



**FEMA**

**DEC 23 2013**

Ms. Cynthia D. Pederson  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region III  
2443 Warrenville Road, Suite 210  
Lisle, Illinois 60542-4351

Dear Ms. Pederson:

Enclosed is one copy of the final After Action (AAR) / Improvement Plan (IP) for the August 21, 2013, Radiological Emergency Preparedness (REP) Partial Participation Hostile Action Based (HAB) Plume Exposure Pathway Exercise for the Dresden Nuclear Power Station (DNPS). The State of Illinois; Grundy, Kendall and Will Counties; and the utility owner/operator, Exelon Nuclear participated in this exercise. Grundy County received credit for participating in a HAB exercise. Kendall County received credit for participating in a HAB and Plume Exposure Pathway Exercise. Will County's biennial requirements were not evaluated, with the exception of an Out-of-Sequence EV-2 School Interview. The AAR/IP was prepared by the U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) Region V, Radiological Emergency Preparedness Program.

There was one Deficiency identified during this exercise for Grundy County. There were no Deficiencies identified for the State of Illinois, Kendall or Will Counties.

The Deficiency assessed was based on Grundy County not activating the alert system (sirens) in association with the dissemination of an Emergency Alert System (EAS) Message that contained instructions to the public to shelter in place, whereas the public would have been unaware to listen for an imminent EAS message/Protective Action Decision. In addition, the County did not read the first page of the EAS message which described the affected Sub-Areas. Together, the absence of the alert (sirens) and missing front page of the EAS message could have adversely affected the health and safety of the public.

In accordance with 44 CFR 350.9(d), we thoroughly reviewed and discussed this issue with the Department of Homeland Security/Federal Emergency Management Agency Headquarters and the U.S. Nuclear Regulatory Commission.

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A successful re-demonstration of the Deficiency was conducted on October 17, 2013.

There was one Area Requiring Corrective Action (ARCA) identified during this exercise for the State of Illinois. There was one ARCA identified during this exercise for Kendall County, which was successfully re-demonstrated. There were no ARCAs identified for Grundy or Will Counties.

The ARCA for the State of Illinois was identified under Criterion 3.a.1 - The Offsite Response Organizations (OROs) issue appropriate dosimetry, potassium iodide (KI) 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 exposure record or chart. OROs maintain appropriate record keeping of the administration of KI to emergency workers. The Saint James Medical Center Nuclear Medical Technologist was unaware that Direct – Reading Dosimeters (DRD) should be available, zeroed, initial readings recorded and read at specific intervals. In addition, the Nuclear Medical Technologist was not aware that Emergency Room staff treating a radioactively contaminated patient should adhere to dosimeter limits. A letter received December 10, 2013 by DHS/FEMA Region V, from the State of Illinois, Illinois Emergency Management Agency indicated that a dosimetry distribution plan was being developed and would be implemented in 2014. This plan would provide dosimetry and subsequent training to all primary and secondary hospitals, as well as transportation providers.

The ARCA for Kendall County was identified under Criterion 5.a.1 - Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current REP guidance. The Public Information Officer (PIO) did not instruct the personnel at Radio Station WSPY to rebroadcast the General Information message every 15 minutes, as required. Retraining was conducted by the State of Illinois Controller, and the PIO adequately re-demonstrated the procedure.

There was one Plan Issue each identified during this exercise for the State of Illinois and for Grundy County. There were no Plan Issues identified for Kendall or Will Counties. There was one previously identified Plan Issue for the State of Illinois, which remains unresolved as of the August 21, 2013, DNPS REP Exercise.

The Plan Issue identified during this exercise for the State of Illinois was under Criterion 3.a.1 – The OROs issue appropriate dosimetry, KI 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 exposure record or chart. OROs maintain appropriate record keeping of the administration of KI to emergency workers. The DRD dose limits contained on the Radiation Exposure Record/Dosimetry Record and in the Illinois Plan for Radiological Accidents (IPRA) Volume 1 (2007), Standard Operating Procedure Radiological Task Force (RTF)-RAFT-11, Revision 3, pages 4, 5 and 7 are not sufficiently clear to accurately describe the three Environmental Protection Agency Protective Action Guide Total Effective Dose Equivalents (TEDE) dose limit categories.

An emergency worker accruing a DRD exposure of 10 Roentgen would have received a TEDE dose of 16.7 rem, exceeding the 10 rem TEDE limit. If the emergency worker was involved in a lifesaving mission where the 25 rem TEDE limit was appropriate, the emergency worker would have been required to leave prior to accruing 25 rem TEDE and potentially adversely impacting the lifesaving mission. This Plan Issue will be addressed by the State of Illinois issuance of 0-2 R dosimeters to replace the 0-20 R dosimeters and updating of the current reporting limits. Further discussion is needed between DHS/FEMA Region V and the State of Illinois before this Plan Issue can be completely resolved.

The Plan Issue identified during this exercise for Grundy County was identified under Criterion 3.a.1 – The OROs issue appropriate dosimetry, KI 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 exposure record or chart. The OROs maintain appropriate record keeping of the administration of KI to emergency workers. The Grundy County Emergency Operations Center is located within the 10-mile Emergency Planning Zone of the DNPS, Emergency Operations Center staff are considered emergency workers, and would in the event of a radiological incident require DRD and Permanent Record Dosimeters (PRDs), as referenced in the REP Manual, June 2013, III-43. Grundy County plans and procedures do not reflect that DRDs and PRDs would be issued to EOC staff in the event of an incident at DNPS. This Plan Issue will be addressed in the next plan update.

The previously identified Plan Issue for the State of Illinois, is identified under Criterion 5.b.1 - OROs provide accurate subsequent emergency information and instructions to the public and the news media in a timely manner. Information contained within the IPRA Volume 1, Concept of Operations, and RTF procedure RTF-POS-2 are not consistent in regards to the KI information that is provided to the public. This Plan Issue will be addressed in the next plan update.

A letter was sent from DHS/FEMA Region V to the State of Illinois, October 18, 2013, requesting additional demonstrations to adequately evaluate a representation of emergency workers from various organizations participating in the multiple Staging Areas activated during the August 21, 2013 exercise. In a letter to DHS/FEMA Region V, received December 13, 2013, the State of Illinois in coordination with the support communities agrees to schedule additional interviews with emergency workers from key organizations within the first calendar quarter of 2014.

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 Dresden Nuclear Power Station, granted on September 30, 1981, remains in effect.

Copies of this Report were transmitted to the DHS/FEMA National Office, Nuclear Regulatory Commission (NRC) Headquarters' Document Control Desk, and the State of Illinois.

Ms. Cynthia D. Pederson

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

Sincerely,

  
Andrew Velasquez III  
Regional Administrator

Enclosure (1)