U.S. Department of Homeland Security
Region V
536 South Clark Street, Floor 6
Chicago, IL 60605

FEMA

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NRC Headquarters Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

To Whom It May Concern:

Enclosed is one copy of the LaSalle County Station Medical Services (MS-1) Drill Report. The drill was conducted in Ottawa, Illinois, on September 24, 2008. Participants included members from the Illinois Emergency Management Agency, Marseilles Ambulance Service and the Ottawa Community Hospital.

No Deficiencies and no Areas Requiring Corrective Action were identified during this drill.

Based on the results of the September 24, 2008, MS-1 drill, the offsite radiological emergency response plans and preparedness for the State of Illinois and affected local jurisdictions, site-specific to the LaSalle County Station, can be implemented and are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site.

Therefore, the Title 44 CFR, Part 350, approval of the offsite radiological emergency response plans and preparedness for the State of Illinois site-specific to the LaSalle County Station, granted on June 4, 1982, remains in effect.

Copies of this Report were transmitted to the DHS/FEMA National Office, Nuclear Regulatory Commission (NRC) Region III, NRC Office of Nuclear Security and Incident Response, and the State of Illinois.

If you have any questions, please contact William E. King, Chairman, Regional Assistance Committee, DHS/FEMA Region V, at (312) 408-5575.

Sincerely,

Edward G. Buikema
Regional Administrator

Enclosure (1)

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FEMA

Final Medical Services (MS-1) Drill Report

LaSalle County Station

Licensee:	Exelon Corporation
Exercise Date:	September 24, 2008
Report Date:	October 28, 2008

U.S Department of Homeland Security
Federal Emergency Management Agency
Region V

536 South Clark Street
Chicago, Illinois 60605 – 1521

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I. EXECUTIVE SUMMARY

On September 24, 2008, 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 around the LaSalle County Station. The purpose of the MS-1 drill was to assess the ability of off-site 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's policies and guidance concerning the exercise of State and local radiological emergency response plans.

DHS/FEMA wishes to acknowledge the efforts of the personnel from the State of Illinois Emergency Management Agency (IEMA), Marseilles Ambulance Service, and the Ottawa Community Hospital who participated in the MS-1 drill.

The scenario for the MS-1 drill was developed by personnel from the State of Illinois. The scenario stated that the LaSalle County Station had declared an Emergency Classification Level of General Emergency. The emergency alert sirens had sounded, and the public was directed to evacuate affected areas and to report to reception centers set up in the local area. The scenario was based on an individual that was an evacuee driving to the Illinois Valley Community College Reception Center. While en-route to the reception center the individual's car over heated. The individual stopped at the roadside, opened the car hood and got his left arm sprayed with hot steam causing a second degree burn on the bottom of the left forearm. Another evacuee saw the accident and drove the person to the reception center. Radiological monitoring and decontamination of evacuees was provided for at these facilities by staff from IEMA under the Illinois Plan for Radiological Accidents (IPRA). The individual entered the reception center holding his arm and explained the accident to the receptions staff members. An ambulance was contacted to transport the individual to the hospital. The individual was surveyed while waiting for the ambulance and contamination was detected. The individual was transported to the Ottawa Community Hospital.

During the MS-1 drill, Criterion 6.d.1 - Transportation and Treatment of Contaminated Injured Individuals, which is 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, was evaluated. The State and local organizations demonstrated knowledge of their organizational emergency response plans and procedures and adequately implemented them. No issues were identified as a result of this drill.

II. DRILL NARRATIVES

Medical Services (MS-1) Transportation – Marseilles Ambulance Service

On Wednesday, September 24, 2008, a Medical Services (MS-1) Drill was conducted at the Ottawa Community Hospital, 1100 East Norris Drive, Ottawa, Illinois. In accordance with the extent of play agreement, the ambulance and crew from the Marseilles Ambulance Service, from Marseilles, Illinois, and an Illinois Emergency Management Agency (IEMA) Radiological Monitor (RM), assigned to provide services at the simulated reception center and in the ambulance, participated in the MS-1 Transportation drill.

The scenario for the MS-1 Drill was as follows: The LaSalle County Station had declared an Emergency Classification Level of General Emergency. The emergency alert sirens had sounded, and the public was directed to evacuate affected areas and to report to reception centers set up in the local area. An evacuee was driving to the Illinois Valley Community College Reception Center. While en-route to the reception center the individual's car over heated. The individual stopped at the roadside, opened the car hood and got his left arm sprayed with hot steam causing a second degree burn on the bottom of the left forearm. Another evacuee saw the accident and drove the person to the reception center. Radiological monitoring and decontamination of evacuees was provided for at these facilities by staff from IEMA under the Illinois Plan for Radiological Accidents (IPRA). The individual entered the reception center holding his arm and explained the accident to the reception staff members. An ambulance was contacted to transport the individual to the hospital. The individual was surveyed while waiting for the ambulance and contamination was detected. The individual was transported to the Ottawa Community Hospital.

For demonstration purposes, the IEMA RM readied the survey equipment that would be used during the drill. This operation was observed in the Ottawa Community Hospital parking lot prior to the arrival of the victim. The IEMA RM checked the meters to ensure that the batteries were installed and fresh. The survey meters and probes were secured in plastic bags to protect them from contamination. Additional bags were available in case a bag became contaminated and had to be replaced. The survey meters were turned on and allowed to warm up. Headphones were attached to the meters. The survey instruments used included: a Ludlum 2241-3 digital scalar/rate meter with pancake probe last calibrated on August 20, 2008, with the next calibration due on August 20, 2009, and a Bicron Micro-R meter, last calibrated on August 19, 2008, and due for calibration on August 19, 2009.

The instruments passed an operational battery test and a source response check prior to use by the IEMA RM. Sources were imbedded in the side of the carrying case used to transport the equipment. The source used was a 10uCi CS-137 Source dated November 2005. The operability check exposure rate and count rate were recorded on a label affixed on a side of the instrument (Bicron Micro-R meter was .9-1.5mR/hr and the

Ludlum 2241-3 was 20.2-33.8 kcpm).

For the purpose of the exercise, the Illinois Valley Community College Reception Center (simulated) was set up in the hospital parking lot of the receiving hospital. Upon arrival at the reception center, at 1305 hours, the evaluator observed an IEMA RM with a metal carrying case containing survey meters, personal dosimetry, and other support supplies such as disposable gloves, swipes and plastic bags. Supplies also consisted of copies of the Reception Center Monitoring/Action Log Form [IEMA 267 (8/05)]. A copy of this form was used during the drill to record patient survey information.

The metal carrying case included a personal dosimetry kit. The kit included the following: a Dosimeter Corporation of America Model 622 Direct-Reading Dosimeter (DRD) with a range of 0-20 R, leak tested on May 9, 2008; a permanent reading Landauer Optically Stimulated Luminescent Dosimeter (LD) with an effective date of July 08 – June 10; 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 KI provided by iOSAT in 130 mg tablets individually sealed with an expiration date of June 2007. A printed card inside the kit advised the user that the KI was tested and the drug was found to be viable so the expiration date was extended. A copy of the extension letter would be kept in the command vehicle located at the reception center from which the IEMA RM would be dispatched.

The IEMA RM took background readings in the area of the reception center that would be used for patient transfer and treatment. Using a Bicron Micro-R meter, readings of 40 counts per minute (cpm) were noted in the reception center. This level was established as background to be used for establishing the decontamination level. The State of Illinois has established a decontamination level of two times background.

The drill commenced when an individual entered the reception center (simulated) holding his arm and talking about the accident to reception staff members; the local 911 Center was contacted at 1325 hours, to transport the individual to the hospital. As the IEMA staff processed him through the radiological monitors they discovered that he was contaminated (simulated). As the victim was surveyed by the IEMA RM he indicated that he had an intense pain in his right arm. At 1327 hours, the Marseilles Ambulance Service was dispatched to transport the victim to the Ottawa Community Hospital.

At 1328 hours, the ambulance crew from the Marseilles Ambulance Service received a call from the 911 dispatch center deploying them to the reception center. The Marseilles Ambulance personnel also had cell phones for primary communication with the hospital. The ambulance used for the drill was equipped with an 800 MHz radio system, which had the capability to be contacted from the 911 center and the hospital. The ambulance crew also had a regional medical channel for communication. Drill records indicate that the ambulance crew contacted the Ottawa Community Hospital at 1333 hours, and informed the center that they were in route to attend to a contaminated patient and they would call in later with more information.

While waiting for the ambulance to arrive, the victim was monitored for contamination

by the Reception Center IEMA RM. Monitoring of the patient was conducted in a low radiation background area. The patient was examined using a Ludlum Model 2241-3 survey instrument equipped with a pancake probe, speaker and set-able alarm. The monitoring techniques used were slow and methodical, with proper positioning of the probe for personnel monitoring. Contamination was found on the victim and documented on a Reception Center Monitoring/Action Log Form. Controller injected information was as follows: left palm-2000 cpm; right palm 3000 cpm; left shoe 1500 cpm; pants at the waste – 1000 cpm; with a background - 40 cpm. Personal information and comments containing information regarding the injury also were recorded on the form.

At 1338 hours, personnel from the Marseilles Ambulance Service arrived at the reception center. The IEMA RM gave the Emergency Medical Technicians (EMTs) a status of the patient's condition and information gathered prior to the ambulance arrival. The EMTs took caution in their approach to the victim; this ensured their safety. The EMTs took universal contamination control precautions while treating the patient. They wore paper coveralls, booties, hair protection, face and eye protection, and rubber gloves.

The EMTs assessed the patient's level of consciousness, level of pain and vital signs. The victim was mobile and sitting in a chair as the EMTs gather patient information and assessed vital signs. The vital signs obtained indicated the patient was alert and oriented; pulse 130; Blood Pressure (BP) 154/100; Pupils Equal, Round and Reactive to Light (PERRL); and the skin warm and moist. The patient stated he had Chronic Obstructive Pulmonary Disease (COPD) and asthma, and was allergic to Demerol. The victim answered questions while the Marseilles Ambulance EMTs placed the patient on Oxygen at 15 l/m with a non-rebreather mask, bandaged the burn area of the right forearm and readied the stretcher. During the assessment and treatment of the patient, the EMTs and IEMA RM were constantly aware of the areas where they came in contact with the patient. Frequent checks for contamination of gloves and areas in close proximity to the patient were checked by the IEMA RM for possible contamination.

As the Marseilles EMTs were aware that the patient's hands were contaminated, they placed gloves on the contaminated hands. They would have removed the contaminated shoe and clothing; however, the IEMA Controller stated that the shoe and clothing would remain on the victim so the Ottawa Community Hospital could demonstrate their removal for the exercise. The EMTs and IEMA RM described their techniques for the removal of the shoe and clothing should they have to perform this task at another time. Adequate contamination control methods were discussed.

For demonstration purposes, an ambulance crew member was simulated as contaminating his right glove. He properly removed the outer glove and disposed of in a contaminated waste bag, which was left at the reception center for disposal.

The stretcher was prepared with a double sheet ready to wrap the patient. The patient walked to the stretcher and lay down with assistance from the ambulance crew. The EMTs wrapped him in the sheets and secured him to the stretcher with three patient straps. The EMTs then moved the victim to the back of the ambulance and placed the victim into the ambulance.

At 1352 hours, the EMTs reviewed and recorded the patient's contamination information provided by the IEMA RM. The EMTs prepared to transport to the hospital. During this preparation the ambulance crew again took vital signs, and simulated placing the patient on ambulance oxygen. The EMT riding in the back of the ambulance provided medical care and gathered personal information from the patient to relay to the hospital. Patient treatment received the highest priority.

At 1358 hours, the ambulance crew departed the scene. The IEMA RM rode with the ambulance to the hospital. During the entire demonstration the ambulance crew and the IEMA RM remained aware of potentially contaminated areas, and conducted contamination surveys when contamination was suspected. The ambulance personnel change gloves and place them, and all used equipment, into a hazardous waste bag that indicated that the contents contained contaminated items. Again the EMT changed gloves before touching either the patient or equipment when contamination was identified.

At 1359 hours, the EMT communicated the patient's condition with the Ottawa Community Hospital Emergency Department staff via cell phone in the ambulance. The EMT reported the ambulance was in route with a patient. Information relayed to the hospital included the reason for transfer to the hospital (burn to the right forearm), radiological contamination readings, location of contamination, level of consciousness, and vital signs. The EMTs reported an accurate assessment of the patient's respiratory rate, pulse, skin color, temperature, and blood pressure and patient's history, and treatment in progress. The EMTs gave an estimated time of arrival of two minutes.

At 1401 hours, the Marseilles Ambulance Service arrived at the Ottawa Community Hospital. Documentation indicated that the hospital was informed in advance of the patient's arrival that they would be receiving a contaminated patient picked up at the Illinois Valley Community College Reception Center.

The Hospital Emergency Department Staff and another IEMA RM assigned to the hospital met the ambulance personnel in the receiving area. The ambulance pulled into the receiving area and the patient was removed from the ambulance. Hospital personnel were briefed on the patient's condition (by the ambulance crew) and the patient was transferred from the stretcher to a gurney using the proper lifting and communication techniques. The ambulance IEMA RM provided the patient's contamination information, which was recorded earlier on a Decontamination Center Monitoring/Action Log Form, to the Ottawa Community Hospital and IEMA RM assigned to the Center. The Marseille Ambulance Crew gave an accurate report of the patient and condition to the hospital staff.

After the patient was transferred to hospital personnel, the EMTs, equipment, and ambulance were surveyed for contamination by the IEMA RM. The ambulance crew and IEMA RM displayed a good awareness for the location of potential contamination. Also surveyed were all locations touched by the EMT during treatment and monitoring of the patient during transport to the hospital.

For demonstration purposes, one EMT was partially monitored and demonstrated the proper doffing of anti-contamination clothing. The EMT doffing and survey were discussed and were adequate for the demonstration. Potentially contaminated clothing and equipment was double bagged and was simulated tagged for transfer to the appropriate receiving agency.

The IEMA RM discussed taking a swipe of any area found to be contaminated. The swipe would be bagged and the sample transferred later to the laboratory. The ambulance receiving area was monitored and found clean. Through interview, decontamination procedures were reviewed with the IEMA RM and ambulance crew. The steps the monitor described would have adequately decontaminated the ambulance. Further discussions indicated the ambulance and ambulance equipment would have been adequately monitored for contamination, and released back to service.

Through interview, the ambulance crew 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 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 Ottawa Community Hospital and other hospitals in the area that could treat radiological exposed patients. The crew was able to identify and describe alternative routes to the Ottawa Community Hospital in the event that the primary route was blocked.

The IEMA RM discussed the process of surveying the Ottawa Community Hospital receiving area with the Ludlum 2241-3 survey meter. He demonstrated and described what actions would be taken should contamination be found in this area. The IEMA RM stated that an established priority for getting the ambulance and the hospital's receiving area cleared and completed the radiation monitoring process to ensure that the ambulance and hospital receiving area were placed back into service. All areas of the hospital and path from ambulance to treatment room cleared at readings of background.

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

Medical Services (MS-1) Hospital – Ottawa Community Hospital, Ottawa, Illinois

A State of Illinois' Medical Services (MS-1) Hospital Drill was performed out of sequence on September 24, 2008, commencing at 1330 hours, at the Ottawa Community Hospital, Ottawa, Illinois.

Prior to the start of the drill, the evaluator was informed that if an incident occurred at the LaSalle County Station, area hospitals would be contacted by a Health Department Representative located in the State Incident Response Center. Notification would include the current emergency classification level declared for the plant, alert hospitals that they could potentially receive contaminated injured persons, advise hospitals to assess available emergency support services, and to consider establishment of their Radiation Emergency Area (REA) with support staff.

At 1333 hours, the hospital received an initial drill telephone call from the Marseilles Ambulance Service that they were outbound to the reception center to pick up a person who was injured and potentially contaminated with radio active materials. Established hospital policy dictates that ambulance personnel provide this initial call to the hospital and then call back with more information once they arrived at the scene and assessed the situation. Per the extent of play agreement, the reception center was the Illinois Valley Community College Reception Center, which was simulated staged at the heliport at the hospital. Outbound information and subsequent information was recorded on an Ottawa Regional Hospital and Healthcare Center Radio Log form.

Routine emergency communications between the hospital and ambulance personnel occur using an ambulance scanner or secure telephone. The initial drill telephone call and future drill communications with the ambulance personnel were conducted using the backup secure telephone line. An ambulance radio scanner is primarily used for communications, but this system can be monitored by some area residents. Therefore, for drill purposes, the secure line was used. Both systems are located next to each other in the Emergency Room (ER) command center and are used daily. Both systems were observed by the evaluator to function adequately either during the drill or for real world emergencies. An Emergency Communication Register Nurse (ECRN) monitored the systems and responded to all drill communications.

Upon receipt of the outbound call and inclusion of a controller injected message that a contaminated injured inbound patient would be arriving at the hospital, the ECRN followed procedures to establish a secure Radiological Emergency Area (REA). Contact was made with the ER Nursing Director who was apprised of the situation. She instructed the ECRN to conduct an assessment of the ER to determine how many critical needs patients were currently present and commence to transfer (simulate) those that could be moved to other areas of the hospital. The ECRN was instructed to activate (simulated) a hospital Code Orange over the public address system. This announcement would activate the hazmat team and ancillary personnel to report to the ER. Responding hospital personnel would include staff from Administration, Security, Maintenance,

Housekeeping, ER, and the Decon Team (doctor, team leader, buffer nurse, radiation safety officer and nurses to attend to the patient.) All personnel were available, if needed for the drill. Personnel from Administration, ER and the Decon Team took active roles in the drill. Due to a high volume of real world ER emergencies, a senior nurse stepped in to handle the duties of the ER physician. Other hospital persons observed the drill. Persons assisting and observing the drill, along with other hospital and ambulance personnel had just received Emergency Medical Services for Radiation Accidents training presented by IEMA the morning of the MS-1 Drill.

Following the simulated ER patient assessment, transfer of patients out of the ER, and notification of Code Orange to hospital staff, hospital personnel demonstrated the capability to activate and set up a Radiological Emergency Area (REA) for patient treatment and control of contamination.

The Gastrointestinal (GI) Lab, adjacent to the ER treatment rooms, was selected as the REA. The GI Lab had multiple areas that could be cordoned off with privacy curtains; had its own outside entrance to the ambulance bay; provided easy access to main corroders of the hospital, to the ER treatment rooms and communications center; and was close to the locked supply room that contained non-medical supplies (caution tape, extra collection buckets, etc.) that would be used to set up the REA.

Personnel visually surveyed the REA and removed nonessential equipment into the main part of the hospital. The evaluator was informed that excess wall equipment or standing medical equipment that could not be removed would be covered with fabric sheets or plastic. A sliding cloth privacy curtain was drawn to separate areas that would be used for treatment. Yellow "Caution Do Not Enter" tape was strung in the outside stairwell entry way to block movement to and from the stairs, and placed on the floor in the REA to define the treatment area and buffer zone. . A Radiation Emergency Response Incident Checklist sign was taped on a wall where it would be readable by staff assigned to the Buffer and patient treatment areas. The sign served and was used by hospital and IEMA personnel as a check off sheet to monitor actions taken during the drill. Action items included: notification, REA preparation, patient arrival, patient care and assessment, radiological assessment, sample collection, patient decontamination, patient exit, staff exit, and REA returned to services.

The REA was outfitted with equipment needed for wound, decontamination, and post decontamination treatment (wet wipes, soap, water, saline solution, gauze, chucks, towels, blankets, patient gowns, stethoscope, scissors, etc.). Additional medical supplies were available in the ER, if needed. Biohazard waste receptacles were placed in the REA. These would be used to collect potentially contaminated items.

In preparation to treat the incoming contaminated patient, REA personnel each donned Personnel Protective Equipment (PPE) to include a disposable gown, two pairs of gloves, face mask, booties, and hair cover. An Illinois Emergency Management Agency (IEMA) Radiological Monitor (RM) and hospital staff from the Radiation Department were available and provided guidance to hospital personnel on how to secure their PPEs to maintain the highest contamination control possible.

During the REA set up, an IEMA RM arrived at the hospital. He was dispatched (simulated) by his supervisor at the Illinois Valley Community College Reception Center to provide survey and verbal technical support to hospital personnel, and survey the areas used in patient treatment.

The IEMA RM arrived with a metal carrying case containing survey meters, personnel dosimetry, and other support supplies such as disposable gloves, booties, baggies, garbage bags, scissors, forceps, smears, sample envelopes, masking tape, tape, contaminated item labels, pens, pad of paper, and forms. The Reception Center Monitoring/Action Log Form [IEMA 267 (8/05)] was available. A copy of this form was used during the drill by the ambulance IEMA RM to record patient survey information. A copy filled out with patient information was turned over to the Hospital IEMA RM during patient transfer. Monitoring equipment, personal dosimetry, potassium iodide supplies, and accompanying instructions and record keeping forms were operationally checked by the IEMA RM before the MS-1 drill began.

Personal dosimetry included a Dosimeter Corporation of America Model 622 Direct-Reading Dosimeter with a range of 0-20 R, leak tested on May 9, 2008; a permanent reading Landauer Optically Stimulated Luminescent Dosimeter (LD) issued September 5, 2008, with an effective date of September 05 – October 08; and an InLight LD dated July 08 – June 10. Other equipment included: a pencil grip dosimeter charger, 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 KI provided by iOSAT in 130 mg tablets individually sealed with an expiration date of June 2007. A printed card inside the kit advised the user that the KI was tested and the drug was found to be viable and the expiration date was extended. A copy of the extension letter would be kept in the command vehicle located at the reception center from which the IEMA RM would be dispatched. The evaluator was told that the expiration date was extended to June 2009.

A Ludlum 2241-3 digital scalar/rate meter with pancake probe last calibrated on 6/11/08, with the next calibration due on 6/11/09, was available as was a Bicron Micro-R meter, last calibrated on 7/30/08, and due for recalibration on 7/30/09. The IEMA RM donned disposable gloves and checked out his equipment. In reality, this process would have occurred at the Reception Center. The instruments passed an operational battery test and a source response check. The survey meter and probe were secured in plastic bags to protect them from contamination. Additional bags were available in case the bag became contaminated and had to be replaced. The survey meter was turned on and allowed to warm up. Headphones were attached. Sources were imbedded in the sides of the carrying cases used to transport the equipment. Operability check exposure rate and count rate were recorded on a label affixed on a side of the instruments. Additional probes that were highly sensitive were available to measure small areas for contamination.

In addition, the IEMA RM was questioned about his knowledge to manage radiological exposure for emergency workers. The IEMA RM was familiar with how to complete the

Radiation Exposure Record card with name, social security number, and current date; knew how to wear the permanent Landauer Luminescent Dosimeter, check the Direct Reading Dosimeter (DRD) every 30 minutes and record readings on the record cards. He was aware of the State administrative reporting limit (3R) and turn-back value (10R). After this assignment, the IEMA RM could be reassigned to another location. Equipment would be checked out at the end of the mission.

According to the extent of play agreement negotiated with the Department of Homeland Security/Federal Emergency Management Office, Region V, personal dosimetry was not issued to hospital personnel by IEMA. By monitoring his own DRD and using radiation survey equipment, the IEMA RM at the hospital was aware of local conditions and could advise hospital personnel of changes in readings, if any. Only a very low level of exposure was expected at this facility.

The IEMA RM conducted a background check in areas that would be used for patient treatment. A reading of 30-35 counts per minute was noted. This level was established as background to be used for future patient and emergency worker care. Decontamination levels established by the State of Illinois are two times background.

While the REA was being readied, the ECRN stayed at the ER communications center. At 1359 hours, an inbound call was received and documented from the Marseilles Ambulance Service staff. Staff advised that they were in route to the hospital with a patient who had a burn to the right forearm and was contaminated. Patient vitals were given to include level of consciousness, respirations, pulse, skin and pupil conditions, blood pressure and know medication allergy and history. The estimated time of arrival was two minutes.

Hospital personnel met the inbound ambulance in the receiving area. They were brief by the ambulance crew about the patient's condition and assisted with the transfer of the patient from the ambulance stretcher to a hospital gurney. The Reception Center Monitoring/ Action Log Form was passed from the ambulance IEMA RM to the hospital IEMA RM along with a verbal description of the patient's contamination levels, location and efforts taken to contain known contamination. The patient was mummy wrapped and had gloves on each hand. Contamination levels were reported as left palm 2000 cpm, right palm 3000 cpm, left shoe 1500 cpm and waist 1000 cpm. Shared information also included details on the patient's accident, his medical condition (pulse/respirations/ blood pressure) and current medications and allergies.

En-route to the REA, the wheels of the gurney and floor of the entry pathway were surveyed by the ambulance IEMA RM to confirm that no cross contamination had occurred to the floor of the treatment room. Reported readings were identified as background levels and this information was shared with the hospital IEMA RM.

The first priority of the receiving Decon Team was to do a quick, on the spot, assessment of the patient's medical condition. Priority was given to ensuring that the patient was medically stable and the injury was not life threatening prior to treatment for the exposure to radiation. The Decon Team was able to talk with the patient and assess that the patient

was medically stable, conscious, alert, his right forearm was burned, and obtain medical and accident history.

During these and the rest of the drill activities, the buffer nurse stayed within the buffer zone and was able to hear and record medical and contamination information on a hospital form.

Confirming that the patient was stable, the Decon Team and IEMA RM proceeded with medical treatment, and monitored and decontaminated the patient. The patient was mummy wrapped in two cloth sheets. The IEMA RM advised hospital personnel that the wrapping could be removed and instructed them on how to unroll the material. The sheets were carefully pulled back from the patient, one at a time, and individually rolled.

The ER physician ordered a blood sample to be drawn and sent to the laboratory for analysis. The patient's left arm was exposed, monitored for contamination and found to be clean. Medical procedures were followed for collecting (simulated) a blood sample. The sample was surveyed for contamination and determined to be clean. Proper procedures were followed to control contamination as the sample was bagged, labeled and double bagged as it was passed across the buffer zone line to the buffer nurse for transmittal to the hospital laboratory. During medical treatment, the IEMA RM and hospital Decon Team discussed saving the dressing cover from the burned area and swabs from nasal and injury sites. These samples would be processed in the same manner as the blood sample for transmittal to the laboratory for analysis of contamination levels. The Decon Team was queried to determine if they knew who to contact in case the IEMA RM was not available to counsel them on radiation matters. The Decon Team was aware that contact could be made with REACTS or to IEMA through a hot line telephone number available 24-hours a day/seven days a week.

The IEMA RM monitored the patient through out the drill. The patient was surveyed and contamination levels at 1200 cpm were located around the abdomen area. The burn area (right arm) was monitored and found clean. The hands, enclosed in gloves, were surveyed. The right hand was surveyed and contamination levels of 2400-2600 cpm were located on the outside of the gloved hand and 2300 cpm on the palm. The left arm and hand were surveyed and found clean, but results revealed contamination on the glove of the left palm at 2200 cpm. Survey techniques were slowly and thoroughly completed as they would be in an actual emergency.

Under the guidance of the IEMA RM, two nurses on the Decon Team commenced decontamination of the left and right palms. Each nurse worked on a separate hand. Both of the patient's gloves were slowly and carefully removed and disposed of in a biohazard waste container. The hands were resurveyed with the results reported as right palm 2600-2700 cpm and left palm 2200 cpm. The IEMA RM indicated the need for decontamination measures. Wash wipes were used to decontaminate the palms of both hands. Wipes were disposed of in a biohazard waste container and the palms were resurveyed with the left palm declared clean and the right at 600 cpm. Another decontamination sequence was completed and the right palm also was declared clean. The IEMA RM supervised the Decon Team in properly rolling back a blue sheet covering

and cutting off the patient's clothing near the abdominal area, thereby, removing the contaminated materials. The patient's left shoe was also known to be contaminated at 1600-1800 cpm. Care was taken to remove both shoes. Red plastic bags were placed over each shoe. Each shoe was remove and contained within a bag that was then disposed of in the biohazard waste container. This removed the contamination. As needed during decontamination, the rest of the patient's clothes were cut off, properly rolled and disposed of in order to contain contamination. Areas were also surveyed by the IEMA RM to determine if contamination was present.

During these efforts care was taken by each nurse to have their own hands surveyed, multiple times, by the IEMA RM and frequently change their gloves before continuing with patient care or decontamination efforts. All contaminated gloves, equipment and clothing were properly disposed of in the biohazard waste container.

After medical treatment and decontamination efforts were completed, the IEMA RM conducted a full body survey on the patient. He was declared clean and released from the REA. The gurney that the patient lay upon was moved to the buffer line and the patient stepped across the yellow barrier tape into a clean area. Coverings on the gurney were carefully rolled and disposed of in a biohazard waste container.

Exit procedures for the Decon Team were demonstrated by the IEMA RM and one nurse. The nurse stepped up to the buffer line and, while inside the REA, her gloves were surveyed and found cleans. She removed her first set of gloves, face mask, hair covering, and gown, carefully rolling the inside of the gown to the out side. She put all articles in a biohazard waste container.

The IEMA RM performed a slow and methodical full body survey with the probe held about one-half to one inch away from the survey area. This was the same technique used for all survey attempts conducted during the drill. For demonstration purposes, upon reaching the nurse's right shoe covering, a 400 cpm count was detected. The nurse was instructed to carefully remove her shoe coverings by putting her finger inside the clean inner part of the covering. The shoe cover was removed and disposed of in the biohazard waste container, gloves and foot were surveyed. The nurse stepped across the buffer line on the clean foot. The survey continued with the other foot, which was found clean. Gloves were removed and all surveyed areas were determined to be clean; the nurse was released.

The IEMA RM stated that after the Decon Team was cleared, he would survey the REA for contamination, paying attention to used equipment (gurney, backboard, scissors, stethoscope, etc). A sweep of the floor, following a grid patter, would clear the REA. If contamination was found at any spot, a surface wipe would be done at the location and the area would be resurveyed. If an area could not be decontaminated, the REA would be closed off until more thorough decontamination efforts could be done. Radioactive waste would be double bagged and sealed. Bags would be labeled with information identifying the contents of the bag and level of contamination, if known. The IEMA RM would provide advice on waste disposal that would come down to him from other IEMA officials.

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

III. EXTENT OF PLAY AGREEMENT

EXTENT OF PLAY AGREEMENT
FOR THE
MEDICAL SERVICES (MS-1) DRILL
September 24, 2008

Location: Transportation: Marseilles Ambulance Service
Hospital: Ottawa Community Hospital
1100 East Norris Drive
Ottawa, Illinois 61350

Participants: Players - Marseilles Ambulance Service and Ottawa Community Hospital
Victim - Volunteer
Controllers - IEMA
Evaluators - DHS/FEMA RV

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 Marseilles Ambulance Service will use 2-way radios to communicate with Ottawa Community Hospital. 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.

Ottawa Community Hospital 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 this 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.

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.

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.

Marseilles Ambulance Service will demonstrate the capability to transport contaminated, injured individuals to Ottawa Community Hospital in Ottawa. The ambulance crew will pick up a contaminated injured patient near the grounds of Ottawa Community Hospital (simulating pick-up of a patient from Illinois Valley Community College, a designated Reception Center). The ambulance crew will be met by IEMA staff that will perform initial radiation monitoring, and will provide information regarding contamination levels on the patient. Marseilles Ambulance Service will utilize universal precautions and good housekeeping practices to minimize the spread of contamination, and will focus on treating the patient's medical condition.

Marseilles Ambulance Service will call in the information regarding the patient to Ottawa Community Hospital in Ottawa so they can prepare for receipt of a contaminated patient. IEMA personnel will accompany the patient to the hospital along with the ambulance, bringing instrumentation to provide radiation readings and guidance to the hospital.

Ottawa Community Hospital 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. 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 this exercise, another IEMA staff member will be dispatched to Ottawa Community Hospital with radiation detection and measurement equipment in advance of the ambulance arriving. The purpose of having two separate individuals for this exercise is to

facilitate monitoring the ambulance and ambulance personnel so they are not kept out of service for an extended period of time.

Ottawa Community Hospital also has a Nuclear Medicine Department, and Nuclear Medicine personnel are available to assist with radiation surveys and monitoring.

The drill will conclude with the hospital representative and IEMA personnel 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.

For purposes of this 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.

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