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

FEMA

JUL 8 2011

Mr. Mark Satorius
Regional Administrator
U. S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road
Lisle, Illinois 60542-4351

Dear Mr. Satorius:

Enclosed is one copy of the Final After Action Report / Improvement Plan for the March 1, 2011, Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise for the D.C. Cook Nuclear Power Plant. Two copies were provided for the State of Michigan and one copy was provided for Berrien County. The State of Michigan, Berrien County, and the utility owner/operator, American Electric Power, participated in this exercise. The Final Report was prepared by the U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) Region V, Radiological Emergency Preparedness Program.

No Deficiencies were identified for any jurisdiction during this exercise.

No Areas Requiring Corrective Actions (ARCAs) were identified for any jurisdiction during this exercise.

There were three Planning Issues unresolved during this exercise for the State of Michigan.

The first Planning Issue Number, 15-11-6a1-P-01, was issued under Criterion 6.a.1 – "Reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers." Contamination may have been spread and dosimetry may have been contaminated by the emergency workers gloved hands being contaminated without frisking. Recommend revising procedure to ensure the monitoring of hands or that they re-glove after opening potentially contaminated tailgates and handling potentially contaminated equipment and samples.

The second Planning Issue Number, 15-11-3a1-P-02, was issued under Criterion 3.a.1 – "OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with plans and procedures." Emergency workers periodically and at the end of each mission read and record dosimeter reading. Appendix F of the Michigan Nuclear Facility Emergency Management Plan states that the administrative dose limit is 1 rem per day and 3 rem per emergency Total Effective Dose Equivalent (TEDE) (footnote b). Electronic Personal Dosimeters and Direct-Reading Dosimeters only approximate the Deep Dose Equivalent component of TEDE. No EPD/DRD correction factor for TEDE is given. If a DRD reading of 1 R or an EPD reading of 1 rem is indicated on the device, the individuals TEDE may actually be several rem due to the Committed Effective Dose Equivalent component not indicated by the dosimetry.

The third Planning Issue Number, 15-11-4a3-P-03, was issued under Criterion 4.a.3 – "Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected." Teams must move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. The HPRT Standard Operating Procedure (SOP) specified air sampler volume to be collected at six cubic feet, run time of three minutes at two cubic feet per minute does not meet the minimum volume of ten cubic feet required to detect the presence of radioiodine concentrations as low as 10^{-7} Ci/cc. The HPRT SOP also does not address purging the air sampler prior to disassembly and analysis. The counting system may not be sensitive enough to detect radioiodines as low as 10^{-7} Ci/cc when the total volume collected is less than 10-cubic feet. The net count may cause a gross overestimation of the calculated thyroid dose due to the presence of noble gases remaining in the sample cartridge if the air sample is not purged prior to analysis.

There were no Planning Issues identified for Berrien County.

Based on the results of the March 1, 2011 exercise, the offsite radiological emergency response plans and preparedness for the State of Michigan and affected local jurisdictions, site-specific to the D.C. Cook Nuclear Power Plant, 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 Michigan site-specific to the D.C. Cook Nuclear Power Plant, granted on December 4, 1980, remains in effect.

Copies of this Report have been provided to the DHS/FEMA National Office, Nuclear Regulatory Commission (NRC) Headquarters' Document Control Desk, and the State of Michigan.

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

Enclosures (1)