



FEMA

Mr. Mark Sartorius
Regional Administrator
U.S. Nuclear Regulatory Commission, Region III, Suite 210
2443 Warrenville Road
Lisle, Illinois 60532-4352

Dear Mr. Sartorius:

Enclosed is one copy of the LaSalle County Station Medical Services (MS-1) Drill Report. The drill was conducted in Peru, Illinois, on May 24, 2011. Participants included members from the Illinois Emergency Management Agency, Oglesby Ambulance, and the Illinois Valley Community Hospital.

A previous planning issue from April 2009, 34-09-6d1, was corrected during this drill. Hospital plans were updated in June 2009 to include additional hospital personnel assignments and radiological monitoring equipment.

No Deficiencies or Areas Requiring Corrective Action were identified during this drill. Please see the enclosed drill report for further details. If you have any questions, please contact William King at (312) 408-5575.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew Velasquez III".

Andrew Velasquez III
Regional Administrator

Enclosure

cc: NRC Headquarters Document Control Desk
Ms. Lisa Gibney, REP HQ Branch Chief and HQ Project Officer



LaSalle County Station

After Action Report/ Improvement Plan

Drill Date - May 24, 2011

Radiological Emergency Preparedness (REP) Program



FEMA

Published June 10, 2011

Unclassified

Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

LaSalle County Station

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LaSalle County Station After Action Report/Improvement Plan

Published June 10, 2011

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EXECUTIVE SUMMARY

On May 24, 2011, the U.S. Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA), Region V, evaluated a Medical Services (MS-1) Drill in the 10-mile plume exposure pathway Emergency Planning Zone (EPZ) around the LaSalle County Station. The purpose of the Medical Services Drill was to assess the ability of offsite agencies to respond to a medical emergency involving a potentially radiologically contaminated member of the public. The Medical Services Drill was held in accordance with DHS/FEMA policies and guidance concerning the exercise of State and local radiological emergency response plans (RERPs) and procedures.

DHS/FEMA wishes to acknowledge the efforts of the personnel from the Illinois Emergency Management Agency, Oglesby Ambulance, and Illinois Valley Community Hospital.

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

The following criteria, which are part of the six Exercise Evaluation Areas described in Federal Register notice [67 FR 20580-20602], April 2002, which amends the FEMA REP-14, Radiological Emergency Preparedness Exercise Manual, were evaluated during the medical services drill.

Criterion 1.d.1 - At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations.

Criterion 1.e.1 - Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations.

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

Criterion 6.d.1 - The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

The State and local organizations demonstrated knowledge of and adequately implemented organizational emergency response plans and procedures.

There were no Deficiencies identified as a result of this drill. There were no Areas Requiring Corrective Action (ARCAs) identified during this drill. There were no previous Deficiencies or ARCAs to be corrected during this drill.

INTRODUCTION - EXERCISE BASIS

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all offsite nuclear planning and response. DHS/FEMA's activities are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350 "Review and Approval of State and Local Radiological Emergency Plans and Preparedness", 351 "Radiological Emergency Planning and Preparedness" and 352 "Commercial Nuclear Power Plants: Emergency Preparedness Planning." These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

The FEMA Rule 44 CFR 350 establishes the policies and procedures for DHS/FEMA's initial and continued approval of State and local governments' radiological emergency planning and preparedness for commercial nuclear power plants. This approval is contingent, in part, on State and local governments' participation in joint exercises with licensees.

DHS/FEMA's responsibilities in radiological emergency planning for fixed nuclear facilities include the following:

- Taking the lead in offsite emergency planning and in the review and evaluation of RERPs and procedures developed by State and local governments;

- Determining whether such plans and procedures can be implemented on the basis of observation

and evaluation of exercises of the plans and procedures conducted by State and local governments;

- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and

- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:

- U.S. Department of Agriculture;
- U.S. Department of Commerce;
- U.S. Department of Energy;
- U.S. Department of Health and Human Services;
- U.S. Department of the Interior;
- U.S. Department of Transportation;
- U.S. Environmental Protection Agency;
- U.S. Food and Drug Administration; and
- U.S. Nuclear Regulatory Commission.

Representatives of these agencies serve on the DHS/FEMA Region V Regional Assistance Committee (RAC), which is chaired by DHS/FEMA.

Formal submission of the RERPs for the LaSalle County Station to FEMA Region V by the State of Illinois and involved local jurisdictions occurred on March 31, 1981. Formal approval of these RERPs was granted by FEMA on June 4, 1982, under 44 CFR 350.

A Medical Services (MS-1) Drill was conducted on May 24, 2011, and evaluated by DHS/FEMA to assess the capabilities of State and local offsite emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the LaSalle County Station. The purpose of this report is to present the drill results and findings on the performance of the Offsite Response Organizations (ORO) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the Federal evaluation team, with final determinations made by the DHS/FEMA Region V RAC Chairperson, and approved

by the DHS/FEMA Headquarters.

The criteria utilized in the FEMA evaluation process are contained in:

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980;
- FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and
- FEMA "Radiological Emergency Preparedness: Exercise Evaluation Methodology; Notice" as published in the Federal Register Notice, Vol. 67, No. 80, dated April 25, 2002.

Section 1 of this report, entitled "Exercise Overview", presents information pertaining to the team that planned and coordinated the exercise. This section also provides listing of all participating jurisdictions and functional entities that were evaluated.

Section 2 of this report, entitled "Exercise Design Summary", contains the purpose and design of the exercise, a description of the plume pathway EPZ and presents basic information and data relevant to the exercise scenario.

Section 3 of this report, entitled "Analysis of Capabilities," presents detailed information on the demonstration of applicable exercise criteria at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and ARCAs (if any) assessed during this exercise, recommended corrective actions, and the State and local governments' schedule of corrective actions, if applicable, for each identified exercise issue; and (2) descriptions of unresolved ARCAs assessed during previous exercises and the status of the OROs' efforts to resolve them.

Section 4 of this report, entitled "Conclusion" presents the DHS/FEMA summary of overall exercise conduct and results as evaluated against the requirements of 44 CFR 350.

EMERGENCY PLANNING ZONE (EPZ) DESCRIPTION

The LaSalle County Station, Units 1 and 2, is located on a 3,060-acre site in Brookfield

Township, four miles west of the LaSalle and Grundy Counties line. It is located in the northeastern portion of Illinois, approximately seven miles south-southeast of the community of Marseilles, four and one-half miles south of the Illinois River, which runs east-west through LaSalle County and six miles southwest of the community of Seneca. The 10-mile plume extends outward in all directions from the LaSalle County Station and impacts portions of LaSalle and Grundy Counties. This EPZ includes the municipalities of Grand Ridge, Marseilles, Ransom and Seneca in LaSalle County, and Kinsman and Verona in Grundy County.

The population distribution in this 10-mile EPZ is relatively low. Following is a list of the six largest communities in the area and their respective year 2000 population figures: Grand Ridge (546), Kinsman (109), Marseilles (4,655), Ransom (409), Seneca (2,053) and Verona (257). The year 2000 total population for these communities was 8,029 persons. The 10-mile EPZ is divided into 13 Sub-Areas. Following is a list of the Sub-Areas with their associated year 2000 permanent resident population: Sub-Area 1 (936), Sub-Area 2 (70), Sub-Area 3 (665), Sub-Area 4 (3,225), Sub-Area 5 (568), Sub-Area 6 (150), Sub-Area 7 (725), Sub-Area 8 (1,000), Sub-Area 9 (269), Sub-Area 10 (7,250), Sub-Area 11 (4,900), Sub-Area 13 (638) and Sub-Area 17 (314).

Primary land use around the LaSalle County Station is agricultural, with crops of corn and soybean. The closest industries are located in the communities of Marseilles and Seneca. Recreational facilities outside the municipalities include a 60-acre park with camping facilities on the southwest shore of the 2,058-acre cooling lake for the LaSalle County Station. The cooling lake, which occupies over two thirds of the 3,060 acre station site, has recreational boating and fishing. Seneca area marinas have facilities for over 400 boats on the Illinois River, and are just over four miles north-northeast of the LaSalle County Station. Five and one-half miles north-northwest of the Station is the 510-acre Illini State Park with camping, boating, picnicking and fishing.

Major transportation facilities in the LaSalle County Station EPZ are limited to Interstate 80, nine miles north of the Station and the Illinois Waterway, four and one-half miles north of the LaSalle County Station. Marseilles Lock and Dam, at river mile 244.5, is seven miles northwest. Five rail lines also run through the LaSalle County Station EPZ. Their location in the EPZ is described in relationship to the LaSalle County Station as follows: The Burlington Northern and Santa Fe Railway Company has two rail lines, a spur line into the Station from Ransom and the other line six miles from the Station running northeast to southwest; the CSX Transportation, Inc. line is five miles north, the Illinois Rail Net line is nine miles west, and the Norfolk Southern line is ten miles to the south just outside of the EPZ.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

LaSalle County Station

Type of Exercise

Drill

Exercise Date

May 24, 2011

Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type

Radiological Emergency

1.2 Exercise Planning Team Leadership

William King

Radiological Assistance Committee

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1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the LaSalle County Station drill:

State Jurisdictions

Illinois Emergency Management Agency

Illinois Valley Community Hospital

Oglesby Ambulance Service

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

On May 24, 2011, the DHS/FEMA Region V Office evaluated a Medical Services (MS-1) Drill for the LaSalle County Station. The purpose of the MS-1 Drill was to assess the ability of offsite agencies to respond to a medical emergency involving a potentially radiologically contaminated member of the public. The MS-1 Drill was held in accordance with DHS/FEMA policies and guidance concerning the exercise of State and local radiological emergency response plans.

2.2 Exercise Objectives, Capabilities and Activities

2.3 Scenario Summary

Appendix C "Injects and Summary", contains a summary of the Exercise Scenario, a simulated sequence of events that was used as a basis for invoking emergency response actions by Offsite Response Organizations (OROs) in the MS-1 Drill.

During the exercise, controllers from the State of Illinois provided "inject messages" containing scenario events and/or relevant data to those persons or locations who would normally receive notification of such events. These inject messages were the method used for invoking additional specific response actions by OROs.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Drill Evaluation and Results

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the May 24, 2011, Medical Services (MS-1) Drill conducted to test the offsite emergency response capabilities of State and local governments in the EPZ surrounding the LaSalle County Station.

Each jurisdiction and functional entity was evaluated based on its demonstration of exercise criteria delineated in Federal Register Notice: Vol. 67, No. 80, dated April 25, 2002. Detailed information on the exercise criteria and the extent-of-play agreements used in this exercise are found in Appendix B “Exercise Plan” of this report.

3.2 Summary Results of Drill Evaluation

The matrix presented in Table 3.1, on the following page(s) presents the status of all exercise criteria from Federal Register Notice Vol 67, No. 80, dated April 25, 2002, which were scheduled for demonstration during this drill by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status of those criteria is indicated by the use of the following letters.

- M – Met (No Deficiency or ARCAs)

- D – Deficiency assessed

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

- N – Not Demonstrated

- Blank - Not scheduled for demonstration

Table 3.1 - Summary of Drill Evaluation

DATE: 2011-05-24 SITE: LaSalle County Station, IL M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated			
		IL-IL Val CH--	IL-IL Val CH--MSIF-
Emergency Operations Management			
Mobilization	1a1		
Facilities	1b1		
Direction and Control	1c1		
Communications Equipment	1d1	M	M
Equip & Supplies to support operations	1e1	M	M
Protective Action Decision Making			
Emergency Worker Exposure Control	2a1		
Radiological Assessment and PARs	2b1		
Decisions for the Plume Phase - PADs	2b2		
PADs for protection of special populations	2c1		
Rad Assessment and Decision making for Ingestion Pathway	2d1		
Rad Assess/Decision making concerning Relocation, Reentry, and Return	2e1		
Protective Action Implementation			
Implementation of emergency worker exposure control	3a1		M
Implementation of KI decision	3b1		
Implementation of protective actions for special populations - EOCs	3c1		
Implementation of protective actions for Schools	3c2		
Implementation of traffic and access control	3d1		
Impediments to evacuation are identified and resolved	3d2		
Implementation of ingestion pathway decisions - availability/use of info	3e1		
Materials for Ingestion Pathway PADs are available	3e2		
Implementation of relocation, re-entry, and return decisions	3f1		
Field Measurement and Analysis			
Adequate Equipment for Plume Phase Field Measurements	4a1		
Field Teams obtain sufficient information	4a2		
Field Teams Manage Sample Collection Appropriately	4a3		
Post plume phase field measurements and sampling	4b1		
Laboratory operations	4c1		
Emergency Notification and Public Info			
Activation of the prompt alert and notification system	5a1		
Activation of the prompt alert and notification system - Fast Breaker	5a2		
Activation of the prompt alert and notification system - Exception areas	5a3		
Emergency information and instructions for the public and the media	5b1		
Support Operations/Facilities			
Mon/Decon of evacuees and EWs and registration of evacuees	6a1		
Mon/Decon of EW worker equipment	6b1		
Temporary care of evacuees	6c1		
Transportation and treatment of contaminated injured individuals	6d1	M	M

3.3 Criteria Evaluation Summaries

3.3.1 Illinois Jurisdictions

3.3.1.1 State of Illinois - Illinois Valley Community Hospital - Medical Service - Transportation

Criterion 1.d.1:

Successfully demonstrated - this criterion narrative is contained in the Criterion 6.d.1 section.

Criterion 1.e.1:

Successfully demonstrated - this criterion narrative is contained in the Criterion 6.d.1 section.

Criterion 6.d.1:

As part of the LaSalle County Station Radiological Emergency Preparedness Exercise, the State of Illinois demonstrated that the facility and offsite response organizations had the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. The Medical Services (MS-1) Drill was conducted on Tuesday, May 24, 2011, at the Illinois Valley Community Hospital located at 925 West Street in Peru, Illinois.

In accordance with the extent-of-play agreement, personnel and an ambulance from the Oglesby Ambulance Service from Oglesby, Illinois, and two Illinois Emergency Management Agency (IEMA) Medical Radiation Technicians (MRT), participated in the MS-1 Drill.

The scenario for the MS-1 Drill was the LaSalle County Station (LCS) had declared an Emergency Classification Level of a General Emergency. The emergency alert sirens sounded, the public had been directed to evacuate affected areas and to report to reception centers set up in the local area. The scenario was based on a local resident who worked in the LaSalle Emergency Planning Zone and experienced a flat tire while driving to Illinois Valley Community College (reception center). While loading the flat tire in the trunk, she lost her footing and fell where a broken bottle was laying, which embedded glass in her right hand. Upon arrival to the reception center, the portal monitor registered a reading which set off the portal alarm, which at this time, IEMA staff noticed she had injured herself and was bleeding. IEMA called 911 for an ambulance and informed the reception center supervisor of the resident who had become a patient.

The IEMA MRT readied the monitoring/survey equipment that would be used during the drill. These actions occurred in the reception center area and prior to the arrival of the resident/patient.

Instruments were brought to the reception center by the IEMA MRT were in a Storm Case marked H1. The survey instrument used by the IEMA MRT was a Ludlum 2241-3 meter with two Model 44-9 Pancake probes calibrated in December 2010 with the next calibration due in December 2011. Headphones and one additional probe for the Ludlum 2241-3 included a Model 44-10 2x2 NaI (scintillator). The IEMA MRT checked the meter to ensure that batteries were installed. In addition, a Bicorn Micro-R meter was included, which was calibrated on August 2010 and due for calibration in August 2011.

Both instruments passed an operational battery test and a source response check. A check source was inside the carrying case used to transport the equipment. The check source used was 10 uCi Cs-137. The operability check exposure rate and count rate were recorded on a label affixed on a side of the instrument.

The IEMA MRT carried a red duffel bag that contained equipment such as personal dosimetry and other support supplies which included disposable gloves, scrubs, hair covers, booties, plastic bags, scissors, face masks, masking tape, clipboards, lint roller, “swiffer” wet/dry mop, yellow “Caution” tape, pens, writing paper and IEMA forms. One form is the Reception Center Monitoring/Action Log Form [IEMA 267 (8/05)].

Also included in the red duffel bag was a personal dosimetry kit. The kit included a Dosimeter Corporation of America Model 622 Direct-Reading Dosimeter (DRD) with a range of 0-20 R, tested May 2011, a permanent reading Landauer InLight Optically Stimulated Luminescent Dosimeter with an effective date of June 2010 – June 2012, a Radiation Exposure Record card with space to record user information, an instruction sheet describing use and precautions for ingesting potassium iodide (KI), and 14 doses of iOSAT KI by Ambex in 130 mg tablets individually sealed in a foil pack. The extension of the shelf life of the KI was effective through June 2011 per a Memorandum from IEMA dated July 8, 2010.

The IEMA MRT explained that the IEMA protocol for the establishment of a reception center included taking background readings in areas used for monitoring and decontaminating evacuees

prior to the set up of these areas. Reception center readings would be used for to determine patient treatment. For drill purposes, controller inject messages were used to determine these readings.

The drill commenced at 1014 hours, when the resident entered the reception center and went through a portal monitor (simulated) and set off the alarms on the monitor. The resident was interviewed and surveyed by the IEMA MRT who observed an injury to the resident's left palm. The resident explained that she had fallen onto both knees and hands while trying to change her vehicle tire. The resident at this point had become a patient due to the observed hand injury.

The IEMA MRT determined that an ambulance was needed to transport the resident who at this point had become a patient due to the observed hand injury. A controller inject simulated a call which requested an ambulance to the reception center to transport the patient to the Illinois Valley Community Hospital.

While waiting for the arrival of the ambulance, the IEMA MRT monitored the patient using the Ludlum 2241-3 meter with a pancake probe. The monitoring techniques used were slow and methodical, with proper positioning of the probe for personnel monitoring. The IEMA MRT wore booties, two pairs of gloves and personal dosimetry. Contamination was noted at various locations on the patient and were reported by controller injects as the IEMA MRT performed a radiological survey.

Reading were as follows: left palm 1600 counts per minute (cpm), forehead 400 cpm, right palm 1600 cpm, right knee 800 cpm, left knee 800 cpm, right bottom foot 1200 cpm, and left bottom foot 1200 cpm. Contamination information was documented on a Reception Center Monitoring/Action Log Form by the controller who simulated a scribe for the IEMA MRT.

At 1021 hours, the ambulance crew from the Oglesby Ambulance Service arrived at the reception center. The ambulance was equipped with a Motorola two-way radio system, which connected the ambulance crew to the 911 center and the medical center. A radio system of 16 talk groups was available for use on the two-way radios that operated on the Medical Emergency Radio Communications of Illinois (MERCY) network. The ambulance crew had cellular telephones that could be used as back-up communication. The ambulance crew also had pagers that had the capability of receiving one way information through them. The pagers would emit an audible tone followed by verbal information. In the ambulance, there was a mobile data terminal,

which information could be received and sent.

The ambulance crew was dressed in a disposable gown, booties, face shield, and two pairs of gloves. The ambulance crew consisted of a Paramedic and an EMT. The IEMA MRT gave the medics the patient status and information gathered prior to the ambulance arrival. The medics were again informed that they would be treating and transporting a contaminated injured patient.

The Paramedic assessed the patient's level of consciousness and level of pain by interview while the patient's left palm injury was being dressed by dry gauze square, roller gauze and taped. The patient stated she was allergic to penicillin and was not taking any prescription medications.

During the assessment and initial treatment of the patient, the medics and IEMA MRT were aware of the areas where they came in contact with the patient. The patient's clothing was cut off and removed. The patient's clothing, gloves, scissors, and tape were disposed of in a plastic bag identified for contaminated materials. Frequent checks for contamination on the gloves and areas in close proximity to the patient were done by the IEMA MRT.

The Paramedics had readied a gurney prior to coming inside the reception center. The gurney had been draped with a thin blanket (bottom layer) and two sheets. The patient walked to the gurney and laid down. The medics covered the patient cocoon-style with the sheets and blanket while taking care to wrap each layer separate before the next layer while being aware of cross-contamination. The patient was secured with the gurney straps.

At 1033 hours, the medics prepared to transport the patient to the hospital. The Paramedic in the back of the ambulance provided medical care and gathered personal information from the patient, which was communicated to the hospital. The Paramedic communicated the patient's condition to the Illinois Valley Community Hospital Emergency Department staff via cellular telephone. This was done to keep the medical channels open due to real time events occurring at the hospital.

The vital signs were for the patient was conscious and alert, blood pressure 116/62, pulse 78, respirations 30, and PERL (pupils equal and reactive to light). Patient history included that the patient had fallen from a standing position and sustained left hand injuries with glass imbedded in the palm. History included that the patient was allergic to penicillin. The hospital was informed that the patient was radiological contaminated person with 1600 cpm on both hands

and 400 cpm on forehead. Contaminated clothing was removed and left at the reception center.

Patient medical treatment was the priority. The ambulance crew departed the scene at approximately 1041 hours with an estimated arrival time of two-three minutes.

At 1044 hours, the Oglesby Ambulance Service arrived at the Illinois Valley Community Hospital with the IEMA MRT on board. The hospital Emergency Department Staff and the IEMA MRT assigned to the medical center was standing by to meet the ambulance in the receiving area. The ambulance pulled into the receiving area. The IEMA MRT on board the ambulance exited the ambulance and informed the hospital staff that the concrete edge of the parking area and sidewalk area would be the physical line for the patient transfer from the ambulance crew to the hospital staff. The patient was removed from the ambulance.

Medical center personnel were briefed on the patient's condition by the Paramedic and IEMA MRT. The patient was transferred from the ambulance gurney to the hospital gurney using proper lifting and communication techniques.

The ambulance IEMA MRT provided the patient's contamination information, which was recorded earlier on a Reception Center Monitoring/Action Log Form, to Illinois Valley Community Hospital and IEMA MRT assigned to the hospital.

After the patient was transferred to hospital personnel, the medics, equipment, and the ambulance were surveyed for contamination by the IEMA MRT. The medics and IEMA MRT displayed a good awareness for the location of potential contamination. The medics doffed the personal protection equipment which included the face mask, gown, booties, and gloves. Also surveyed were locations touched by the EMTs during treatment and monitoring of the patient during transport to the hospital.

The IEMA MRT discussed vehicle monitoring to include all door handles, steps leading into the vehicle, steering wheel, wheels and wheel wells, engine intake, radio, etc. A swipe would be taken from any area found to be contaminated. Areas that could be decontaminated with simple cleaning would be cleaned at the hospital which would allow the ambulance and crew to be released back into service.

The EMTs were advised by the IEMA MRT to go to the Emergency Worker Decontamination

facility or to the reception center for a final monitoring after their mission ended. An IEMA MRT would monitor the ambulance receiving area to ensure that the area was clean. Through interview, the Paramedics stated that they knew what locations are designated as monitoring and decontamination facilities in the local area. They would report to one of these locations, or they would call their dispatch center and be told where to go for decontamination in the event they needed this service. They were familiar with the hazards of radiation contamination and the precautions to take to avoid the spread of contamination. Through interview, the ambulance crew demonstrated that they were aware of the primary route to the Illinois Valley Community Hospital and other medical centers in the area that could treat radiological exposed patients.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

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

3.3.1.2 State of Illinois - Illinois Valley Community Hospital - Medical Service - Facility

Criterion 1.d.1:

Successfully demonstrated - this criterion narrative is contained in the Criterion 6.d.1 section.

Criterion 1.e.1:

Successfully demonstrated - this criterion narrative is contained in the Criterion 6.d.1 section.

Criterion 3.a.1:

Successfully demonstrated - this criterion narrative is contained in the Criterion 6.d.1 section.

Criterion 6.d.1:

As part of the LaSalle County Station Radiological Emergency Preparedness Exercise, the State of Illinois demonstrated that the facility and offsite response organizations had the appropriate

space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. The Medical Services (MS-1) Drill was conducted on Tuesday, May 24, 2011, at the Illinois Valley Community Hospital (IVCH) located at 925 West Street in Peru, Illinois.

At 1017 hours, the IVCH emergency room staff received a call from the Illinois Valley Community College Reception Center via the MERCI Radio VHF Radio System (simulated - actual call was through cellular telephone). The caller stated that an evacuee had just arrived at the center for monitoring and medical assistance; she had experienced a flat tire while driving to Illinois Valley Community College Reception Center. While loading the flat tire in the trunk she lost her footing and fell where a broken bottle was laying embedding glass in her right hand. The evacuee tripped the portal monitor where IEMA staff noticed she had injured herself and was bleeding. IEMA called 911 and informed the reception center supervisor. The caller further stated that an ambulance was called to report to the center to transport the evacuee to the IVCH. At 1019 hours, the Oglesby Ambulance Service contacted the IVCH to let them know they were on their way to the Illinois Valley Community College Reception Center.

The primary communications system used was the MERCI Radio VHF Radio System. The ambulance simulated the use of the Emergency Medical Services frequency to communicate with the hospital during the exercise (actual communication done via cellular telephone). The hospital also has a dedicated commercial telephone line, located next to the radio console, which would allow the ambulance crew to use their cellular phones to communicate directly with the emergency room, as a back-up should the radio fail.

There were no communications failures during the exercise.

At 1021 hours, the head Emergency Room Nurse announced a “Code Orange” (simulated) over the Emergency Room intercom. The Emergency Room staff began to prepare the Radiation Emergency Area (REA) for the arrival of the contaminated evacuee. They clearly marked a clean buffer zone in the REA and placed tape across an area in the parking lot, just outside the direct entrance to the REA, to delineate between the clean area and the potentially contaminated area. The REA was ready to receive a patient at 1034 hours.

The IVCH is located outside the 10-mile Emergency Planning Zone (EPZ) for the LCS. The Radiation Emergency Area (REA) is located in a separate room that is part of the Emergency

Department. The REA has a direct entrance from the hospital parking lot.

The REA Staff consisted of a Nuclear Medicine Technician (NMT) and two Registered Nurses (RN) located in the REA, and a Buffer Zone Nurse, Licensed Practical Nurse (LPN) and Illinois Emergency Management Agency (IEMA) Medical Radiation Technician (MRT) located in the clean buffer zone outside the REA. The REA staff dressed out in protective clothing that consisted of; a gown, a skull cap, booties, two pairs of nitrile gloves, and a face shield.

Radiation monitoring and contamination control responsibilities are shared by hospital NMT and IEMA MRT. Radiation Emergency Response Incident Checklist was posted on the wall in the buffer zone. A laminated Contamination and Injury Guide was used by the buffer zone nurse to keep track of what areas of the individual were contaminated. The guide also contained the telephone numbers for IEMA and the Radiological Emergency Assessment Center (REAC). Since the radiation levels for the exercise were less than 2 mR/hr and contamination was less than 5000 cpm, hospital personnel were not required to wear any dosimetry. The IEMA MRT was considered a field team member and wore an Optically Stimulated Luminescent Dosimeter (OSLD) and a Dosimetry Corporation of America Model 622 0-20 R Direct Reading Dosimeter (DRD) which was tested on 05/11.

The NMT used a Victoreen 190 survey meter with a model 44-9 pancake probe (calibration due 06/30/11). The IEMA MRT had a Ludlum model 2241-3 survey meter (calibration due 06/18/11) with several probes; including a model 44-9 pancake probe, a model 43-65 alpha probe, and a model 44-10 sodium iodide probe. He also had a Bicron survey meter (calibration due 08/31/11). All instruments passed an operational battery test and a source response check.

A large plastic barrel stored in a closet near the REA contained all the supplies required for dress out and setting up the REA.

At 1038 hours, the emergency department received the initial call from the ambulance stating that they had a contaminated female patient with bruising and swelling of the right hand. They also stated that they had removed the individual's pants and shoes and had cocooned her to prevent the spread of contamination. They also provided a set of vitals: Blood pressure, 116/62; Respirations, 30; Pulse 78; Skin, normal; and Level of consciousness, alert and oriented.

The ambulance arrived at the hospital parking lot at 1047 hours. A clean transfer was made from

the ambulance gurney to the hospital gurney. The Emergency Medical Technician (EMT) transferred information to the REA RN including a copy of a form from the Reception Center that indicated the initial contamination levels of the evacuee. He stated that after the evacuee's pants and shoes were removed the evacuee was cocooned and no additional contamination surveys were performed.

The evacuee was wheeled into the REA and treatment started. The cocoon was removed and a set of vitals were taken: Blood pressure, 116/62; Respirations, 28; Pulse 78; Skin, normal; and Level of consciousness, alert and oriented. Since the vitals were well within the normal range, there was an open wound on her right hand, and she was alert and oriented; it was determined that no additional medical care was need prior to decontamination. The evacuee would be decontaminated and then transferred to the appropriate department for additional evaluation and treatment.

Since the trigger level for contamination is two times background, background for the REA had been determined prior to the evacuee's arrival. Background was 50 cpm so the trigger level for contamination was 100 cpm. The evacuees cocoon was removed and the NMT performed a whole body contamination survey with the following results; right hand 1800 cpm, left hand 1600 cpm, and the headline right temple area 400 cpm. The nurse used saline solution to attempt to decontaminate the right hand. The staff member carefully washed the patient's right hand and the NMT rechecked the area for contamination. The contamination level showed 800 cpm to her right hand. A second saline wash was conducted and when checked by the NMT, the right hand still had a reading of 300 cpm. A third saline wash was conducted and again was checked by the NMT and read 75 cpm. The left hand was decontaminated in the same manner and after the first decontamination was clean with the palm reading 60 cpm. The hairline right temple contamination was addressed with a premoistened saline towel and after the first decontamination was clean with a reading of 60 cpm.

Throughout the decontamination process, appropriate contamination control methods were used. This included use of methods to prevent the spread of contamination such as glove changes. In addition, appropriate methods were used for the collection of contaminated materials.

To demonstrate the transfer of material out of the REA, the REA staff transferred a pair of paramedic scissors. The scissors was transferred into the buffer zone into a clean bag; the bag was sealed, labeled, and the bag was monitored to determine if there was any activity on the

sample. The readings were background. The bag was brought over to the edge of the REA boundary and was placed into a bag being held open by a nurse on the clean side for later analysis by the IEMA MRT. The transfer was performed to eliminate any chance of contamination. Through an interview the nurse and NMT stated they would utilize the same procedure to pass out nasal swabs or any type of additional lab samples or medical equipment.

Prior to the evacuee's transfer out of the REA, a whole body contamination survey was performed by the NMT with no contamination found. A final set of vitals was taken: Blood pressure, 135/78; Respirations, 20; Pulse 74; Skin, normal; and Level of consciousness, alert and oriented. The individual was transferred to a clean wheelchair in the buffer zone. The patient and the wheelchair were monitored again and no contamination was detected.

During the exercise, the hospital NMT performed all the radiation monitoring and contamination control within the REA. The NMT asked the IEMA MRT for advice numerous times during the exercise.

The REA staff demonstrated correctly the technique for undressing and stepping into the buffer zone and clean area. Through an interview, the NMT and IEMA MRT described the process to be used to clean up the REA and package all contaminated materials for transport back to the LCS.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

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

ISSUE NO.: 34-09-6d1-?-

ISSUE: The Illinois Valley Community Hospital (IVCH) does not have an approved plan. The State of Illinois upon request by FEMA Region V to review the plan prior

to the exercise was forwarded a hazardous material response plan. The IVCH provided a draft plan just before the exercise.

The Medical Services Drill per the hospital provided the opportunity to practice the draft plan. The MS-1 Drill indicated the following weaknesses in the demonstration:

Additional personnel need to be dressed appropriately in anti-contamination clothing and standing by outside the decontamination room; Include in the procedure a process that will prevent the contamination of monitoring equipment (i.e. covering probe with a plastic bag), and ensuring the hospital has a second calibrated radiation monitoring instrument available.

CORRECTIVE ACTION DEMONSTRATED: Illinois Valley Community Hospital plan, dated 06/09, stated that "All personnel assigned will don required protective clothing" listed on page 3, V. In addition on page 3, and continuing through the hospital plan, are position assignments and the number required. Following is an excerpt from page 3 under the Charge Nurse section. This section also indicates that a "second team" will be suited up and ready to assist.

IV. Assign personnel to select area – Decon Team, Buffer Zone Staffing minimum:

- A. Plan 1 – Decon – 1 physician 1 nurse (min)
- B. Buffer or support personnel 1 nurse (min)
- C. Plan 2 – Decon – 1 physician 2 nurse (min)
- D. Buffer or support personnel 1 nurse (min)
- E. Triage – 1 physician (on call) 1 nurse (min)
- F. A second decontamination team will prepare for patient decontamination once the first team has “suited up”.

V. Assure personnel are dressed in required protective clothing and have been trained. Record staff vital signs.

The Nuclear Medicine and Radiation Safety Officer is listed on page 8 of the hospital plan.

Following is an excerpt from page 8.

The Nuclear Medicine Department will direct/assist the ED staff at checking patient(s) and/or equipment for radioactive contamination. 2. If adequate personnel

are available from the Nuclear Medicine Department, one individual should be assigned to assist the physician and nurse(s) in the Decontamination Area in regard to contamination control and assisting in surveying patient(s), equipment, and staff as needed. 3. Nuclear Medicine should assist in the Buffer Zone in maintaining contamination control. The RSO is responsible for checking all articles, patients, and staff who depart from the Decontamination Area for contamination.

IEMA Medical Radiation Technicians are available and present during MS-1 drills and if an actual incident would occur. The IEMA MRTs would provide oversight, guidance, and have radiological survey/monitoring equipment and would supercede the hospital plan if needed. This is in accordance with IPRA plans.

The updated hospital plan has corrected the prior issue 34-09-6d1.

- g. PRIOR ISSUES - UNRESOLVED: None

SECTION 4: CONCLUSION

There were no Deficiencies, ARCAs, or Plan Issues identified for the State of Illinois.

APPENDIX A: DRILL EVALUATORS AND TEAM LEADERS

DATE: 2011-05-24, SITE: LaSalle County Station, IL

LOCATION	EVALUATOR	AGENCY
State of Illinois - Illinois Valley Community Hospital - Medical Service - Transportation	*Deborah Fulk	DHS/FEMA
State of Illinois - Illinois Valley Community Hospital - Medical Service - Facility	Edward Diaz	DHS/FEMA
* Team Leader		

APPENDIX B: EXERCISE PLAN

OFFSITE MEDICAL DRILL

**Illinois Valley Community Hospital
(Reception Center)
Peru, ILLINOIS**

**May 24, 2011
10:00 a.m.**

**EXTENT OF PLAY AGREEMENT
FOR THE
MEDICAL SERVICES EXERCISE
April 12, 2011**

Location: Illinois Valley Community Hospital
Transportation Provider: Oglesby Ambulance
925 West Street
Peru, IL 61354

Participants:

Victim (volunteer)

Lead Controller: (IEMA)

IEMA ER Monitor: Tarver Haven
Estabrook

IEMA Hospital Controller: Joni

IEMA Ambulance Monitor: Mark Hannant

IEMA Ambulance Controller: Kathy Allen

Criteria that can be re-demonstrated immediately for credit, at the discretion of the evaluator, include the following: For Transportation: 1.d.1, 3.a.1 and 6.d.1; for the Hospital, 1.d.1, 1.e.1, 3.a.1 and 6.d.1. Criteria may be re-demonstrated, as agreed by the Lead Controller and FEMA Evaluators.

EVALUATION AREA 1 - EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations.

The Oglesby Ambulance will use 2-way radios to communicate with IVCH. Other communication systems that can be used include commercial telephone or cell phones.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

IVCH will adequately demonstrate the ability to support operations, with adequate resources. The availability of dosimetry and KI for hospital personnel will **not** be demonstrated during this exercise, however IEMA staff will be issued dosimetry and KI as field team members.

EVALUATION AREA 3 - PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart.

The use of dosimetry and KI will not be demonstrated by hospital staff. IEMA staff will demonstrate appropriate use of dosimetry and KI.

For purposes of the exercise, if there is no medical need to bring equipment into and out of the treatment room, nasal swabs will be taken (swabs to be taken outside the nose to simulate taking swabs inside the nose) and passed out of the room to demonstrate movement of equipment and supplies into and out of the controlled area. These swabs will also be utilized to establish if any radioactive materials have been inhaled.

EVALUATION AREA 6.d – TRANSPORTATION AND TREATMENT OF CONTAMINATED INJURED INDIVIDUALS

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

Oglesby Ambulance will demonstrate the capability to transport contaminated, injured individuals to IVCH. The ambulance crew will pick up a contaminated injured patient near the grounds of IVCH that will simulate a local reception center. The ambulance crew will be aware that a release has occurred from LaSalle plant but not able to determine if the patient is contaminated. Oglesby Ambulance will utilize universal precautions and good housekeeping practices to minimize the spread of contamination, and will focus on treating the patient's medical condition.

Oglesby Ambulance will call in the information regarding the patient to IVCH in Peru so they can prepare for receipt of a potentially contaminated patient IVCH will implement their plan for receipt, isolation and treatment of an injured contaminated patient. Medical personnel will utilize universal precautions and good housekeeping practices to minimize the spread of contamination, and will focus on treating the patient's medical condition. Simple decontamination efforts will be demonstrated after the patient has been medically stabilized. The hospital will demonstrate procedures for limiting exposure to hospital staff, decontaminating a patient, and restricting access to the area where the patient is being treated and monitored. Hospital personnel will demonstrate their knowledge of who to call beyond IEMA for assistance in Radiological Accidents, e.g., REAC/TS.

For purposes of this exercise, 2 IEMA staff members will participate. One will accompany Oglesby Ambulance and one will be dispatched to IVCH to assist in an advisory role to nuclear medicine staff. Both IEMA staff will be equipped with monitoring equipment. The purpose of having an IEMA MRT available is to facilitate monitoring the ambulance and ambulance personnel so they are not kept out of service for an extended period of time.

The drill will conclude with the hospital representative supervising the removal of protective clothing and surveying of the emergency room and hospital personnel. IEMA will also advise on the proper procedure for release or disposal of contaminated material.

Following the conclusion of the drill, a short critique will be held.

APPENDIX C: SUMMARY AND INJECTS

OFFSITE MEDICAL DRILL (Summary and Injects) Illinois Valley Community Hospital Peru, Illinois

**May 24, 2011
Start time: 10:00 a.m.**

OBJECTIVES:

1. Demonstrate the ability of EMS personnel to transport a contaminated accident patient.
2. Demonstrate the ability of hospital personnel to treat a contaminated injured patient.
3. Demonstrate the ability of personnel to exercise proper radiological controls.
4. Demonstrate the proper techniques of personnel decontamination.
5. Demonstrate good communication between medical personnel and IEMA staff.
6. Demonstrate proper use of radiation detectors.

IEMA PLAYERS AND CONTROLLERS

Injured Victim	TBD
IEMA Rad Monitor (Amb.)	Mark Hannant
IEMA Rad Monitor (Hosp.)	Tarver Haven
IEMA Ambulance Controller	Kathy Allen
IEMA Hospital Controller	Joni Estabrook
Lead Controller	IEMA

EXTENT OF PLAY FOR IVCH MEDICAL DRILL

INTRODUCTION:

An offsite medical drill will be conducted to demonstrate the State of Illinois' concept of operations for handling contaminated injured individuals. The drill is structured to address MS-1 Hospital and Transportation criteria.

NOTE: Evaluators should be aware that while hospital personnel are encouraged to assume responsibility for monitoring, decontamination, and contamination control activities within their facility to the extent they are able to do so, they are advised to take direction from Illinois Emergency Management Agency (IEMA) personnel regarding these issues. The purpose of providing IEMA support is to ensure appropriate radiation protection protocols are observed.

Extent of Play:

LaSalle Nuclear Power Station has declared a general emergency. The emergency alert sirens have sounded, the public has been directed to evacuate affected areas and to report to reception centers set up in the local area. The scenario is based on a local resident who works in the LaSalle EPZ and experiences a flat tire while driving to Illinois Valley Community College. While loading the flat tire in the trunk she loses her footing and falls where a broken bottle was laying embedding glass in her right hand. Upon arrival to the reception center, she trips the portal monitor where IEMA staff notice she has injured herself and is bleeding. IEMA calls 911 and informs the reception center supervisor.

1. An ambulance and EMS staff will be used to demonstrate loading, transporting and unloading the victim. EMS personnel will pick up the patient at a staged location close to the hospital. IEMA staff will be present for the transportation portion of the drill.
2. The ambulance crew will communicate with the receiving hospital regarding the medical status and any additional precautions taken to prevent spread of contamination.
3. IEMA MRT will be available to conduct monitoring at the simulated reception center and during transport.
4. IEMA MRT and hospital nuclear medicine staff will be providing radiological exposure control and monitoring of EMS and hospital personnel.
5. Decontamination is determinant on ambulance protocols and extent of the injury that the patient presents.
6. The IEMA MRT will supervise the ingress and egress of radiological control areas. Monitoring will be performed prior to personnel leaving the potentially contaminated patient treatment area. Protective clothing used by hospital personnel will be similar to that used for a chemical or biological agent in accordance with hospital protocol.

7. Hospital nuclear medicine personnel will be the primary radiological advisor for contamination control and any patient and staff radiological monitoring and contamination control activities unless no nuclear medicine staff is available to assume responsibility. IEMA will be present to advise and assist as needed.
8. The medical facility will demonstrate or describe their procedures for the medical treatment and necessary decontamination of a contaminated injured individual. Multiple methods of decontamination, including dry, damp or wet, may be utilized for the removal of contamination. IEMA/hospital nuclear medicine personnel will survey the hospital REA and medical personnel to maintain contamination control. These methods will include taking swipes of floors and surfaces so that the hospital and ambulance can be cleared for normal operations.
9. The hospital may need to contact REAC/TS to determine appropriate samples needed to assess internal contamination. Any samples collected will be sent to REAC/TS for analyzing, IEMA does not process biological samples.
10. Emergency medical personnel will be able to maintain their exposure below the limits specified in 10 CFR Part 20 because for the exercise, the dose rate from the patient is below 2 mr/hr.
11. After the Hospital is notified, hospital personnel will prepare the area to receive the patient in accordance with their procedures and provide security as necessary. IEMA as a general practice would, if necessary, post radiation signs in accordance with the requirements as set forth in 10 CFR Part 20. Hospital security will control the area in accordance with the same policies and procedures used to provide isolation in the treatment of a chemical or biological agent.
12. Regardless of specific written hospital procedures for addressing radiation contamination, the supervision and advice provided by IEMA personnel should be the governing guidance for determining whether the patient's contamination situation is appropriately addressed.

The drill shall terminate when the controller verifies that the criteria under Evaluation Area 6, Sub-element 6.d and Evaluation Area 3, Sub-element 3.a.1, have been satisfied.

NARRATIVE SUMMARY FOR IVCH MEDICAL DRILL

LaSalle Nuclear Power Station has declared a general emergency. The emergency alert sirens have sounded, the public has been directed to evacuate affected areas and to report to reception centers set up in the local area. The scenario is based on a local resident who was attempting to evacuate the EPZ. While evacuating the area she has a flat tire and injures her hand, which dramatically slows her leaving the area. She eventually reports to the local Reception Center.

Upon arrival to the Reception Center the evacuee trips the portal monitor and is asked by IEMA staff to step aside for personal monitoring. IEMA personnel notice the evacuee is bleeding and inquires regarding the person's injury. IEMA staff realizes the injury requires more than basic first aid and calls 911 and notifies the Reception Center Supervisor. Oglesby Ambulance is dispatched to the reception center to which an IEMA staff member accompanies the patient and ambulance crew.

For purposes of the drill, a location close to the hospital will be used to represent the actual reception center. Ambulance personnel will demonstrate patient loading and transport. Ambulance personnel will communicate with the receiving hospital. Patient contact dose rates are less than 2 mR/hr. Contamination levels will be less than 5,000 cpm, which means EMS personnel are exempt from direct read dosimeters and LDs in accordance with IEMA procedures for personnel monitoring.

At the hospital an IEMA MRT will assist hospital staff in monitoring and decontamination efforts. For the purposes of the evaluated exercise, IEMA will provide two individuals to perform monitoring: one will monitor ambulance and the other will provide assistance to hospital staff.

At the hospital, medical personnel will utilize universal precautions and good housekeeping practices to ensure contamination from the patient is controlled and not spread. Simple decontamination efforts will be demonstrated after the patient has been medically stabilized. IEMA personnel will discuss the need to take additional samples for further radiological analysis. Hospital personnel will demonstrate their knowledge of who to call beyond IEMA for assistance in Radiological Accidents, e.g., REAC/TS.

For purposes of the exercise, if there is no medical need to bring equipment into and out of the treatment room, nasal swabs will be taken (swabs to be taken outside the nose to simulate taking swabs inside the nose) and passed out of the room to demonstrate movement of equipment and supplies into and out of the controlled area. These swabs will also be utilized to establish if any radioactive materials have been inhaled.

The drill will conclude with the hospital representative and IEMA personnel supervising the removal of protective clothing and survey of the emergency room and hospital personnel. IEMA will also advise on the proper procedure for release or disposal of contaminated material. Following the conclusion of the drill, a short critique will be held.

TIME: Pre t = 0

Victim

Instructions

MESSAGE FORM

Controller

Player

Contingency

Drill/Exercise Type: IVCH Hospital Medical Drill

Message for: Victim and EMS staff

MESSAGE

The LaSalle Nuclear Station has issued a public broadcast that a radioactive release has occurred and that residents and those working in your area are being evacuated. You then report to the Reception Center.

While driving you experience a flat tire. After changing it and putting the flat in your trunk you slip on gravel and fall into broken glass injuring your hand. Upon arrival at the reception center you trip the portal monitor and are asked to step aside for personal monitoring. IEMA staff notices you are bleeding and calls 911.

You are in a moderate amount of pain from the glass being embedded in your hand and are having difficulty making a fist.

You have no known medical issues other than a history of allergic reactions to penicillin.

FOR CONTROLLERS USE ONLY

The information would be available to the hospital as they received preliminary notification information from outbound ambulance calls.

TIME: Time 0
MESSAGE: Initial Conditions

MESSAGE FORM

(X) Controller (X) Player () Contingency

Drill/Exercise Type: IVCH Hospital Medical Drill

Message for: Hospital Personnel

MESSAGE

Initial Conditions:

The patient initially is uncomfortable and slightly bleeding from embedded glass in her hand. T

<u>Contamination Levels:</u>	<u>Initial survey Reading</u>	<u>First Decon</u>	<u>Second Decon</u>	<u>Third Decon</u>
Right hand	1800 cpm	800 cpm	300 cpm	75 cpm
Left hand	1600 cpm	600 cpm	60 cpm	
Backside of Pants	1000 cpm	0 cpm Pants should be removed		
Pants at knees	800 cpm	0 cpm pants should be removed		
Hairline right temple	400 cpm			
Shoes (should be removed)	1200 cpm	0 should be removed		

*Pant/shoes should be removed and bagged.

**Contamination would likely be spread from hand to injured arm either on patient's skin or clothing.

Current Medical Conditions:

Current pain and bleeding of right hand

Note: See last page for contamination locations and levels.

FOR CONTROLLERS USE ONLY

Contamination levels have not been established at this time.

TO: First Responders/EMS

FROM: EMS Controller

NOTE: Do not provide the data to players unless the means to obtain it are demonstrated.

THIS IS A DRILL
DO NOT initiate actions affecting safe operations

Message:

Patient pain is 7 of 10 and seems to be worsening.

	<i>EMS Arrival on Scene</i>	<i>Enroute to Hospital</i>	<i>In REA</i>	<i>After Treatment</i>
Level of consciousness:	Alert & Oriented X3			
Respirations:	30	30	26	20
Pulse:	80	78	78	74
Skin:	Normal	Normal	Normal	Normal
Pupils:	PERL	PERL	PERL	PERL
Blood Pressure:	120/70	116/62	116/62	135/78
Visual:	Bleeding and swelling of right hand			

Note:

ECG Monitor – Sinus tachycardia corresponding to pulse.

Pulse Oximeter 97% on room air.

- Penicillin

Expected Action:

Follow local protocols or standing orders.

THIS IS A DRILL
DO NOT initiate actions affecting safe operations

FOR CONTROLLERS USE ONLY

TIME: 0 + 5 min.

MESSAGE: _____

MESSAGE FORM

(X) Controller

(X) Player

() Contingency

Drill/Exercise Type: IVCH Hospital Drill

Message for: Hospital Personnel

MESSAGE

When Hospital is notified that a potentially contaminated patient will be arriving, the Hospital should make preparations to receive patient in accordance with hospital procedures.

IEMA staff will be dispatched to the hospital in advance of the receipt of the patient for purposes of this exercise.

FOR CONTROLLERS USE ONLY

Issue the message only if ambulance departure from reception center was to occur after 1020. Realistically it would take 20 minutes after the initial call for the ambulance to respond and depart with the patient.

TIME: After patient arrival at hospital

MESSAGE: **Decontamination Activities**

MESSAGE FORM

(X) Controller

() Player

() Contingency

Drill/Exercise Type: IVCH Hospital Drill

Message for: IEMA RAD Controllers

MESSAGE

If proper radiological controls are in place no contamination is found in the ambulance. All areas of the hospital and path from ambulance to treatment room will be surveyed and read as background.

The controller may adjust contamination levels based on actions of the players.

The patient has contamination on right palm, left palm, forehead at hairline, right knee, left knee and on both pant cuffs and bottom and toes of shoes.

IT DOES NOT MATTER IF THE CLOTHING IS REMOVED BY THE AMBULANCE OR HOSPITAL PERSONNEL. Clothing should be bagged and labeled.

FOR CONTROLLERS USE ONLY

TIME: After patient arrival at hospital

MESSAGE: **Decontamination Activities**

MESSAGE FORM

(X) Controller

() Player

() Contingency

Drill/Exercise Type: IVCH Hospital Drill

Message for: IEMA RAD Controller

MESSAGE

Decontamination efforts are as follows:

Once clothing is carefully removed, all outer contamination is removed. **Bagged clothing reads 1200 cpm.**

The first attempt will remove all contamination from the left palm, however the right palm will take several attempts. After decontamination efforts the right hand still reads slightly above background but below the contamination threshold level.

The temple at the hairline will not be able to be decontaminated on the first attempt and reads 400 cpm the second decon effort will result in readings slightly above background. The contamination levels and locations may be adjusted accordingly.

The cuts and glass embedded in the patients hand should be properly addressed by hospital personnel as well as observing contamination control measures.

*Pants and shoes should be removed and bagged.

**Contamination would likely be spread from hand to injured arm either on patient's skin or clothing.

Note: Controllers may adjust levels based on player actions.

FOR CONTROLLERS USE ONLY

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