OUTCOME 4 – CAI HAZARD MITIGATION

Not Applicable.

EMERGENCY RESPONSE OUTCOME 5 – PROTECTION

Not Applicable.

EMERGENCY RESPONSE OUTCOME 6 – VICTIM CARE

Not Applicable.

EMERGENCY RESPONSE OUTCOME 7 – EMERGENCY PUBLIC INFORMATION

The Public Information Officer (PIO) for IDHS reported to the EOC, and a liaison from the Public Information Office reported to the JIC that was being established at the Rockville Armory. IDHS maintained continual contact with the JIC and responded to media calls with information provided by representatives at the JIC.

The IDHS PIO submitted no news releases because IDHS policy states those will be issued through the JIC. The only time this policy would change would be in an emergency where there was a State Declaration.

News releases issued by the JIC were faxed to IDHS and were reviewed by the PIO who shared pertinent information with the EOC representatives.

EMERGENCY RESPONSE OUTCOME 8 – REMEDIATION AND RECOVERY

Not Applicable.

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EDGAR COUNTY

EMERGENCY RESPONSE OUTCOME 1 – PREVENTION AND PREPAREDNESS

Edgar County Emergency Services and Disaster Agency (ESDA) is located outside the Protective Action Zone (PAZ) in Paris, Illinois. Edgar County does not receive a work plan from Newport Chemical Depot (NECD); therefore, the county does not develop a protective action decision (PAD) each day. The County's Emergency Operations Plan is dated March 31, 2006, and was distributed April 2006.

Edgar County participates in the annual Chemical Stockpile Emergency Preparedness Program (CSEPP) exercises but not in the quarterly CAIRA exercises.

Edgar County provides required training to first responders and incorporates CSEPP into all-hazards training. The county has several trainers so that the county's training program is self contained.

Edgar County has an active public outreach program through speaking engagements.

EMERGENCY RESPONSE OUTCOME 2 – EMERGENCY ASSESSMENT

Notification of accidents at Newport Chemical Depot (NECD) is transmitted to Illinois Emergency Management Agency (IEMA) in Springfield, IL, via the dedicated Newport Alert and Notification System (NANS). IEMA then notifies Edgar County via NANS. Edgar County was notified at 0913 of a Category IV community emergency with a protective action recommendation (PAR) of "None". The Edgar County 911 operator, located in the Sheriff's Office, also received the initial call at 0913 via NANS.

The ESDA staff was kept apprised of the plume changes via computer generated plume maps e-mailed to them by IEMA.

EMERGENCY RESPONSE OUTCOME 3 – EMERGENCY MANAGEMENT

The 911 operator initiated a call down for full operational level staffing of the Emergency Operations Center (EOC). The EOC was operational at 0930.

The Edgar County EOC was equipped with sufficient communications systems. Among these were: NANS alert system, landline phones, cell phones, radios from emergency agencies, e-mail ability, and fax capability. The EOC was small, and when fully operational, was crowded and noisy when all phones were in use. The EOC staff effectively performed their emergency functions without problems or delays. Adequate security was provided; access to the EOC was controlled, and staff signed in to enter the facility.

The PAD did not affect Edgar County therefore the PAR to the public was one of no action required but stay alert to possible changes. The ESDA Director briefed the staff of updated information. One decontamination site requested a Mutual Aid Box Alarm System (MABAS); the EOC simulated providing this resource.

County management in the EOC discussed protective action responses for special populations, but it was not necessary to do anything for those populations. The county's plans and procedures for these special care populations were adequate.

EMERGENCY RESPONSE OUTCOME 4 – CAI HAZARD MITIGATION

Not Applicable.

EMERGENCY RESPONSE OUTCOME 5 – PROTECTION

The Edgar County PAD was “no protection”; At 0950 and 0952, emergency alert system (EAS) messages were sent (simulated) to Edgar County radio stations regarding the NECD accident. . The EOC directed the opening of a reception center and shelter.

Paris Community Hospital was notified at 0914 of the accident. By 1205, it was reported that the hospital, the health department, and the shelter were all secured.

Crestwood School Reception Center and Shelter

The Edgar Chapter of the American Red Cross (ARC) demonstrated the capability to staff, set up and operate a reception center and shelter. Per the Illinois State Plan, Paris, located in Edgar County and Danville in Vermilion County serve as the host communities for the evacuating Illinois PAZ population. Paris and Danville are outside of the PAZ. In Edgar County, the initial mass care center is collocated at the reception center facility. Crestwood Community School was designated as the reception/initial mass care center for Edgar County residents evacuating from the PAZ. Edgar County ARC has oversight to organize the shelter, and the Edgar County Health Department has oversight of the Reception Center. A Memorandum of Agreement (MOA), dated March 2006, between the American Red Cross and Crestwood School was available at the school.

Two members of the Edgar County Health Department arrived at Crestwood School at 0930 and set up the reception center 50 feet outside the school entrance. The ARC workers began arriving at 1011, inspected the building, and filled out a Building Inspection Checklist that was signed by Crestwood's school principal and the ARC representative. After a brief discussion and review of procedures the shelter was opened at 1056. Two evacuees arrived at 1057. Both victims had been decontaminated and were color banded as stated in local procedures. The first, an evacuee appearing confused was sent inside the shelter after being checked through the reception center. ARC procedures were followed and the situation was handled in a professional manner. At 1101

that evacuee was removed from the shelter by a police officer and taken to jail (simulated). At 1100, a second evacuee was registered and assistance was provided to notify the family.

At 1059 a third evacuee arrived at the reception center complaining about a leg injury, a headache, and difficulty breathing. After questioning by health department officials, it was determined that Victim #3 exhibited signs of nerve agent exposure. She was instructed to lie in the grass under the ARC tent. The health department representative contacted Emergency Medical Services (EMS) by radio. The reception center was notified by radio that an ambulance was on the way. The ambulance arrived at 1111. A lone firefighter wearing self-contained breathing apparatus (SCBA) arrived on scene at 1112. The ambulance driver radioed a request for a fire truck to help decontaminate the third evacuee. The reception center was informed that the fire truck was being used and couldn't go to the reception center. Health department officials and the firefighter decided to use a garden hose at the school to perform gross decontamination of the evacuee. At 1128 the victim was transported to the hospital.

Health department officials followed proper protocol in setting up the scene and registering the victims.

Edgar County Airport Traffic Control Point

At 0937 a traffic control point (TCP) was set up at the entrance of the Edgar County Airport by an Edgar County Sheriff's Department auxiliary officer. The auxiliary officer had a local area map, 911 map, an Emergency Response Guidebook (ERG), a symptom card, and an Acute Exposure Guidelines publication in his patrol vehicle. Because his level of hazardous materials training was at the awareness level, he had no PPE assigned.

The TCP was appropriately set at the perimeter and ran effectively. The officer provided perimeter security and screened approaching individuals

EMERGENCY RESPONSE OUTCOME 6 – VICTIM CARE

Edgar County Airport Decontamination Site

The Paris Fire Department, Chrisman Fire Department, Northern Edgar County Ambulance Service and Edgar County Special Service Area emergency medical services (EMS) were dispatched at 0913 to set up a decontamination site at Edgar County Airport. Personnel from the combined responding agencies arrived within 24 minutes. Fire personnel properly and efficiently set up the site including two ambulatory and one non-ambulatory decontamination lines in one tent as well as a hose line for gross decontamination. Separate ambulatory lines for male and female were established. All equipment worked properly, and all personnel had respiratory clearances.

The Incident Commander briefed groups and assigned tasks. The Safety and Decontamination Officer directed that pre-entry vital signs be taken of every worker donning protective clothing. The vital signs were taken by the Edgar County Special Services Ambulance personnel.

At 1001, the first patients arrived at the decontamination area before the site setup was complete. The patients were directed to the gross decontamination area for (simulated) gross decontamination. They were instructed to remain in the gross decontamination area until the decontamination shower setup was complete. The initial patients included one ambulatory trauma patient showing signs of agent exposure, one ambulatory patient showing minor signs of agent exposure, and one non-ambulatory trauma patient showing moderate signs of agent exposure. The initial patients were followed by a single patient showing signs of confusion. This patient also was directed to the gross decontamination site. Patient #1 began the decontamination process 12 minutes later, was blue wrist banded on the hot side and then directed into the shower. Wet decontamination was simulated because of adverse weather conditions.

Patient #2 entered the shower and was decontaminated and was followed shortly by the third ambulatory patient. All the ambulatory patients were decontaminated by 1017. Medical personnel triaged the patients after decontamination. The patient showing moderate exposure symptoms, was administered one Mark I Antidote Kit and wrist banded accordingly. The non-ambulatory patient was taken into the non-ambulatory decontamination line at 1027 and taken to medical triage nine minutes later.

It was determined that the non-ambulatory patient needed to be transported immediately to a local hospital. The patients was stabilized, given one Mark I Antidote Kit, and banded accordingly. The moderately exposed trauma patient and the non-ambulatory exposed trauma patient were transported via Edgar County Special Service Area Ambulance to the Paris Community Hospital for further definitive treatment. En route the Ambulance personnel administered one additional Mark I Antidote Kit to the moderately exposed non-ambulatory patient.

The decontamination site had the following inventory of antidote:

Chemical Agent Pharmaceutical Inventory					
Jurisdiction			Dosage amount	# of	Exp. date
Edgar County	Special	Service Area	Mark I Antidote Kits	110	October, 2006
Northern Edgar County		Ambulance	Mark I Antidote Kits	120	November, 2008

Status of Previous Findings

❖ **Finding Requiring Corrective Action: ED05.6.1**

Subject: No Sharps Containers

Resolved: Yes

❖ **Finding Requiring Corrective Action: ED05.6.2**

Subject: Medication Error

Resolved: Yes

Paris Hospital

Paris Community Hospital (PCH) is a 25-bed facility with eight emergency department (ED) beds. The facility has a comprehensive disaster plan, with a revision date of May 2005, to direct management of internal and external incidents. The Medical Records department is designated as the hospital Incident Command location. Binders are maintained in the Medical Records department containing job action sheets utilizing Hospital Emergency Incident Command System (HEICS). The pharmacy maintains a stock of antidote as represented in the following table:

Chemical Agent Pharmaceutical Inventory			
	Dosage amt	# of	Exp. date
Atropine	.4mg/ml (20ml)	45	March 2007
Mark I Antidote Kits	1 dose	490 / 480	October 2006 / May 2009
Diazepam	10 mg vial	25	October 2006
Diazepam	10 mg syringes	10	June 2006

At 0918, the PCH hospital operator received initial notification of an accident at NECD from the local 911 dispatch. PCH initiated a lock down operation where signs were posted at each door to inform the public that the hospital was participating in the CSEPP exercise. Personnel were placed at facility entrances for security. PCH does not have an overhead paging system. The “Info Rad” computer system was used to page each department. The decontamination team was similarly notified via text message at 0915. Shortly after the notification of the NECD accident, the local sheriff dispatch notified the hospital, via radio transmission, of an accident involving a bus and a truck near the local airport. PCH quickly placed personnel at key points throughout the ED to assist with patient tracking.

At 0932, the PCH Chief Executive Officer arrived in the medical records department to initiate HEICS. He assumed the position of Incident Commander (IC), assigned roles and distributed job action sheets to hospital staff as they arrived in the medical records department. The IC calmly interacted with staff to ascertain their comprehension of the incident command process and facilitate completion of duties within defined time frames. The IC briefed staff at 1005. PCH dispatched a member of the hospital staff to the Edgar County EOC. The IC initiated contact with the liaison to provide a direct telephone number for communication and direct the flow of information from the liaison to the hospital via the IC. Prior to the conversation, the liaison had communicated information to the ED.

During the briefing, the operations section chief reported that PCH currently had 12 inpatients, of which three could be discharged, and 11 beds were immediately available. Additionally, the operations section chief had initiated a call down roster and received confirmation of availability

from off-duty staff. Information regarding the accident and victims was disseminated. The labor pool was located across the hall in the cafeteria; the IC recognized that members of the labor pool were being assigned tasks without consultation with the labor pool section chief and he offered a resolution strategy.

The PCH decontamination station was located in a separate multi bay garage located approximately 20 yards east of the hospital. The larger of two portable decontamination tents was kept erected permanently in this facility. Water is provided by city water supply and warmed by a 50-gallon heating tank in the garage. This is supplemented as necessary, with a 2,000-gallon water tanker supplied by the Paris Community Fire Protection. The decontamination team consists of eight to 10 individuals with documented hazmat operational level training and annual retraining. The team uses Occupational Safety and Health Administration (OSHA) Level B encapsulated protection suits.

At 0937, the sheriff's deputy set up a traffic control point at the entrance to the hospital parking lot on East Court Street. By 0959, the entire team was suited up; the pre-donning vitals (pulse and blood pressure) were recorded and observation of duration periods was completed by the safety officer. At 1012, the first two patients presented to a fireman at the outer edge of a well-identified patient access point. The fireman asked the patients several questions about their symptoms and then assisted them to the hot zone. Two PPE-clad responders surveyed both patients with a Multi Rae Plus meter. The patients were given white wrist tags. No consideration of treatment with Mark 1 Antidote Kits was verbalized. No other actions relating to their decontamination or the bagging of personal effects was demonstrated.

These patients were walked through the ambulatory showers but no effort was made to explain decontamination procedures or demonstrate them. The team placed the non-ambulatory patient (manikin) in a Stokes litter and decontaminated it. The litter and patient were placed on the ground for nursing staff to pick up and place on a waiting gurney—to be transported into the hospital.

The team doffed PPE, and left it in the middle of the garage floor. The team then rested, hydrated and had vital signs (pulse and blood pressure) recorded. At 1126, Edgar County EMS presented with an “emergency decon”, non-ambulatory patient. The hospital decontamination team re-donned PPE and transferred the patient from the ambulance gurney to a backboard. A cursory history was taken, and the patient was partially decontaminated; again, members of the team crossed back and forth between the hot and cold zones. The decontamination was partially performed; the patient wasn't washed on both sides, nor was the hair washed other than by the shower. Again, unprotected medical personnel received the patient on the same unwashed backboard. The patient was transferred to the ED where patient tracking and treatment continued.

Strength

Subject: Ancillary Department Participation

Discussion: Participants of the ancillary departments, such as laboratory and radiology, showed great enthusiasm. Rather than just explaining their role, the laboratory sent a phlebotomist to the ED to simulate drawing blood. Radiology took a patient to their department and held the patient in real time. This performance by both departments helps the hospital in the understanding of how long it actually takes to receive pertinent information regarding these patients.

Strength

Subject: Hospital and County Cooperation

Discussion: A PCH representative was dispatched to the Edgar County Emergency Operations Center. This liaison communicated pertinent information in a timely manner to the Incident Command at PCH. The distinct advantage of accurate, timely information is recognized in the focused response of the hospital staff to the emergency.

Finding Requiring Corrective Action ED06.6.2

Subject: Site Safety and Control– Paris Community Hospital

Discussion: Multiple aspects of the decontamination process were observed to be erroneously performed, such as failure to observe the inviolability of cold and hot zones. No deployment of cold zone backboards or gurneys occurred, and no protected team members were deployed to the cold zone to receive patients. The actual demonstration of decontamination techniques failed to include decontamination of the posterior aspect of the patient’s body or their scalp.

Reference: 29 CFR 1910.120(q)(2) (directly or as included by reference under 40 CFR 311)

Recommendation: Ensure that a site safety and control plan is fully developed and implemented. Have the decontamination team practice comprehensive procedures with observers reinforcing proper methods. Multiple practice sessions using soap, water and manikins/live volunteers to reinforce solid decontamination technique.

Finding Requiring Corrective Action ED06.6.3

Subject: Medical Monitoring Program – Paris Community Hospital

Discussion: Paris Community Hospital (PCH) was unable to produce the medical and respiratory clearance records for the personnel who participated in the decontamination process. It was stated that the personnel who would be participating in the decontamination process have been medically cleared. Medical clearance needs to be accomplished by a Physician or Licensed Health Care Professional (PLHCP) prior to wearing Personal Protective Equipment (PPE) and records attesting to same should be available for inspection.

Reference: OSHA 29 CFR 1910.134(e); CSEPP Planning Guidance Appendix H (2)

Recommendation: Have medical and respiratory clearance performed prior to participation in decontamination training and participation where donning PPE is required. Having a designated place to hold such records would make them readily available.

EMERGENCY RESPONSE OUTCOME 7 – EMERGENCY PUBLIC INFORMATION

Edgar County PIO function was accomplished by a volunteer who is the managing editor of the local newspaper. She was notified through the 911 dispatch at 0919 and arrived at the county EOC at 0947. She was immediately briefed as to the emergency at NECD.

The county made the decision that no PAR was needed and at 0930 inform the public through the national weather service that no action was needed to be taken. Further notification was done through local radio stations at 0930 and again at 0952. The county then made a decision to not interface with the Joint Information Center because Edgar County was not affected. The PIO and county staff monitored news releases from other jurisdictions about the accident.

EMERGENCY RESPONSE OUTCOME 8 – REMEDIATION AND RECOVERY

Not Applicable.

VERMILION COUNTY, ILLINOIS

Vermillion County opted to host and conduct a community planning discussion with representatives from nine response agencies. Although the Chemical Stockpile Emergency Preparedness Program (CSEPP) responsibilities were covered briefly, the County Director centered the main discussion on a hypothetical hazardous materials event at a local chemical manufacturing facility within the protective action zone (PAZ).

The Westville Volunteer Fire District Chief initiated the roundtable with a description of his responsibilities as the Incident Commander. Each response agency representative then articulated their responsibilities.

The roundtable discussion revealed the need for early notification to key response agencies to ensure their effective response capability. The team identified several options to accomplish this as well as the appropriate next step. Discussion also revealed how much emergency preparedness progress Provena United Samaritan Medical Center has made over the last several months. While the Medical Center recently acquired decontamination equipment, they have an insufficient amount of qualified personnel to perform a decontamination operation. Various options necessary to accomplish this vital capability were discussed. Vermillion County plans to demonstrate field decontamination capabilities this summer.

Vermillion County is to be commended for using this opportunity to strengthen community emergency preparedness. Representatives expressed the value of the discussion both in knowledge gained and in specific actions to accomplish their responsibilities.

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ILLINOIS EMERGENCY MANAGEMENT AGENCY

EMERGENCY RESPONSE OUTCOME 1 – PREVENTION AND PREPAREDNESS

The Illinois Emergency Management Agency (IEMA) Emergency Operations Center (EOC) receives a daily work plan and protective action recommendation (PAR) from the Newport Chemical Depot (NECD). The PAR recommends public protective action within the Protective Action Zone (PAZ) in the event of a chemical accident at the NECD.

The Communications Center Manager D2-Puff™ considers this information, along with other pertinent information, and advises the EOC manager on appropriate action for the protection of residents. In the event of a chemical accident, the EOC manager disseminates an IEMA PAR to the PAZ counties within the State of Illinois.

The IEMA Emergency Operations Plan All Hazards contains a Chemical Stockpile Emergency Preparedness Program (CSEPP) Annex which is reviewed and updated periodically. The promulgation date is April 4, 2006. The current Newport community Alert and Notification Memorandum of Understanding is dated March 3, 2005.

The IEMA Communications Center participates in the NECD quarterly chemical accident/incident response and assistance (CAIRA) exercises. IEMA also participates in Department of Homeland Security and the Department of Energy exercises. IEMA received a full accreditation in the national Emergency Management Accreditation Program (EMAP) in February, 2006.

An active and continuing education program is in place at IEMA. All EOC staff receives periodical EOC training as well as basic, refresher, and advanced training for their respective positions. Several are cross-trained for other positions. Training is conducted in the counties. The primary database which contains the name, course and course date is maintained by the IEMA. During the past six months, 13 classes were held in which 231 students were trained in hazardous materials, EOC operations, chemical awareness and shelter-in-place. Continuing education is ongoing with civic groups and various schools.

The EOC and IEMA Communications Center contain up-to-date communications equipment and information technology resources to manage and coordinate response to emergency events. The equipment is tested by its daily use.

EMERGENCY RESPONSE OUTCOME 2 – EMERGENCY ASSESSMENT

Emergency Assessment functions at IEMA's EOC are shared between the Communications Center and the EOC. The EOC had limited play because of real-world events. Sufficient

capabilities to effectively function during a chemical event were successfully demonstrated in the IEMA's Communications Center.

At 0908, IEMA's Communications Center received initial notification from the Newport Chemical Depot of a Category III – Post Only Emergency chemical accident with the release of VX chemical agent from a one-ton container. The wind direction was from 264 degrees. The notification was received on the Newport Alert and Notification System (NANS) phone, located in the State Communications Center adjacent to the EOC. Acute Exposure Guideline Level (AEGL) 1 was 44 miles and an AEGL 2 was 3.5 miles. No AEGL 3 information was provided. The Emergency Response Telecommunicator (ERT) completed the NANS notification form and promptly gave it to the acting EOC manager. During the initial notification, NECD updated the accident to a Category IV –Community Event Notification Level. Included in this notification was the protective action recommendation. The PAR from NECD was that Vermillion Township East in Vermillion County, Liberty Township and Reserve Township in Parke County in Indiana were to shelter. No recommendation was given for the State of Illinois. At 0910 the State ERT notified Edgar and Vermilion Counties by the NANS of the incident. Plume plots and updates were taken and e-mailed to the PAZ in a timely manner. At 1029, the staff reported to NECD conflicts between the D2-PuffTM Run Reports and the information provided over the NANS. NECD informed IEMA that the protective action recommendations given over NANS were made by the Commander and that was why there were differences. At 1123, IEMA noted that the affected townships reported over NANS did not correspond with the affected townships in the D2-PuffTM Run Report. Notification of exit shelter times in the Helt Township East and West was given via NANS at 1123 yet was not provided earlier for the PAR to shelter. No action was taken by IEMA, because the affected counties are in Indiana.

EMERGENCY RESPONSE OUTCOME 3 – EMERGENCY MANAGEMENT

Limited staff was available at IEMA because of a real-world event; however, all necessary duties were performed. Illinois was not significantly affected by the chemical incident. At 0910 the ERT notified Edgar and Vermilion Counties (by NANS) of the incident. The acting EOC manager followed with fax and a land line call that no action was necessary as Illinois was not affected at this time.

The D2-PuffTM plume modeling software was used. An ERT brought up the software but was unable to capture the plume until 0934. This action did not impede in providing timely information to the counties. At 0937 the EOC D2- PuffTM analysts arrived to take over the plume updates.

An update was given to the acting EOC manager at 1003 by the State Regional Coordinator who had been deployed to Edgar County. Due to the extent of play agreement consideration was being given by the county to open a shelter and set up a decontamination site. At 1014 decontamination sites were established at the Paris Community Hospital and the airport. Crestwood School opened a shelter at 1114. The airport site reported they were standing-down at 1114.

EMERGENCY RESPONSE OUTCOME 4 – CAI HAZARD MITIGATION

Not Applicable.

EMERGENCY RESPONSE OUTCOME 5 – PROTECTION

The acting EOC manager followed up with a fax and a land line call that no action was necessary as the State of Illinois was not affected at this time. A call to update Edgar County was placed at 0931. The county was told that a call via NANS would be placed by the EOC only if there was a wind shift that could affect the county. Otherwise the information would be received by fax or land line.

At 0915 the State Regional Coordinator was notified by the ERT to deploy to Edgar County to assist the county if needed. He arrived at 0938 and provided the EOC with eight updates.

EMERGENCY RESPONSE OUTCOME 6 – VICTIM CARE

Not Applicable.

EMERGENCY RESPONSE OUTCOME 7 – EMERGENCY PUBLIC INFORMATION

IEMA did not deploy a staff member to the Joint Information Center (JIC) because of real-world events. At 0916 the IEMA Communications Center received a non-surety message over NANS that the Commander at NECD had given permission to activate the JIC. The acting EOC manager promptly placed a call to Edgar County notifying them of the activation of the JIC and provided them with a contact number. The Communications Center received the first press release via electronic mail from NECD at 1014. IEMA did not appoint a public information officer, but IEMA staff faxed news releases to Edgar County in a timely manner.

The lack of staffing at the JIC did not appear to impede the flow of information from the EOC to the counties.

EMERGENCY RESPONSE OUTCOME 8 – REMEDIATION AND RECOVERY

Not Applicable.

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JOINT INFORMATION CENTER/ JOINT INFORMATION SYSTEM

EMERGENCY RESPONSE OUTCOME 1 – PREVENTION AND PREPAREDNESS

Not Applicable.

EMERGENCY RESPONSE OUTCOME 2 – EMERGENCY ASSESSMENT

Not Applicable.

EMERGENCY RESPONSE OUTCOME 3 – EMERGENCY MANAGEMENT

Not Applicable.

EMERGENCY RESPONSE OUTCOME 4 – CAI HAZARD MITIGATION

Not Applicable.

EMERGENCY RESPONSE OUTCOME 5 – PROTECTION

Not Applicable.

EMERGENCY RESPONSE OUTCOME 6 – VICTIM CARE

Not Applicable.

EMERGENCY RESPONSE OUTCOME 7 – EMERGENCY PUBLIC INFORMATION

Activity began at the Newport Community Joint Information Center (JIC) in Rockville at 0927 when the JIC Manager arrived at the National Guard Armory. Tables, telephones, printers, a fax machine and some computers were set up already. The JIC Manager turned on the equipment and started signing in and badging JIC staff as they arrived.

A JIC staffer arrived at 0944 with the mobile JIC equipment which is stored at Newport Chemical Depot (NECD). The staffer informed the NECD Chemical Stockpile Emergency Preparedness (CSEPP) public affairs officer (PAO), who had arrived a few minutes before, that roughly 80 percent of the JIC staff was sheltering in place at NECD. Part of NECD sheltered-in-place because of the accident, but some staff members were not in sheltered areas and were able to get to the JIC.

The NECD CSEPP PAO informed the JIC Manager who assigned more duties to the staff present to cover all positions until the remaining NECD JIC personnel arrived about 45 minutes later. The JIC staffer who brought the mobile JIC unpacked laptop computers and audio-visual equipment for the news conference.

At 0950, the JIC Manager briefed the skeleton staff on the situation at NECD. Briefings were held every 30 to 45 minutes. Using a portable public address system, Indiana Emergency Management Agency, NECD and the counties' information was shared with JIC staff.

By 1041, the JIC was operational with staff filling the positions of news writer, media monitors/analysts, administrative support, public and media phone call takers, status board writers, media liaison and security. One staffer monitored e-mail and Argonne National Laboratory's (ANL) CSEPP Hotline and shared information with the rest of the staff.

News releases in the Newport community were issued and distributed by the individual jurisdictions until the JIC was open. After the JIC opened, PAOs and public information officers (PIOs) from the various jurisdictions forwarded news releases to the JIC for distribution. JIC news writers also produced several news releases that were disseminated on JIC letterhead.

The media monitoring team was adequately equipped and sufficiently trained to effectively monitor emergency alert system (EAS) messages, news releases, and mock media news stories. The monitoring team utilized three televisions, one radio, and one laptop with internet access.

Two people staffed this work station. The media monitoring team was sheltered at NECD and arrived at the JIC at 1045. They immediately began working to clear the backlog of messages. One staff member programmed the correct television stations and set up radio monitoring of the EAS stations while the other member began sifting through hard copies of media stories. The work area was up and running within 10 minutes. As discrepancies were found in the JIC news releases and news stories, the staff immediately took action to clarify or correct the inaccurate information by informing the JIC Manager, the NECD CSEPP PAO, and the appropriate staff member.

Phones began ringing at 0950; at 0954 a phone went unanswered even though there were several people standing near the phone at the time. This happened several times.

The call takers arrived at 0958 and set up: two media call takers; two citizen call takers; two outgoing callers. Each county and state liaison also had a phone (six total). Media call takers, public call takers and outgoing callers all had laptop computers with electronic smart books.

These call-takers were placed where they could easily see status boards. County and state liaisons had access to paper smart books, but in order to see status boards they had to leave their stations and walk around the room. All call takers were given EAS messages and news releases as they were received by the JIC.

Even though call takers had access to all of this information, they were unable to answer a lot of the questions and had to leave their station to find someone with answers. Call takers used cordless phones without a hold option and would walk throughout the JIC with a caller on the phone. This allowed the caller to hear conversations throughout the JIC.

Vermillion, Parke and Fountain counties all sent liaisons to the JIC in place of PIOs. For the first time, a West Central Community Hospital representative was at the JIC. The liaisons began receiving calls from the media at 1008. They received information through phone calls, news releases and EAS messages. The liaisons each remained in contact with their counties at intervals no longer than 30 minutes.

At 1315, the NECD Commander and state and county public affairs representatives participated in a news conference facilitated by the JIC Manager. The news conference lasted until 1360.

Observation

Subject: Inadequate Information Sharing

Discussion: The Newport Chemical Depot issued its first news release at 0923; Fountain and Vermillion counties issued their initial news releases at 0935; and Parke County issued its first news release at 1020. No information of any kind from Vermillion County was ever distributed within the JIC, although the Vermillion County liaison in the JIC posted some information on the status board. The Fountain County liaison in the JIC also posted information on the status board, but only three items of information from Fountain County were distributed to the JIC. The Army's first news release (at 0923) was not distributed within the JIC until 1034. In contrast, Parke County provided numerous information items to the JIC, including EAS messages and news releases. Many, if not all, of these were captured by early-arriving JIC volunteers and distributed even before the JIC was open. As a result, much information about the situation in Parke County was available in the JIC throughout the day. Much less was available to JIC personnel about the circumstances in Vermillion County and Fountain County.

Recommendation: The importance of timely and accurate dissemination of information during a community emergency should be stressed throughout the Newport community, and a culture of information-sharing should be cultivated constantly.

Observation

Subject: JIC News Release

Discussion: There were several problems with an unnumbered JIC news release posted to ANL’s CSEPP Hotline at 1345. First, the news release was not on JIC letterhead, did not indicate a time the information was current as of, and had no point of contact. Besides the formatting problems, this news release was the only announcement stating that Parke County officials had lifted the shelter-in-place order for all Parke County residents. While this change in protective action instructions should have been issued as an EAS message by the county, the JIC missed an opportunity in this news release to provide a “big picture view” of the status of the emergency response in Indiana, including Fountain and Vermillion counties. By the time this JIC news release was issued, Fountain County had told its evacuated residents it was safe to return home and residents of Vermillion Township were still sheltered. Additionally, the news release did not address whether the schools were still sheltered.

Recommendation: The JIC should look for opportunities in its public communications to represent all the jurisdictions that are part of the Joint Information System; this will establish the JIC as a primary source of information for media covering all facets of the emergency response.

Observation

Subject: Media Monitoring

Discussion: On more than one occasion, after finding an error in news stories and making the managing staff aware, the correction was not made in a timely manner. Additional news stories were broadcast repeating the erroneous information.

Recommendation: JIC management should design protocols for the management of information throughout the dissemination process, including procedures for each of the designated functions with system checks that ensure accurate information is being released.

Observation

Subject: Call Taking

Discussion: The JIC telephone teams were well staffed and had access to electronic smart books. However, there were only two phones designated for media inquiries. There also were only two phones for citizen inquiries. Having only four lines for incoming questions from the media and public poses a problem for disseminating information in a timely manner.

Recommendation: Adding at least one phone to each designated area in media and citizen call-taking areas would help move information in a more timely fashion. This would reassure the public and media that someone is there to answer questions.

Observation

Subject: Call Taker Knowledge

Discussion: Call takers had access to electronic smart books and were given EAS messages and news releases as the JIC received them, yet, as with last year, they could not provide answers to callers. Call takers routinely passed calls to the JIC Manager or to the NECD CSEPP PAO. While call takers were walking around the JIC with phone in hand, callers were not put on hold and could hear conversations going on throughout the JIC.

Recommendation: Accurate and timely answers by staff are essential to the dissemination of emergency public information. Because this is a repeat observation, it is imperative for call takers to receive a thorough review of automated reference materials and procedures. Additional training should be provided to volunteers on how to quickly and accurately utilize smart books and other resource materials. Phones need to be upgraded to include a hold button.

Observation

Subject: JIC Status Boards

Discussion: Status boards are tools used in the JIC to share information among jurisdictions. The boards were placed in an area easily viewable for the media and public phone teams but not by the liaisons from state and local jurisdictions.

Recommendation: The placement of JIC status boards should be revisited. The JIC should either place the status boards on one end of the JIC working area where they are viewable by all or have multiple status boards.

Observation

Subject: JIC Equipment

Discussion: All of the JIC equipment seemed to be functional, especially notable considering the time change the weekend before.

At least one fax machine was set up and turned on without paper. An Indiana county liaison/representative did not receive a timely fax because of a lack of paper and unfamiliarity of where office supplies were stored.

The volunteers copying and distributing material were diligent in their work. However, most of the copies had large dark marks and streaks. Those blemishes made it difficult to read the documents. In addition, it would have been extremely difficult to fax the

information to other offices and agencies assuming the receiving machines would just exacerbate the blemishes.

Recommendation: Develop or update a checklist for JIC staff to review for quick and efficient set up and activation of the JIC.

Observation

Subject: EOC/JIC Use of ANL's CSEPP Hotline

Discussion: The Internet and ANL's CSEPP Hotline were monitored for incoming e-mails, the Exercise News Network, and mock media news stories. Items from this were printed, logged in, and copied for distribution within the JIC. However, several items were posted to ANL's CSEPP Hotline multiple times by various jurisdictions. Consequently, JIC staff logged and distributed the same item several times causing confusion among JIC staff.

In addition, the media monitoring staff was unable to access the information on ANL's CSEPP Hotline until 1127 because of JIC equipment problems. The laptop used for media monitoring had not been tested for all the functions in CSEPP Hotline..

Internet access provided an excellent opportunity to maintain open communication among the JIC, NECD EOC, and other jurisdictions. However, that tool did not seem to be utilized to the fullest extent possible. E-mails were received from Parke County asking the JIC to make widest distribution of EAS messages and news releases. It was not evident how that information was in fact disseminated. It appeared that Parke County was the only jurisdiction to make that request. The NECD EOC PAO could have depended on the JIC for distribution of news release once the JIC was open.

Recommendation: ANL's CSEPP Hotline monitor should be encouraged to use personal experience and initiative to cull repetitive documents and only maintain the first copy received. This will help PAOs/PIOs become familiar with the jargon of emergency management and the news media in order to use technically proper terms that will be clearly understood by emergency management and/or news media professionals. In addition, equipment being utilized should be installed and tested.

Observation

Subject: Unclear Labeling of EAS messages and News Releases

Discussion: File names and e-mail subject lines were not designed and written in a clear manner. Files from Parke County were labeled EAS #1, EAS #2, etc. Not all files were literally EAS messages. There would have been a lot of confusion if the other counties also sent EAS messages similarly labeled. Parke County could have labeled its files as PC EAS #1 and Vermillion County, IN, could have labeled its as VCIN EAS#1 while Vermilion County, IL, might use VCIL EAS #1. Also the e-mail subject line should be

used to identify the jurisdictional originator, date, and topic (i.e.: Subject: Parke County NR - April 5, 2006 - "Commissioners order limited evacuation")

Parke County conscientiously provided complete information in a timely manner for distribution within the JIC. However, many of these items were inappropriately labeled as Emergency Alert System (EAS) messages when they were, in fact, news releases. For example, an item at 0940 labeled EAS # 4 reported that the Parke County Emergency Operations Center (EOC) had been activated and was operational. Another item at 1022 labeled as EAS #8 simply reproduced the text of the Parke County emergency proclamation. While important and newsworthy, neither of these would seem to rise to the level of urgency required for an EAS message.

Similarly, the three items produced by Fountain County that were distributed in the JIC were simply labeled as messages 3, 4, and 5. It was unclear whether these were intended to be EAS messages, news releases, or memo-style information items for internal JIC consumption. Message #5 announced an evacuation order for two townships in Fountain County, clearly a development that warranted both an EAS message and rapid dissemination to the news media. The headline on this item - "Evacuation Announcements" - failed to convey an appropriate sense of its true significance.

Recommendation: The NECD PAOs and various jurisdictional PAOs should review plans and policies to develop common or complimentary file and e-mail protocols in order to maximize automation capabilities and reduce confusion.

Observation

Subject: NECD, JIC News Release Construction

Discussion: The first news release was issued from the NECD EOC PAO at 0923 and received in the SIMCELL at 1044. The news release had the correct date. It did not have any time on it. A second news release was not issued until approximately 1104 (after the JIC was open). There was no evidence of any coordination between the NECD EOC and the JIC. Like the first news release, there was no time listed. In addition, the text of the second news release was too large for the space allocated in the CMA news release template and overlaid the contact information in the lower left corner.

Three news releases were prepared by the Mason & Hanger Corporation volunteer from NECD. Times of preparation or news release were not listed. In addition, the third JIC news release was prepared in a different format. (Please note: the third news release included "2-2-2" at the bottom of page one.)

Recommendation: Ensure news releases include the time issued. Also, the JIC news release writer and reviewer should ensure all documents are identical in format and style.

Observation

Subject: News Conference

Discussion: Overall, the participants at the JIC news conference provided emergency public information in an effective way and represented their jurisdictions well. However, there were several elements of the news conference design that could have lessened the ability of participants and news media to use the news conference to its fullest potential:

1. To present a more unified front, the primary participants should have stood closer to the speaker. This would have sent the message of “one unified team working together.” It also would have reduced the time necessary for one speaker to leave the podium and another to walk up. While that amount of time may not seem significant, over the 35-minute news conference it left quite a bit of dead air.
2. The media and the public will be far more interested in some speakers than others. While information provided by someone such as the representative from the Board of Animal Health is important, it is not of the same level of consequence as information about the status of protective actions (particularly in this case when the animal health representative did not have much specific information). The opportunity for remarks should be limited to those who are critically involved in the response; reference should be made to the availability of other speakers, but they should not be part of the news conference presentation unless the media has specific questions.
3. The rules used to guide reporter’s interaction with the speakers were not conducive to a good exchange of information. It would have made more sense for the media to have been permitted to question the speaker after he/she made opening remarks. It was too disjointed to hear seven speakers, then to try to return to the thread of their remarks when several minutes had passed. In one instance, one of the speakers the mock media had follow-up questions for left the news conference before those questions could be asked.
4. The backdrop for the news conference should be improved. While a tight shot of the speaker showed a nice blue backdrop, a wider shot revealed that the blue backdrop did not extend the length of the wall underneath. The overall effect was somewhat unprofessional.
5. The JIC Manager opened the news conference while the NECD CSEPP PAO stayed in the JIC working area to address incoming phone calls and staff questions and issues. As a point to consider, the JIC Manager might want to announce a time limit. The news conference seemed to go very long to the point where the Commander and other critical managers were kept from being where they were needed more. (i.e.: the Commander was away from the NECD EOC for an extremely long time). By announcing a time frame, the JIC Manager can step in,

release the Commander from the podium in a smooth fashion, and all parties can resume other critical duties.

Recommendation: Public affairs staff in the Newport CSEPP community may benefit from refresher spokesperson and news conference training.

Observation

Subject: Emergency Public Information Basics

Discussion: The job of a PIO during a critical incident is to provide FACTUAL information (Fast, Accurate, Coordinated, Timely, Understandable, Appropriate and Lots of it).

In order for information to be understandable and appropriate, it cannot be provided in acronyms that the reporter (and more importantly the public) may or may not know. For example, instead of saying “the JIC is now open” one could say “we have established an information center to help answer questions from the public and the media.” Instead of saying, “shelter in place” one could say “go inside, turn off heating or ventilation systems, seal windows and doors with plastic and duct tape, and stay tuned to your tone-alert radio for further instructions.” This is so important, in fact, that the NIMS Integration Center recently issued a national edict that all emergency response personnel “speak in plain English” to avoid confusion across jurisdictions, educational levels and ethnic backgrounds. Many players spoke in acronyms, including the examples above, and not all participants could even explain the acronym correctly when queried.

Recommendation: Public information staff should practice speaking plain English. Make sure PIOs have the authority and are properly trained to talk to the media. Checklists that define positions are helpful for anyone working a disaster incident, public information officers included.

Observation

Subject: JIC Information Management.

Discussion: JIC systems and management often created unnecessary obstacles to the media in obtaining emergency information. The JIC is intended to be the primary source of emergency information for the media and the public. Yet the media had to work hard to get information from the JIC:

- There were too few phone lines, and apparently the lines did not roll over to other lines, so that callers often received busy signals for as long as 10-15 minutes.
- Operators often did not have the requested information at hand and it took repeated callbacks and follow-ups to obtain needed information.
- Information supplied was sometimes inconsistent with other sources. For example, when asked by several callers whether depot resources were being augmented, reporters were told that only claims service was being provided. But the Chemical

Materials Agency had previously indicated that 12 real-time analytical platforms had been dispatched from Anniston.

Recommendation: Emergency officials and JIC management should revisit and streamline JIC procedures to ease information flow to the media.

EMERGENCY RESPONSE OUTCOME 8 – REMEDIATION AND RECOVERY

Not Applicable.

SECTION 4. FRCAs AND ACTION PLANS

A list of findings requiring corrective actions identified during the Newport Community CSEPP EX 06 is in the following table. Findings are grouped by the responsible jurisdiction. Findings Requiring Corrective Actions (FRCAs) have been assigned an identifying number used throughout the report to identify the FRCA. The identifying number should be used in completing action plans.

The number is structured as follows: XX06.Y.1. The "XX" is a two-letter identification of the response organization to which the corrective action applied [e.g., NE for Newport Chemical Depot, NJ for Newport Community (two or more jurisdictions), IN for State of Indiana, FO for Fountain County, PK for Parke County, VR for Vermillion County IN, ED for Edgar County, NI for the Newport JIC]; "06" represents the year of the exercise; "Y" indicates the Emergency Response Outcome (ERO) where the Finding Requiring Corrective Action was noted, this will be an Arabic number representing the appropriate ERO [e.g., 1 for Prevention and Preparedness, 2 for Emergency Assessment, 3 for Emergency Management, 4 for CAI Hazard Mitigation, 5 for Protection, 6 for Victim Care, 7 for Emergency Public Information and, 8 for Remediation and Recovery] and; "1" is the sequence number of the FRCA.

ID Number	Subject	Page
NJ06.6.1	Site Safety and Control Plan	2-10
NE05.2.1 NE06.2.1	Planning and Coordinating RTAP Placement	3-5
NE06.2.2	Safety Buddy System	3-2
NE06.2.3	Timely and Consistent PARs	3-2
NE06.2.4	Hazard Analysis Modeling Concepts and Implementation	3-3
VR06.5.1	Electronic Door Locks	3-23
VR06.5.2	Activation of Collective Protection System	3-24
VR06.5.3	Familiarity with Policy and Procedures	3-24
VR06.6.1	Site Safety and Control Plan - SVHS	3-29
VR06.6.2	Site Safety and Control Plan -- WCCH	3-37
FO06.6.1	Site Safety and Control Plan -- SVH	3-60
FO06.6.2	Site Safety and Control Plan – St. Clare	3-64
ED06.6.2	Site Safety and Control – Paris Community Hospital	3-77
ED06.6.3	Medical Monitoring Program – Paris Community Hospital	3-77

ACTION PLANS

This Section contains the action plans of the Newport Community jurisdictions for findings identified in Newport CSEPP EX 06 and/or the resolution of findings from Newport CSEPP 05:

Newport Community	4-3
Newport Chemical Depot	4-5
Vermillion County, Indiana	4-11
Fountain County	4-15
Edgar County	4-17

ACTION PLAN FOR THE NEWPORT COMMUNITY
Newport Community CSEPP Exercise 2006
(April 5, 2006)

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NJ06.6.1	Site Safety and Control Plan	Community IPT & Newport Community Medical Task Force	March 07
<p>CORRECTIVE ACTION/COMMENT: Although five sites received specific write-ups requiring corrective actions. This item will be identified in each training for priority and emphasized at both Community IPT and Medical Task Force meetings. Also each SAIC training, one in Oct 06 and Mar 07, it will lifted up as a priority.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures</p>			

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ACTION PLAN FOR NEWPORT CHEMICAL DEPOT
Newport Community CSEPP Exercise 2006
(April 5, 2006)

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NE05.2.1 NE06.2.1	Planning and Coordinating RTAP Placement	RTAP Coordinator	6/23/06
<p>CORRECTIVE ACTION/COMMENT: WSP Number ENV 2-003, RTAP COORDINATION was written and put into effect on June 21, 2005.</p> <p>The RTAP Coordinator attended D2-Puff training, with D&E Technical on 2 May 2006. The one-on-one training the RTAP Coordinator received was very beneficial. The RTAP Coordinator has a better understanding on how to use D2-Puff software as a tool to coordinate the depots' RTAPs. In addition to the quarterly CAIRA exercises, the RTAP Coordinator will work with the Emergency Operations Center (EOC) to create table top exercises for the monitoring staff that will help them prepare for emergency operations. These table top exercises will also allow the RTAP Coordinator to gain additional experience making decisions using the D2-Puff software. Complete.</p> <p>The RTAP Coordinators' radio was upgraded with a more powerful antenna on 10 April 2006. The upgraded antenna has resolved the communication problems that were experienced during the IRFX. The RTAP Coordinator will also be relocated adjacent to the Hazard Analyst to improve internal communications.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p style="text-align: center;"> <input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other <input checked="" type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input type="checkbox"/> Procedures </p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NE06.2.2	Safety Buddy System	RTAP Coordinator	6/17/2006
<p>CORRECTIVE ACTION/COMMENT: Arrangements were made on 8 May 2006 with Program Management and the Personnel Decontamination Station (PDS) Team Leader to allow for a safety buddy and/or RTAP driver during emergency monitoring operations. The Environmental Manager and RTAP Coordinator are still looking to add at least two (2) more members to the pool of drivers that can operate the RTAP during an emergency.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input checked="" type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input type="checkbox"/> Procedures</p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NE06.2.3	Timely and Consistent PARs	CSEPP Manager	8/30/2006
<p>CORRECTIVE ACTION/COMMENT: A checklist was developed for hazard analysts to use during a response. The checklist was successfully demonstrated during a CAIRA exercise conducted on 10 May 2006. The June 2006 Hazard analysis training will focus on making and communicating timely and consistent PARs.</p> <p>A quarterly CAIRA exercise will be conducted on or before the end of August to validate the training.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input type="checkbox"/> Procedures</p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NE06.2.4	Hazard Analysis Modeling Concepts and Implementation	CSEPP Manager	8/30/2006
<p>CORRECTIVE ACTION/COMMENT: Monthly training for hazard analysts will focus on modeling concepts and implementation. Hazard Analysis training for Decision Makers will be conducted in July 2006. A checklist has been developed for hazard analysts. The checklist includes steps to confer with decision makers prior to broadcasting information to the off-post. The checklist was successfully demonstrated during a CAIRA exercise conducted on 10 May 2006.</p> <p>A quarterly CAIRA exercise will be conducted on or before the end of August to validate the training.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input type="checkbox"/> Procedures</p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NE05.2.2 CLOSED	Hazard Analysis Modeling – Accident Site Location	CSEPP Manager	7/31/05 CLOSED
<p>CORRECTIVE ACTION/COMMENT: Personnel are being trained to verify accident site location through use of the IDS system, responders at the site and personnel in the EOC.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input type="checkbox"/> Procedures</p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NE05.2.3 CLOSED	Hazard Analysis Modeling Concepts	CSEPP Manager	9/30/05 CLOSED
<p>CORRECTIVE ACTION/COMMENT: D&E Technical will be on site mid to end of September to provide training to hazard analysts, RTAP coordinators, and decision makers.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input type="checkbox"/> Procedures</p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NE05.3.1 CLOSED	Heat Stress Control	Safety	12/1/05 CLOSED
<p>CORRECTIVE ACTION/COMMENT: The heat stress plan and WSP will be reviewed and written so that the information is accurate on both documents. Procedures will change to reflect current ACGIH guidelines and shall comply with the requests and or suggestions of the SMR team of June 2005.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p> <input type="checkbox"/> Training <input type="checkbox"/> Facilities <input checked="" type="checkbox"/> Plan(s) <input type="checkbox"/> Other <input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures </p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NE04.4.1 NE05.5.1 CLOSED	Concept for Deciding When to End Shelter-in-Place	CSEPP Manager	8/30/05 CLOSED
<p>CORRECTIVE ACTION/COMMENT: The CAIRA Plan has been revised to add the concept plan for when to end shelter-in-place. The plan went to M&H for review on 7/13/05 and will be sent to COR for review on 7/29/05. Revised plan should be signed and in place by 8/30/05.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p> <input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input checked="" type="checkbox"/> Plan(s) <input type="checkbox"/> Other <input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input type="checkbox"/> Procedures </p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
NE05.6.1 CLOSED	Self Aid, Buddy Aid and Victim Evacuation	Surety Manager	On-going CLOSED
<p>CORRECTIVE ACTION/COMMENT: We are conducting more intensive training to better prepare employees to take control of immediate first-aid/buddy aid and victim evacuation. This training will be on-going.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training ___Facilities ___Plan(s) ___Other</p> <p><input type="checkbox"/> Equipment ___Staffing ___Procedures</p>			

**ACTION PLAN FOR VERMILLION COUNTY, IN
Newport Community CSEPP Exercise 2006
(April 5, 2006)**

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
VR06.5.1	Electronic Door Locks	Chief Dep Bob Spence	12/31/06
<p>CORRECTIVE ACTION/COMMENT: Jail maintenance and repair contractor has been contacted and repair work on doors should be completed by 12/31/06.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p> <input type="checkbox"/> Training <input checked="" type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other <input checked="" type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input type="checkbox"/> Procedures </p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
VR06.5.2	Activation of Collective Protection System	Chief Dep Bob Spence	7/1/06
<p>CORRECTIVE ACTION/COMMENT: Policy and procedures notebook will be kept at each dispatch work station and will be readily available. Training and refresher sessions quarterly so that new jail personnel will be familiar with required actions in case of a CSEPP event.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p> <input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input checked="" type="checkbox"/> Plan(s) <input type="checkbox"/> Other <input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures </p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
VR06.5.3	Familiarity with Policy and Procedure	Chief Dep Bob Spence	7/1/06
<p>CORRECTIVE ACTION/COMMENT: Refresher training sessions will be held quarterly to better familiarize jail personnel with procedures during a CSEPP event. Checklists will be kept at each dispatch workstation and readily available.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input checked="" type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures</p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
VR06.6.1	Site Safety and Control Plan - SVHS	Chief Tim Cottrell	7/1/06
<p>CORRECTIVE ACTION/COMMENT: More training will be conducted to better familiarize the decontamination team plans and procedures needed to improve their decontamination process.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input checked="" type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures</p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
VR06.6.2	Site Safety and Control Plan -- WCCH	Asst Chief Scott VanBuskirk	7/1/06
<p>CORRECTIVE ACTION/COMMENT: More training will be conducted to better prepare decontamination team personnel on use of decontamination equipment. Also more training will be done to better familiarize personnel with plans and procedures.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input checked="" type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures</p>			

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ACTION PLAN FOR FOUNTAIN COUNTY, IN
Newport Community CSEPP Exercise 2006
(April 5, 2006)

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
FO06.6.1	Site Safety and Control Plan -- SVH	Audrey Abbott	8/1/06
<p>CORRECTIVE ACTION/COMMENT: Health and Safety Committee of SVH to develop written protocols for decontamination and use of Mark I kits. Provide continuing education for the decontamination team and training for new personnel.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input checked="" type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures</p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
FO06.6.2	Site Safety and Control Plan – St. Clare	Greg Harvey	7/1/06
<p>CORRECTIVE ACTION/COMMENT: SCMC Safety Committee will put into our HM Safety Plan a policy for decontamination area site Safety and Control Plan.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures</p>			

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**ACTION PLAN FOR THE EDGAR COUNTY, IL
Newport Community CSEPP Exercise 2006
(April 5, 2006)**

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ED06.6.2	Site Safety and Control – Paris Community Hospital	Edgar County Decon Team and PCH	11/1/06
<p>CORRECTIVE ACTION/COMMENT: Additional training and familiarization of Decontamination Team personnel and PCH personnel with Site Safety and Control procedures.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p style="text-align: center;"> <input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other <input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures </p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ED06.6.3	Medical Monitoring Program – Paris Community Hospital	Dan Bishop - PCH	11/1/06
<p>CORRECTIVE ACTION/COMMENT: Implement the medical monitoring program provided in previous years by Hazmat DQE.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p style="text-align: center;"> <input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other <input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures </p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ED05.6.1 CLOSED	No Sharps Containers	Edgar County EM	Jan 30, 2006 CLOSED
<p>CORRECTIVE ACTION/COMMENT: Edgar County will purchase sharps containers and utilize them in the decontamination site. Appropriate training and procedures will be reflected to include sharps containers.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures</p>			

FINDING NUMBER	SUBJECT	RESPONSIBLE FOR CORRECTION	COMPLETION DATE
ED05.6.2 CLOSED	Medication Error	Edgar County EM	Oct 30, 2005 CLOSED
<p>CORRECTIVE ACTION/COMMENT: Edgar County EM will ensure that the EMS providers are included in the scheduled Oct 2005 medical training. EMS protocols will be changed to reflect accurate information. Mark I kits will be remain secured in the ambulances and only shown to exercise evaluators. (not placed in the decontamination lines) Mark I Trainer Kits will be utilized for training and demonstrated in exercises for evaluators, for familiarization with kits and procedures.</p> <p>Areas Needing Improvement (Check all that apply)</p> <p><input checked="" type="checkbox"/> Training <input type="checkbox"/> Facilities <input type="checkbox"/> Plan(s) <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Equipment <input type="checkbox"/> Staffing <input checked="" type="checkbox"/> Procedures</p>			

APPENDIX 1 – COMMUNITY PROFILE

This Annex provides the information specified by Policy Paper Number 19 on Community Profile.

BENCHMARK/CAPABILITY REVIEW- March 2006

ALERT AND NOTIFICATION SYSTEMS

	COMMUNITY ASSESSMENT – C
SIRENS (C):	IN: 44 Outdoor warning sirens installed. 39 sirens operational/5 not operational (new). Silent and audible tests (from VC EOC) are conducted daily. IL: Outdoor warning sirens are operational.
IAS (C):	IN: 4105 in counties, distribution as of 1/17/06. IL: Special populations only; NWS radio distribution plan.
NANS (C):	Newport Alert and Notification System (NANS) Dedicated alert and notification system (NECD, IN and IL)
D2-Puff™/WebPuff (C):	Operational in all jurisdictions.
EAS (C):	Operational in all jurisdictions.

AUTOMATED DATA PROCESSING

	COMMUNITY ASSESSMENT – C
Automation System (C):	Operational-all EOC's have data transfer capability.
D2-Puff/Web-Puff (C):	Operational at NECD, IL, IN, and IN Counties. JIC
Radio backup (C):	Operational 800 MHz in IN. VHF in IL.

COMMUNICATIONS

	COMMUNITY ASSESSMENT – C
800 MHz Radio System (C):	IN: Operational. IL: VHS is operational.
Microwave System (C):	IN: Operational. MOU between IDHS and ISP for upgrade. IL: N/A
RACES (C):	IN: Operational IL and NECD: N/A

COORDINATED PLANS

	COMMUNITY ASSESSMENT – C
CSEPP specific plans (C):	NECD: CAIRA plan dated Oct 05 IN Jurisdictions: IDHS: Feb 06; VC: Mar 06; PC: Mar 06; FC: ; JIC: Mar 04 IL: IEMA April 05; EC: Mar 06; VC: Mar 06

DECONTAMINATION (pre-hospital)

	COMMUNITY ASSESSMENT – C
Decon trailers (C):	2 NECD.
Portable decon units (C):	IN: 6 (2 per county). IL: 6 (2 per county plus 2 IL State).

EMERGENCY OPERATIONS CENTER

	COMMUNITY ASSESSMENT – C
NECD (C):	Operational, manned 24/7.
State of Indiana (C):	Operational, manned 24/7.
Vermillion County, IN (C):	Operational and an off duty 24 hour warning point.
Parke County, IN (C):	Operational and an off duty 24 hour warning point.
Fountain County, IN (C):	Operational and an off duty 24 hour warning point.
State of Illinois (C):	Operational, manned 24/7.
Vermilion County, IL (C):	Operational and an off duty 24 hour warning point.
Edgar County, IL (C):	Operational and an off duty 24 hour warning point.

EXERCISES

	COMMUNITY ASSESSMENT – C
Quarterly CAIRA's (C):	All CSEPP jurisdictions participate.
Last CSEPP exercise (C):	June 8, 2005
Next CSEPP exercise (C):	Scheduled for April 5, 2006

PERSONNEL

	COMMUNITY ASSESSMENT – C
CSEPP positions (C):	NECD: 14 FTE's IN: 17 FTEs (6 state; 11 counties) IL: 1 FTE (VC county); 12 partially funded (10 state; 2 EC counties)

TRAINING (pre-hospital)

	COMMUNITY ASSESSMENT – C
CSEPP training (C):	NECD: Recurring training on-going. IL: Recurring training on-going. IN: Training plan completed. Recurring training on-going.

PERSONAL PROTECTIVE EQUIPMENT (pre-hospital)

COMMUNITY ASSESSMENT – C	
Respirators (C):	IL: 52 sets of PAPRs - 30 Vermilion County; 20 EPA (Edgar County 2 encapsulated) IN: 249 PAPRs (131 decon/85 ISP/33 local LE). Approx 3,000 filters received 9/02-good til 9/07.
Kappler responder suits (C):	IL: 352 suits distributed within 2 IL counties. (102 Edgar County; 170 Vermilion County; 80 EPA) IN: 380 Kappler suits received and distributed (shelf life needed). (262 decon/85 ISP/33 local LE)
PPE (C):	NECD: Sufficient quantities are available to support the mission.
Mark I kits (C):	IL: first responders 79 Edgar; 99 Edgar county IN: first responders 1840 (FC 700; PC 600; VC 540)

MEDICAL (at hospital)

COMMUNITY ASSESSMENT – C	
Antidote (C):	IL: 1080 Mark I kits at PCH (600 expire 10/06; 50 expire 5/09) 1020 Mark I kits at PUSMC (400 expire 10/06; 620 expire 5/09) 1,000 Mark I kits (expire 2/08 at Carle Hospital in IL.) 1,100 Mark 1 kits (expire 05/09; 480 to PCH, 620 to PUSMC) IN: 840 Mark I kits at WCCH in Vermillion County, IN. Bottles of Epinephrine & protopam in pharmacy. 90 Mark 1 kits (expire _____) at Cayuga clinic 55 10 ml vials diazepam/162 1Gm protopam/75 20 ml vials atropine at SVH 55 10 ml vials diazepam/162 1Gm protopam/75 20 ml vials atropine at SCMC
Decon unit (C):	NECD clinics: 2 decon units. IN: 1 unit for WCCH use maintained by Clinton Township FD. MOU signed. SCMC decon room/SVH portable unit. IL: 2 units at Carle Hospital; 1 unit at Paris Community Hospital, plus 1 unit at PUSMC.
Respirators (C):	IN: 24 PAPRs available (10 WCCH; 14 SVH) IL: 35 PAPRs available (25 Carle Hospital; 8 PCH, 27 encapsulated suits in PCH)
Kappler suits (C):	IN: 48 suits available (20 WCCH; 28 SVH) IL: 61 suits available (25 Carle Hospital; 36 PCH)

CSEPP curriculum (C):	IL: training scheduled for Mar 06; IN: training scheduled for CY 06.
MOU (C):	In-place between NECD and VA Hospital in Danville, IL; NECD & WCCH in Vermillion County, IN

PUBLIC AWARENESS

	COMMUNITY ASSESSMENT – C
Outreach Center (C):	Staffed and operational in Vermillion County, IN (IRZ).
CSEPP calendar (C):	Annually published and distributed.
JIC/JIS (C):	JIC located in Parke County, IN. Alternate JIC is designated as SVHS.
Citizen’s Advisory Commission (C):	Funded and active in IN.
SIP kits (C):	Distribution on-going.
Emergency supply kits (C):	Distribution completed to schools in Vermillion County
Media Campaign (C):	In progress in IN and IL

APPENDIX 2 – ANNUAL EXERCISE RECAP

This Annex provides the information specified by Policy Paper 19 on annual exercise recaps.

June 8, 2005 Exercise

Summary: The Newport Community Chemical Stockpile Emergency Preparedness Program (CSEPP) Federally Managed Alternate Year Exercise (F/AYE) was conducted on June 8, 2005, to demonstrate and evaluate the community's emergency response capabilities. Participants included the following organizations: The Newport Chemical Depot (NECD); the U.S. Army Chemical Materials Agency (CMA) Operations Center, U.S. Army Materiel Command, the Indiana Department of Homeland Security (IDHS); the following counties in Indiana: Vermillion, Parke, and Fountain; the Illinois Emergency Management Agency (IEMA); the following counties in Illinois: Vermilion and Edgar. The exercise was evaluated and documented using the Integrated Performance Evaluation (IPE) methodology, organized by Emergency Response Outcomes (EROs) and documented in the Newport Community Exercise Report, dated August 9, 2005.

ERO 1 (Prevention and Preparedness): Coordinated on- and off-post emergency plans are in place and synchronized. Materials are distributed and programs are in place to ensure that the public has opportunities to learn about CSEPP, evacuation routes and other citizen safety precautions.

All Indiana jurisdictions and the State of Illinois receive a daily work plan from NECD. Vermilion and Edgar Counties do not have the D2-Puff™ software and are advised by Illinois EMA of the daily work plan.

For the most part training was satisfactory but in some jurisdictions it was noted that training was limited to hazardous material decontamination for emergency responders. It was recommended that the jurisdictions assess their training programs and ensure they comply with CSEPP guidance and the Code of Federal Regulations.

ERO 2 (Emergency Assessment): The Army made PARs for off-post, and announced the recommendations for implementation. The off-post 24-hour warning points or EOCs were notified of the Chemical Event Notification Level (CENL) and PAR within prescribed time limits. Some improvement is needed in the content and timeliness of follow-on hazard assessments to the off-post community. Some inconsequential assessment shortcomings were experienced by the State of Illinois. Typically, plume plots are received and e-mailed to a set distribution list. Run reports are also shared by the Emergency Response Telecommunicator (ERT). PARs are usually shared as well, but the D2-Puff™ software generated errors when users attempted to open the report. There were also event start time inconsistencies between D2-Puff™ and the Newport Alert and Notification System (NANS) reports.

ERO 3 (Emergency Management): The Installation EOC achieved a full operational status quickly and maintained this level of effort for the duration of the response. Command and control for the response was established; response assets were mobilized; the Army chain-of-command was kept informed of Initial Response Force (IRF) activation. The Installation Commander, as the Federal On Scene Coordinator (FOSC), discharged all Department of Defense (DoD) obligations under the National Contingency Plan.

All the EOCs demonstrated command and control of response activities using multiple communications systems. Some difficulties with equipment and systems communications were encountered, but overall, this did not significantly affect this outcome. At all EOCs, staff provided support to the protective action decision-making process, directed, and controlled the implementation of protective actions for at-risk populations. Within each county, the emergency operations reviewed and either activated traffic and access control points or simulated the actions they would take. EOCs effectively tracked the status and location of patients from multiple points of origin during in-sequence exercise activities. There was limited demonstration of direction and control of protective actions for schools and special populations. Each jurisdiction reviewed the need to issue emergency declarations. There were no requests for supplementary assistance.

ERO 4 (CAI Hazard Mitigation-conducted exclusively on post): Prompt and accurate informal report(s) were made from the accident scene. The security cordon was established and enforced. Records that documented the decisions and operations associated with the response were secured and preserved. Emergency responders were properly prepared and ready for employment. Activities of responders were properly coordinated to ensure maximum efficiency of response operations. Additional equipment and manpower were requested to augment personnel available for response operations. Further migration of the agent was limited by covering the spill with plastic after the fire had burned itself out.

ERO 5 (Protection): Accurate recommendations for the initial Chemical Event Notification Level (CENL), Protective Action Recommendations (PARs), and PADs were made. Recommendations to adjust or cancel CENLs, PARs, and PADs were made as conditions warranted, albeit not always in a timely manner. Evacuation of on-post personnel was not required. Access was prevented to the hazardous area.

All off-post EOCs successfully demonstrated their ability to provide a protective PAD and disseminate Emergency Alert System (EAS) messages. The Immediate Response Zone (IRZ) counties demonstrated their capabilities to implement their shelter-in-place plans, activate traffic and access control points, and activate or simulate activation of their indoor and outdoor warning systems. Vermillion County, Indiana demonstrated

their shelter-in-place enhancements. Parke and Fountain Counties in Indiana and Edgar and Vermilion Counties in Illinois demonstrated the capability to open and operate reception centers and shelters.

ERO 6 (Victim Care): On-post victims were saved from additional trauma, injury, and agent exposure. Appropriate life-saving self-aid and first-aid was accomplished. Effective decontamination was accomplished. The medical facility was prepared for the arrival and treatment of patients. Victims were given appropriate medical treatment consistent with their injuries, illness, or extent of exposure.

Performance of victim care and decontamination activities across the off-post community was inconsistent, with significant issues in some jurisdictions. This was true at field response as well as hospitals venues. At several locations, shortfalls in the number of appropriately trained personnel available prevented full demonstration of screening and decontamination activities despite good cooperation between multiple agencies responding together. Some additional issues identified in the off-post community are; timely dress-out of decontamination personnel, Mark I Antidote Kit usage, heat stress monitoring, establishing zones for decontamination, and equipment preparedness for operations.

ERO 7 (Emergency Public Information): Information sharing among jurisdictions was observably improved for the first several hours of the exercise. This level of communication deteriorated in the latter hours of Newport Community Exercise 2005. There were some problems with the JIC that were repeated from previous exercises. Security in the JIC and a couple of Indiana counties was somewhat porous, and media monitoring at the JIC did not begin until late in the exercise. Improvements include generation of news releases, responding to media and public queries. The community news conference at the JIC was effective.

ERO 8 (Remediation and Recovery): Migration of the agent was limited by covering the spill with plastic after the fire had burned itself out. Procedures for environmental assessment and cleanup were not initiated due to the brevity of the exercise and actual high temperatures that limited player work times in protective clothing. No significant remediation and recovery requirements and priorities were established; but some resources were secured and some interagency coordination was accomplished for recovery phase monitoring and sampling. Appropriate and timely decisions on remediation and recovery protective action decisions were made by designated public officials.

Scenario: On June 8, 2005, a convoy (consisting of a lead security vehicle, a flatbed truck loaded with a ton container (TC), and a trailing security vehicle) left the Igloo, drove out of the storage Chemical Limited Area and onto Broadway Street. As the TC transport truck headed East on Broadway Street, the driver had sudden chest pains and slammed his foot on the brake. The security truck hit the TC transport vehicle and dislodged the TC from the vehicle. The TC landed on Broadway Street, began to leak agent (this was the time at which the exercise started or STARTEX), and then rolled into the ditch approximately 15 feet from the transport truck. A trail of liquid agent was visible from the point where the TC landed on the ground to the ditch. The driver in the rear security vehicle exited the vehicle to secure the accident scene. Gasoline and oil leaked from the security vehicle and merged with the agent VX that leaked from the TC in the ditch. Within one minute after the TC fell off of the transport truck the agent began to leak from the TC, a spark from the battery caused the gasoline and oil mixture to ignite. The fire began near the transport truck and then engulfed the leaking TC. After the fire was out, there was another vehicle accident at the corner of 10th Street and South Blvd. There were three injuries as a result of the two crashes; two of the injured had agent exposure.

LISTS OF FINDINGS REQUIRING CORRECTIVE ACTIONS

Findings requiring corrective action identified during the Newport Community CSEPP EX 05 are in the following table.

FRCA Identification	Title
NE05.2.1	Planning and Coordinating RTAP Placement
NE05.2.2	Hazard Analysis Modeling – Accident Site Location
NE05.2.3	Hazard Analysis Modeling Concepts
NE05.3.1	Heat Stress Control
NE04.4.1 NE05.5.1	Concept for Deciding When to End Shelter-in-Place
NE05.6.1	Self Aid, Buddy Aid and Victim Evacuation
ED05.6.1	No Sharps Containers
ED05.6.2	Medication Error

April 21, 2004 Exercise

Summary: The Newport Community CSEPP Federally Managed Exercise (FME) was conducted on April 21, 2004 to demonstrate and evaluate the community's emergency response capabilities. Scheduled participants in the 2004 FME include the following organizations: The Newport Chemical Depot (NECD); the U.S. Army Chemical Materials Agency (CMA) Operations Center, the Indiana Department of Homeland Security (IDHS), former known as the State Emergency Management Agency (SEMA); the following counties in Indiana: Vermillion, Parke, and Fountain; the Illinois Emergency Management Agency (IEMA); the following counties in Illinois: Edgar and Vermilion. Northern Illinois and Indiana were affected by numerous tornados during the evening and night of April 20, 2004. The tornados in northern Illinois caused extensive damage in multiple communities and nine fatalities resulting in the State of Illinois, Vermilion County, and Edgar County Emergency Operations Centers not participating in the exercise. However, planned field and hospital play in Vermilion and Edgar Counties in Illinois was conducted and evaluated. The exercise was evaluated and documented using the Integrated Performance Evaluation (IPE) methodology, organized by response operating system (ROS) and documented in the Newport Community Exercise Report, dated November 30, 2004. What follows is an executive summary of the community's performance; each ROS earned a "CAPABLE" grade:

ROS 1 (Emergency Assessment): Federal, state and local notification requirements were fulfilled; local government entities were kept informed. Additional training and experience with D2Puff would be beneficial. Limited air monitoring was accomplished on-post; there was no off-post monitoring.

ROS 2 (Accident Site Hazard Mitigation): Hazard agent release was promptly terminated at the source using acceptable hazard mitigation practices. A security cordon was established and enforced, and security responders ostensibly provided access control to the temporary CLA they established around the accident site. An available water truck and M12 Decontamination Apparatus were not used. Containment of liquid agent and the fire was extinguished was successful, but could have been more effective. Equipment and supplies for gross-level monitoring was inefficient, as was initial command and control at the accident site. Advance planning for sustained operations began only after the crew returned from the accident site.

ROS 3 (Emergency Management): The Newport CSEPP community displayed combined capabilities to complete all elements within this ROS, including top-level decision making, coordination of direction and control, mobilization and effective activation of both Army and community EOCs. Vermillion County was the only jurisdiction to declare a state of emergency consistent with the scenario. Local jurisdictions accept the NECD PAR as the PAD.

The primary JIC facility was unusable due to simulated wind damage, creating a opportunity to demonstrate mobile JIC equipment for the first time. Situational information was not developed in a timely manner and was incomplete IAW regulatory guidance, most notably the timely release of vital instructions to the public. Conflicting information in several EAS messages resulted in confusion about exiting SIP, relocation, and reception centers and shelters. A supplementary concept of operations for releasing those who SIP would be beneficial. Improvements to the technology, as well as a review of JIC procedures, are necessary. Errors in press releases and better coordination between agencies and press conference logistics are all subjects covered in existing CSEPP training.

ROS 4 (Protection): Accurate recommendations for the CENL and PAR/PADs were made by the NECD staff. Recommendations to adjust PADs were made as conditions warranted. The PARs for ending SIP were late. On-post populations were accounted for, and the on-post populations were ready to evacuate.

While the initial PAR was correct, NECD revised the original PAR to Parke County; this was never communicated over the NANS. This caused a delay in implementing protective actions, but the PAD was made within the time standard.

Siren and IAS demonstrations were simulated for all off-post jurisdictions except Vermillion County, Indiana. No route alerting was conducted. TCPs were successfully demonstrated and special population protection effective in out-of-sequence play at the Montezuma Elementary School.

ROS 5 (Victim Care): Although operational complications relating to training issues and some equipment concerns presented difficulties, the potential “patients” were appropriately evaluated and treated. Sufficient PPE is in place. Signs and symptoms were consistently addressed.

On NECD, appropriate life-saving self-aid and first-aid were not accomplished in a timely manner. Victims were improperly stabilized; spinal immobilizations were neither effective nor timely. Precautions to prevent additional trauma and injury were ignored by the re-use of contaminated backboards. Patient tracking was inconsistent in the county and state EOCs.

ROS 6 (Evacuee Support): On-post and off-post populations were provided appropriate support during the exercise. The off-post community successfully demonstrated its ability to open and direct operations at three American Red Cross shelters/reception centers. Review and articulation of ARC responsibilities should be provided to off-post jurisdictions to further delineate expectations of both ARC and county/state government.

Scenario: On April 21, 2004, during transportation of the first tone container of VX at NECD, a fuel truck collided with a VX transport vehicle creating a fuel and VX spill that ignited into a fire. Southwesterly winds at 20mph carried the subsequent toxic plume into portions of Vermillion, Parke and Fountain counties in Indiana. In order to demonstrate the capability of a new mobile Joint Information Center (JIC), the primary JIC location was declared unusable as an exercise simulation.

LISTS OF FINDINGS REQUIRING CORRECTIVE ACTIONS

Findings requiring corrective action identified during the Newport Community CSEPP EX 04 are in the following table.

FRCA Identification	Title
NE04.2.1	Inappropriate Level of PPE Utilized
NE04.2.2	Security Annex Plans and Operations
NE04.2.3	Initial Monitoring/Clearing of Forward Control Point (FCP) Mobile Personnel Decontamination Station (MPDS)
NE04.3.1	Next of Kin Notification of Civilian (not associated with Depot)
NE04.4.1	Concept for Deciding When to End Shelter-in-Place
NE04.5.1	Inadequate Advanced Cardiac Life Support (ACLS) Training/Proficiency
NE04.5.2	Inappropriate Treatment of Nerve Agent Casualties
NE04.5.3	Expired Provider Licenses and Certification
NE04.5.4	Self Aid and Buddy Aid/Evacuation
NE04.5.5	Documentation Accompanying Patients Off-Post
NE04.5.6	Transportation of Victims
NE04.5.7	Patient Handling and Movement
IL04.1.1	Incorrect PAR Information
VL04.5.1	Need for a Respiratory Personal Protective Equipment (PPE) Program
ED04.2.1	Hazard Analysis Training
ED04.4.1	Antidote Kits
ED04.5.1	Inadequate Hazardous Materials Staff
ED04.5.2	No Respiratory Screening Program/Mask Fit Test Procedures

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APPENDIX 3 – ACRONYMS AND ABBREVIATIONS

ACLS.....	Advanced Cardiac Life Support
ACP.....	Access Control Point
AGEL.....	Acute Exposure Guideline Level
ALS.....	Advanced Life Support
AMC.....	Army Materiel Command
ANL.....	Argonne National Laboratory
AOC.....	Army Operations Center
AR.....	Army Regulation
ARC.....	American Red Cross
ARES.....	Amateur Radio Emergency Service
AYE.....	Alternate Year Exercise
BLEVE.....	Boiling Liquid Expanding Vapor Explosion
BLS.....	Basic Life Support
CAI.....	Chemical Accident or Incident
CAICO.....	Chemical Accident or Incident Control Officer
CAIRA.....	Chemical Accident or Incident Response and Assistance
CAS.....	Citizens Advisory Committee
CCL.....	Contamination Control Line
CDT.....	Central Daylight Time
CENL.....	Chemical Event Notification Level
CFR.....	Code of Federal Regulations
CLA.....	Chemical Limited Area
CMA.....	Chemical Materials Agency
CON.....	Control Room
COSIN.....	Control Staff Instructions
CSDF.....	Chemical Site Defense Force
CSEPP.....	Chemical Stockpile Emergency Preparedness Program
D2-Puff™.....	Hazard Prediction Tool
DA.....	Department of the Army
DHS.....	Department of Homeland Security
DNR.....	Department of Natural Resources (IN)
DoD.....	Department of Defense
EAS.....	Emergency Alert System
ECA.....	Edgar County Airport
ED.....	Emergency Department
EEI.....	Essential Elements of Information
EM.....	Emergency Management
EMA.....	Emergency Management Agency
EMIS.....	Emergency Management Information System

EMS.....	Emergency Medical Service
EMT	Emergency Medical Technician
ENDEX	End of Exercise
EOC.....	Emergency Operation(s) Center
EOD.....	Explosive Ordnance Disposal
EOP	Emergency Operations Plan
EPA	Environmental Protective Agency
ERD.....	Emergency Response Director
ERT	Emergency Response Telecommunicator
ESDA	Emergency Services Disaster Agency
EST.....	Eastern Standard Time
ETO.....	Exercise and Training Officer
EXPLAN	Exercise Plan
FAA.....	Federal Aviation Administration
FAX.....	Facsimile
FCA.....	Friendship Christian Athletics
FCP.....	Field Command Post
FCPO.....	Field Command Post Officer
FD.....	Fire Department
FEMA.....	Federal Emergency Management Agency
FME.....	Federally Managed Exercise
	Forward Control Post
FOSC.....	Federal On-Scene Coordinator
FY.....	Fiscal Year
HA.....	Hazard Analyst
HQ.....	Headquarters
HQDA	Army Headquarters
IAS	Indoor Alert System
IC.....	Incident Commander
ICAM	Improved Chemical Agent Monitor
ICS	Incident Command System
IDEM.....	Indiana Department of Environmental Management
IDHS	Indiana Department of Homeland Security
IDLH	Immediately Dangerous to Life and Health
IDPH	Illinois Department of Public Health
IEMA.....	Illinois Emergency Management Agency
IL LNO.....	Illinois State Liaison Officers
IPT.....	Integrated Process Team
IRF	Initial Response Force
IRFC.....	Initial Response Force Commander
IRZ	Immediate Response Zone

JIC.....	Joint Information Center
JICSaw	Public Affairs Training Course
JIS.....	Joint Information System
kW.....	Kilowatt
LEPC.....	Local Emergency Planning Committee
MACOM.....	Major Command
MCC	Mecca Community Center
MCE	Maximum Credible Event
MCP	Mobile Command Post
MEDDAC.....	Medical Department Activity
MEOC	Mobile Emergency Operations Center
MHz.....	Megahertz
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPDS	Mobile Personnel Decontamination Station
MSC	Major Subordinate Command
NANS	Newport Alert and Notification System
NAWAS	National Warning System
NECD	Newport Chemical Depot
NECDF.....	Newport Chemical Demilitarization Facility
NOK	Next-of-Kin
NRT.....	Near Real Time
NTSB.....	National Transportation Safety Board
NVCDT	North Vermillion County Decontamination Team
NVHS	North Vermillion High School
NWS.....	National Weather Service
O2.....	Oxygen
OC	Operations Center
OPCW	Organization for the Prohibition of Chemical Weapons
OSC.....	On-Scene Coordinator
OSHA	U.S. Occupational Safety and Health Administration
PA.....	Public Affairs
PAC	Type of status board kit used in Vermilion County (IL)
PAD.....	Protective Action Decision
PAO.....	Public Affairs Office(r)
PAPR.....	Powered Air Purifying Respirators
PAR.....	Protective Action Recommendation
PASA.....	Protective Action Sub-Area
PAZ	Protective Action Zone

PBX.....	Type of telephone switching system
PCE.....	Personnel Clothing and Equipment
PCEM.....	Parke County Emergency Management
PCH.....	Paris Community Hospital
PDS.....	Personnel Decontamination Station
PIO.....	Public Information Office(r)
PMCD.....	Program Manager for Chemical Demilitarization
POC.....	Point of Contact
POR.....	Points of Review
PPE.....	Personal Protective Equipment
PSI.....	Electric generating station located north of NECD
PUSMC.....	Provena United Samaritan Medical Center
RACES.....	Radio Amateur Civil Emergency Service
RTAP.....	Real Time Analytical Platform
RTM.....	Response Team Manager
SCBA.....	Self Contained Breathing Apparatus
SCMC.....	St. Clare Medical Center
SEMA.....	State Emergency Management Agency (Indiana)
SEOC.....	State Emergency Operations Center
SFCP.....	State (Illinois) Forward Command Post
SIMCELL.....	Simulation Cell
SIP.....	Shelter-in-Place
SOP.....	Standing Operating Procedure(s)
SRF.....	Service Response Force
SSCC.....	Site Security Control Center
STARTEX.....	Start of Exercise
STEL.....	Short Term Exposure Limit
SVH.....	St. Vincent Hospital
SVHS.....	South Vermillion High School
TC.....	Ton Container
TCP.....	Traffic Control Point
TracSys.....	Emergency Tasking and Response Tracking System software
TVA.....	Tennessee Valley Authority
UHF.....	Ultra High Frequency
USA.....	United States Army
VA.....	Veteran's Administration
VCER.....	Vermillion County Emergency Response
VCR.....	Video Cassette Recorder
VHF.....	Very High Frequency
VX.....	Type of nerve agent

WAN Wide Area Network
WCCH..... West Central Community Hospital

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