PART 1 – TRANSPORTATION AND FIXED FACILITY (NON-NPP) ACCIDENTS

I. PURPOSE

This annex identifies resources and responsibilities for agencies that will respond to accidents involving radioactive materials.

II. CONCEPT OF OPERATIONS

Radioactive hazardous materials are commonly used in a variety of settings (e.g., medical facilities, building and infrastructure construction and inspection, nuclear power plants.) The materials needed for these applications are transported via special and common carrier on the road, air, rail and water. If released into the environment, these materials require special consideration regarding their safe handling and disposal.

The on-scene Incident Commander has responsibility for this operation. The Pierce County Emergency Management Director will act as the liaison between the on-scene responders and additional resources. Statutory authority for oversight regarding the remediation of radiological materials incidents rests with the State of Wisconsin.

During the recovery phase, all agencies are expected to support continuing operations with equipment and staff.

III. RESPONSIBILITIES AND TASKS

A. General

Response

1. Use the Incident or Unified Command System to organize the response and to request and manage additional resources as necessary.

2. Notify the Wisconsin Emergency Management (WEM) on-call Duty Officer (DO) and the Department of Health Services – Radiation Protection Section (DHS-RPS).

3. Set up a perimeter around the facility or spill and enact an access control system.

4. Document all personnel who might have been exposed to radiation or radioactive contamination.

5. Provide for staff to address media inquiries and public information regarding the event.

6. Ensure staff and equipment are not returned to service until qualified personnel have monitored both for radioactive contamination.

Recovery

1. Track agency response and recovery costs incurred and relay totals to the Pierce County Emergency Management Director.

B. Fire Department

Response

1. Notify the Pierce County Emergency Management Director of the radiological release.

2. Use appropriate guidance {e.g., US DOT Hazardous Materials Guidebook, shipping papers, Materials Safety Data Sheet (MSDS)} for recommendations regarding:
   - Extinguishing or controlling fires
   - Appropriate personal protective equipment (PPE) for responders
   - First aid recommendations for those exposed to the substance.

3. Contact the shipper or facility representative for more information regarding the hazardous material and to notify them of the incident.

4. Recommend protective actions as necessary (ss. 213.095).

C. Pierce County Emergency Management Director

Response

1. Coordinate with the WEM DO to have other appropriate state and federal response agencies work with the first responders. These agencies may include:
   - Wisconsin Department of Natural Resources (DNR)
   - Type I Hazardous Materials Team
   - U.S. Department of Energy – Radiological Assistance Program (DOE-RAP) Team

2. Activate the Pierce County Emergency Operations Center, as necessary.

D. Emergency Medical Services

Response

1. Provide emergency, lifesaving care to victim(s).

2. Notify the hospital as soon as possible of the victim's potential exposure to radioactive materials so that hospital personnel may prepare the receiving area.

E. Law Enforcement

Response

1. Upon request, assist with establishing a perimeter and controlling access.

2. Assist with the notification and implementation of any protective actions that have been ordered. In the event of an escalating emergency outside of a city or village limits, the Sheriff of the affected county has the authority to recommend an evacuation of residents (ss. 66.325).

3. Provide escort for emergency response personnel and equipment dispatched to the emergency site, when requested.

F. Chief Elected Official

Response

1. Within incorporated jurisdictional limits, order protective actions as necessary (ss. 323).

2. If response activities exceed local capabilities, declare a local state of emergency and request state aid.

G. Public Works

Response

1. Provide equipment and staff to augment operations, upon request.

2. Assist law enforcement with traffic control activities as needed.

PART 2 – NUCLEAR POWER PLANT ACCIDENTS

I. PURPOSE

This annex identifies resources and responsibilities for agencies that will respond to incidents at the Prairie Island Nuclear Generating Plant based upon the needs according to appropriate Emergency Classification Level.

II. CONCEPT OF OPERATIONS

Because part of Pierce County is included within the plume exposure and ingestion exposure pathway emergency planning zones (EPZs) of the Prairie Island Nuclear Generating Plant (PINGP), it is considered to be both a "risk" and an "ingestion" county. Annex I of the Pierce County Emergency Operations Plan (EOP) has been developed to direct the county response; to identify the means by which it will protect the population and to outline working arrangements between the county, the utility, state government and private emergency response organizations.

There are approximately 7,807 people residing within the 10-mile EPZ which includes all or part of the Townships of Oak Grove, Trimbelle, Diamond Bluff, Trenton, Hartland and Isabelle and the Villages of Ellsworth and Bay City.

Response organizations include:

- All Pierce County Departments are available to operate on a continuous 24-hour basis for a protracted period of time.
- All Township Departments that reside within the Pierce county borders
- The American Red Cross, Amateur Radio Services and other agencies that might be requested to fulfill unforeseen specialized requests under the state's Voluntary Organizations Active in Disasters (VOAD.)
- The Prairie Island Nuclear Generating Station
- Wisconsin state agencies designated in the Wisconsin State Emergency Response Plan. Primary agencies are the Wisconsin Emergency Management, Department of Health Services, Department of Natural Resources and Department of Agriculture, Trade and Consumer Protection.
- Goodhue County and Dakota County Minnesota agencies designated in the respective county's Emergency Operations Plan. Primary contact will be with the Emergency Management Director.
- Minnesota state agencies designated in the Minnesota State Emergency Operations Plan. Primary contact will be with the Emergency Management Agency.
- Federal Agencies designated in the Federal Response Plan. Primary agencies include DHS/FEMA and the Nuclear Regulatory Commission.

The focus of the recovery phase is to provide accurate, official information and instructions to food producers, processors and distributors within a 50 radial mile area

surrounding the PINGP, which includes all of Pierce County. During the recovery phase, all agencies are expected to support continuing operations with equipment and staff.

III. RESPONSIBILITIES AND TASKS

Response

A. Notification, Warning and Communications.

1. The Pierce County Emergency Management (EM) Director is notified of any incident at a nuclear power plant. The EM Director will determine to what extent (i.e., none, partial or full) the county will activate the Emergency Operations Center (EOC) at the Pierce County Law Enforcement Center (555 W. Overlook Dr. Ellsworth, WI) based on the information supplied by the nuclear power plant and the state, if possible. Pierce County will coordinate with Wisconsin and Minnesota to provide support to the federal responders as requested and able. The State of Minnesota will be the lead coordinating agency for Federal responders and will provide them with facilities as necessary. The EM Director will rely on a combination of the telephone list contained in this plan and personal contacts to activate support resources.

   The level of activation for the EOC is determined by the Emergency Classification Level (ECL) for the incident:

   - *Unusual Event* – The Pierce County EM Director is notified and monitors the situation. Public information staff may be dispatched to the JIC.

   - *Alert* – The Pierce County EM Director is notified and monitors the situation. The EM Director determines to what level (i.e., none, partial, full) the EOC is to be activated. For most events, the EOC will be fully activated at an Alert but there are some conditions at the plant (e.g., a “credible security threat”) for which the EOC will not be fully activated. Public information staff may be dispatched to the JIC.

   - *Site Area Emergency or General Emergency* – The Pierce County EM Director is notified and the EOC is fully activated. The Public Information Officer (PIO) is dispatched to the JIC.

   Note that the emergency classification scheme used is consistent with that established by the Prairie Island Nuclear Generating Plant.

2. State and county emergency management agencies use standardized forms to expedite communicating information. The ERONS NXT Communicator is the primary means for notification and communication from the plant to Minnesota,

Wisconsin and their affected counties during an incident at PINGP. The system sends an email of the standard notification form to each notification point and then follows up with a telephone call to each notification point. ERONS NXT Communicator is used for notification only and can be transferred to another location if the Emergency Operations Center (EOC) relocates.

The primary backup system to the ERONS NXT Communicator notification system is NAWAS. Additional back-up communication will be accomplished via commercial telephone lines (land and/or cellular), two-way radios, RACES/ARES radio, facsimile machines and satellite phone.

3. Integrated Public Alert and Warning System (IPAWS) IPAWS is available to United States federal. state, local, territorial and tribal government officials. IPAWS improves alert and warning capabilities by allowing the delivery of an emergency message from a single portal to multiple communications pathways. These pathways include: Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), National Weather Service Dissemination Systems including NOAA weather radio, Unique Systems (emergency telephone networks, sirens or digital road signs) and future systems. People on the Mississippi River will be warned by the Pierce County Water Patrol, National Guard helicopters, etc.

4. Activation of the Public Alert and Notification System (PANS) sirens and/or other alerting systems is used to signal the public to tune in to their local EAS stations each time critical protective action information is broadcast. The PANS system activates for three minutes and will always be used in conjunction with the IPAWS (EAS, WEA) broadcast of an evacuation protective action. The selection of the protective action recommendation (PAR), the affected sectors/sub-areas and the selection of the appropriate IPAWS (EAS, WEA) message is coordinated between the States of Wisconsin and Minnesota and is relayed to the counties. Coordinated decision-making will be done with a sense of urgency. Once a decision has been made for protective actions the 15-minute design objective can be met if circumstances require it. In slowly-developing events, the timing of the activation of the PANS is coordinated between the State of Wisconsin the State of Minnesota, Pierce, Goodhue and Dakota counties. Minnesota Homeland Security Emergency Management or BCA is responsible for issuing and transmitting prescripted IPAWS (EAS, WEA) messages which encompass Dakota and Goodhue Counties in Minnesota *and* Pierce County in Wisconsin.

   Sirens will be activated by the Pierce County Dispatch Center or the Emergency Management Director in the EOC at the direction of the Pierce County Board Chairperson or designee. If circumstances at the plant require an immediate evacuation of the population in all or part of the EPZ, sirens may be activated by Dispatch on the orders of the Pierce County Board Chairperson, Sheriff or Emergency Management Director at the direct request of the utility. Sirens cover all of the 10-mile EPZ for PINGP. If any siren fails to activate, Pierce County will utilize an auto-dial

notification system and/or backup routes to alert the public in the area where the siren(s) did not activate. A message that an emergency exists at the plant and instructions regarding where to obtain additional information will be distributed via this backup method as necessary.

5. Schools and day care centers use their individual procedures as described in their Standard Operating Procedures (SOPs.) Only the schools have tone alert radios that are activated in accordance with school procedures. Information regarding school children can be found in the brochures that are distributed annually and in this plan.

6. Pierce County will not send a representative to the utility's Emergency Operating Facility (EOF.) Off-site representation in the EOF will be at the discretion of the Wisconsin Department of Health Services – Radiation Protection Section Chief.

7. In the event of a rapidly developing event at PINGP, the PANS may be activated at the direct request of the utility and the Minnesota Homeland Security Emergency Management Duty Officer (DO), per procedure (i.e., State of Minnesota Duty Officer EAS Messages for Rapidly Escalating Events.) The Minnesota DO will arrange a PANS activation time with the Goodhue Co. dispatcher. The Goodhue Co. dispatcher will contact Pierce Co. to coordinate the PANS activation and to indicate the PAR that will be broadcast on the EAS.

8. From among a cadre of trained volunteers and/or responders identified by the County Emergency Management Director, designate staff to address media inquiries and public information regarding the event. During a nuclear power plant incident, a Public Information Officer (PIO) designated by the County Emergency Management Director from the trained volunteer/responder PIO cadre will be supplied to the Joint Information Center (JIC) to coordinate the release of public information with all involved parties. The JIC-PIO will respond to 445 Minnesota Street, St. Paul, MN 55101. Prior to the JIC's activation, a PIO designated by the County Emergency Management Director will coordinate with partner counties and the State EOC PIO to release information from the Pierce County Emergency Operations Center (EOC) at 555 W. Overlook Dr. Street, Ellsworth, WI 54011. The exchange of information between the JIC and Pierce County EOC will be through each entities' PIOs by commercial telephone or fax. In the event of a rapidly escalating emergency situation where trained County PIO volunteers and/or responders are not yet available, the County Emergency Management Director, Chief Elected Official, and/or OIC may initiate and/or complete the responsibilities of the PIO as dictated by the needs of the incident.

   The State of Wisconsin maintains a public hotline that can be activated during a radiological incident. The hotline will respond to inquiries from the general public and provide accurate emergency information. The dedicated telephone number

for the hotline is currently published in the annual calendars and will be further publicized in the event of a real emergency.

9. Because ingestion protective actions will not be of an immediate, emergency nature, it will not be appropriate to activate either the regional or local EAS systems for notification of the public about ingestion recommendations. County officials will be notified about ingestion protective actions from the State EOC. The public will be notified of ingestion protective actions through news conferences and news statements issued to the media at the JIC. Also, the state has made arrangements for emergency printing of an ingestion brochure and delivery to the affected counties.

B. Evacuation and Sheltering (Congregate Care)

1. The main evacuation route in Pierce County has people taking Highway 63 or any other county road north to Highway 10, then east on Highway 10 to Highway 72, then east on Highway 72 to the Elmwood School reception center. Projected traffic capacities and evacuation time estimates are in the Evacuation Time Estimate for the Plume Exposure Pathway Emergency Planning Zone – Prairie Island Nuclear Power Plant Manual. Alternate evacuation routes will be determined by Law Enforcement and Highway Department personnel because of potential traffic impediments, weather conditions, or any other condition that may impact our primary evaluation route.

2.

Children that live in the EPZ but that go to school in Ellsworth or Prescott shall stay in school until their parents can pick them up.

3. Special Populations: Patients who call dispatch needing ambulance service will be connected with the appropriate service for transport. Requests by people needing transportation assistance will be coordinated by the County Human Services Director and the Highway Commissioner.

4. Transients: Pierce County is primarily rural farmland and there are no major tourist attractions in the Pierce County part of the 10-mile EPZ. Public campgrounds and hotels in the area will be evacuated as specified in the county evacuation plans. Due to the limited transient population, time estimates for evacuation of transient population are included in the overall evacuation times.

5. On-site personnel: Non-essential utility personnel will be evacuated and transported from the plant to a suitable off-site location according to the procedures developed by the utility and coordinated by the State of Minnesota.

C. Health and Medical

ANNEX I (Radiological Incidents)

The Wisconsin State Radiological Coordinator (SRC) and will be the primary organization from which protective measures will originate. Pierce County entrusts that the SRC will use all available protective action guides from the FDA, EPA and other applicable sources to make recommendations to protect the citizens and workers throughout all stages (e.g., response, demarcation, recovery) of the event. SRC recommendations will be given to the Pierce County Radiological Officer who will work with other EOC staff to ensure that they are implemented to the fullest extent safely possible within Pierce County.

The requirements of Health and Medical Support in a radiation incident situation includes relocation and care of medical facility evacuees, provisions for individuals with special medical needs, provisions for health and medical support in congregate care centers and maintenance of ambulance services to include transporting victims of radiological accidents to medical support facilities. The state will dispatch a radiological health monitoring team to the reception center at the Elmwood High School in Elmwood to manage the health monitoring and decontamination of members of the general public who are injured and/or contaminated.

1. The Sacred Heart Hospital in Eau Claire will serve as the primary hospital for medical care to people in Pierce County who become contaminated/injured as a result of an accident at either plant. Primary communication with the hospital will be by commercial telephone and back-up by radio.

2. Pierce County is responsible for transporting those who become contaminated/injured and need transportation to a hospital with Ellsworth Ambulance Service as the primary transportation provider out of the EPZ. Elmwood Ambulance Service will be the primary transportation provider from the Reception Center to the hospital(s). Communication will occur through Dispatch via the standard radio frequencies or cellular phone.

3. Health monitoring (i.e., monitoring and assessment of radiologically contaminated individuals) will be performed at the reception center within 12 hours after evacuation. The Department of Health Services (DHS) has the lead responsibility for health monitoring and utilizes trained local Auxiliary Health Monitors to provide services under DHS supervision. Additional equipment used by the Auxiliary Health Monitors is stored in Pierce County. This equipment is not regularly used and to ensure operability, PINGP personnel annually maintain and calibrate it. (Note: portal monitors are operationally checked annually but do not require annual calibration.)

   The number of monitoring stations required is based on the capability to monitor 20% of the affected plant EPZ population within 12 hours. The PINGP EPZ population for Pierce County is approximately 7,807, with 20% or 1,561 expected to arrive. To meet the 12-hour time requirement for both EPZs, one portal monitor is required, with an additional hand-held station set up for portal alarm verification. A second portal monitor may be set up as directed

by the Reception Center Manager. A portal monitor can scan at least four evacuees per minute (i.e., 2,880 evacuees within 12 hours.) Each hand-held station can monitor at least 15 evacuees per hour (i.e., 180 evacuees within 12 hours.)

4. EMERGENCY WORKERS: are people who are required to re-enter an evacuated area to provide emergency services even after the general population has been requested to evacuate.

   a. Emergency workers will be given an "emergency kit" that includes (DRDs) dosimeters (i.e., low-level and medium-level), PRDs, KI, and an emergency worker handbook.

   b. Dosimeters will be read and exposure controlled in accordance with directions received from the County Radiological Officer (RO) who is supported by the State's Radiological Coordinator (SRC.) Individual dose records will be maintained and information transmitted. Capability exists for continuous support of this function so there are no predetermined conditions under which an emergency worker should decide to take KI (i.e., all decision to take KI will be determined at the time of the event; there are no blanket orders.)

   c. Protective Action Guide for Field Workers
      - ❑ Exposure limit is 5 REM Total Effective Dose Equivalent (TEDE).
      - ❑ Dosimeters should be checked and read every 30 minutes to see if a measurable radiation exposure has been received. If exposure is noted, the RO may request more frequent readings.
      - ❑ Record readings when significant changes are noted (e.g., 25 mR) but at least every 30 minutes.

   d. The decision to authorize emergency workers to incur exposure in excess of EPA General Public Protective Action Guides will be made by the County Board Chairperson based on information provided by the SRC or designee.

   e. Decontamination of emergency personnel will be in accordance with the NRC's procedures. Specific action levels for determining the need and means for the decontamination of emergency personnel, the public, vehicles, and equipment and waste disposal is a state responsibility outlined in the DHS-RPS Radiological Incident Response Plan.

      ❑

5. <u>POTASSIUM IODIDE (KI) POLICY/PROCEDURES</u>: In response to federal guidance, the State of Wisconsin has established a policy, implemented by Pierce County, for the use of Potassium Iodide (KI) as a protective measure in

the event of a release of radioiodines resulting from an accident at a nuclear power plant. KI is a drug that, if taken in advance of or shortly after exposure to radioiodines, can effectively block their intake into the thyroid, thus preventing or greatly reducing the possibility of any adverse effects of exposure. Normal recommended daily doses of KI are 130 milligrams each for adults and children over one year and 65 milligrams per child under one year of age. The following statements, which can be found in the State Emergency Response Plan, are excerpts from the State of Wisconsin's policy on the acquisition, distribution and use of Potassium Iodide (KI):

General Public
Current policy does not provide for the *statewide* stockpiling and distribution of KI to the general population, but it does support the limited *pre-distribution* of KI to the general population within any local jurisdiction which specifically requests that KI be available to its general population. The KI pre-distribution plan can be found in the Radiological Incident Annex of the State Plan. This is accomplished through the voucher program with the Prairie Island Emergency Planning Guide (calendar).

The primary means of protecting the general population in the event of a nuclear power plant emergency is evacuation.

Emergency workers are defined as those persons who are required to re-enter an evacuated area where a radioiodine release has taken place, to provide emergency services, even after the general population has been requested to evacuate. Emergency workers can include law enforcement personnel, firefighters, emergency medical personnel, plant shutdown crews (other than those at the nuclear plant), security staff, radiological monitors, utility repair crews, roadway repair crews and other functional personnel, as determined. {Additional individuals (e.g., farmers) may be designated as emergency workers and be eligible to receive KI if they are authorized to enter the EPZ in writing by the County Board Chairperson (County Executive) or the County Emergency Management Director.}

a. KI Supplies: Pierce County has stockpiled an emergency supply of 2,000 doses of KI (i.e., a three-day supply for emergency workers). Replacement supplies will be obtained by the DHS State EOC staff at the request of the County Health Officer or the County Emergency Management Director.

b. KI Stockpile Location and Distribution:

- *Emergency Workers:* KI is stockpiled and will be dispensed from the County EOC in the event of an actual or expected radioiodine

release at PINGP. In a fast-moving event, KI may be supplied to outlying services via courier. A qualified health professional will assist the Sheriff's Office with distributing the medication.

- *Special Populations:* There are no nursing homes, hospitals or jails within the 10-mile radius.

c. KI Dispensation: Per state policy, dispensation of KI is approved by the Governor or designee and DHS who directs the County Health Director to authorize the dispensation of KI. A request will be made for each person to read and sign a release-of-all-claims form prior to receiving and taking the KI. One dose per day shall be given to each individual on each day of exposure and individuals should continue receiving KI for two additional days following the last date of exposure. Careful daily dose records shall be kept for each individual. Per state policy, emergency workers expected to enter the 10-mile EPZ, immobile populations and their caregivers and transients or residents who did not receive a timely notice to evacuate shall be offered the opportunity to take KI.

d. Emergency Procedures for KI Distribution

Some individuals may have an adverse (e.g., allergic) reaction to KI that can, rarely, be life-threatening. If it is noticed that a person who has received KI is beginning or is suspected of beginning to have an adverse reaction, this person will be referred to and/or transported to an appropriate medical facility.

Demarcation and Recovery

1. Form a Pierce County Recovery Task Force to create a recovery plan to guide recovery of the off-site areas in Pierce County that were affected by the incident at the NPP. Carry forward issues from the Pierce County Recovery Task Force to the State Recovery Task Force for which state and/or federal resources would be needed. The State of Wisconsin takes primary responsibility for field monitoring and providing a radiological hazard assessment to the affected counties.

2. Make available maps that show the agricultural land use data for the portion of the county in the 50-mile Emergency Planning Zone (EPZ).

3. Work with the DHS-RPS, the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) and others to assist with collecting agricultural samples to be monitored for contamination. The State of Wisconsin accepts primary responsibility for supplying staff, equipment, training and maintenance for these teams. The state has agreements in place with laboratories to complete the monitoring of the collected samples.

4. Work with WEM to ensure the dissemination of the Wisconsin Radiological Emergency Information for Farmers, Food Processors and Distributors (Rev. 12/2014) booklet to food producers and handlers within the 50-mile EPZ.

5. Work with WEM to implement the recommended protective actions in the 50-mile EPZ. These protective actions may include activities such as relocation or agricultural product restrictions.
   - In relocation, plume pathway centers may be used or Pierce County may choose to use shelters listed in Annex E Attachment 2 as able.

6. Coordinate local law enforcement and other staff who can assist with enforcing any embargo or hold of agricultural products that has been ordered by the state or federal officials empowered to do so.

7. Develop guidance and a schedule for the restoration of ingestion areas and restricted zones as closely as possible to their pre-incident condition.

8. Provide return and/or resettlement assistance to evacuated individuals, businesses and industries including:
   - Law enforcement and traffic control, including alternate evacuation routes as needed.
   - Information services
   - Transportation assistance, when needed
   - Assistance to special needs populations and institutions, as necessary
   - Closing public shelters
   - Assistance individuals and businesses with “clean-up” activities or referring them to institutions/agencies that can help
   - Assistance with identifying temporary or permanent housing and jobs in other areas during a resettlement effort

9. Devise a process for identifying and documenting losses caused by or resulting from the incident and for negotiating reimbursement of those losses from the utility and its insurers. These losses include those experienced by individuals, businesses and industry as well as those incurred by federal, state and local government during emergency response and recovery operations.

10. Develop a process for monitoring and tracking the long-term effects of the incident on the population, the economy and the environment. Studies may include research and reports regarding:
    - Long-term health effects
    - Impacts on state and local tourism
    - Long-term impacts on local property values
    - Long-term impacts on farming

IV. PREPAREDNESS

ANNEX I (Radiological Incidents)

A. Planning

1. Written agreements are filed in the Pierce County EOC and copies may be found in the Memoranda of Understanding Section of this plan.

2. The public education program, a joint effort between the utilities, counties and the state, provides information to the public (i.e., residents, workers, transients) via annual calendars mailed to homes and businesses and pamphlets left at hotels, campgrounds, etc. regarding actions that should be taken in an emergency (e.g., notification, radiation, evacuation routes, location of reception/congregate care centers, sheltering in place, pet care, additional contact information.) In the annual calendars a form is provided for individuals needing assistance with evacuation; the public is able to complete this form and return it to Pierce County EM. The Pierce County EM provides this information to Pierce County Aging and Disability Resource Center, who maintains the secured list. Also, the area media is provided information regarding the on and off-site programs in an annual letter in November/ December and before each exercise and is invited to an annual briefing coordinated by the utility. Staff are available upon request for media interviews. Basic ingestion information is included within the annual calendars and a more thorough booklet on ingestion information is maintained at the counties and state.

3. The Wisconsin Department of Health Services – Radiation Protection Section (DHS-RPS), with assistance from the nuclear utilities, provides for operational, inspection and inventory checks of equipment during each calendar quarter and after each use.

4. The updates to the EOP are done on an annual basis. Revised pages will marked to show where changes have been made. The Pierce County EM Director ensures that the telephone list is updated each quarter.

5. Pierce County keeps and updates information and plans regarding:
   - Immobile populations – a list is kept and updated annually of the immobile population living within the 10-mile EPZ.
   - Agricultural businesses – the County Extension Office keeps a list of all the livestock growers, dairy farmers, honey producers and others in the EPZ. The office also keeps lists of dairy plants receiving milk from within the 10 Mile EPZ and animal feed resources.
   - EAS – Pierce County has its own EAS plan and participates in the West Central EAS plan
   - Equipment – Pierce County keeps a current inventory of all radiological monitoring equipment and personnel.
   - Schools/Health Care Facilities – Pierce County schools have evacuation plans that are regularly exercised. All health care facilities have disaster and evacuation plans.

6. Official maps for PINGP are created and annually updated by the State of Minnesota HSEM with coordination and data input by the State of Wisconsin and Pierce County.

B. Training

1. Initial and annual refresher training is provided to qualify individuals (i.e., staff, auxiliary and mutual aid) with the following responsibilities in an accident:

   - Planning for emergency response actions
   - Directors of response organizations
   - Accident assessment *{State responsibility}*
   - Radiological monitoring *{State responsibility}*
   - Police, fire and dispatchers
   - First aid and rescue
   - Emergency services
   - Medical support
   - Emergency public information
   - Emergency communications

2. Training may be conducted using various teaching methods (e.g., drills, exercises, lecture courses, evaluation/testing, practical) and all training activities will be detailed in the annual letter of certification. The scopes of these training may include, but are not limited to; emergency management, radiological fundamentals, and basic principles and procedures for dissemination of public information.
3. Just-in-time training will be available for emergency workers on basic radiation protection as needed.

4. These trainings will be provided by Pierce County and/or in conjunction with Prairie Island NGP, the State of Wisconsin, or FEMA.

C. Drills and Exercises

1. Communications equipment is routinely tested during monthly drills that test communications between the state, risk counties and utilities. Communications tests between the nuclear facility and state and local EOCs will be conducted biennially or at more frequent intervals as deemed necessary. Communications drills include the aspect of understanding the message content. Records are available at the Pierce County EM office and are reported in the Annual Letter of Certification.

2. Pierce County tests all outdoor sirens and alert monitors on the 1st Wednesday of each month at 1 pm

3. Periodic exercises (i.e., simulated emergencies) and/or drills will be conducted in accordance with NRC and FEMA rules and policy; and critiqued/observed by federal and/or state authorities. Biennially, an exercise will be conducted with each utility that involves the implementation of the Pierce County EOP and the mobilization of state and county resources (i.e., personnel and equipment) adequate to verify the capability to respond to an accident scenario. Each exercise scenario has very limited exposure, prior to the exercise, to ensure spontaneity and to allow free play for decision-making to occur. FEMA evaluators will evaluate Pierce County's performance according to the FEMA REP exercise methodology. The Pierce County Emergency Management Director will work with response partners to ensure that identified issues (e.g., Level 1 Findings, Level 2 Findings, and planning issues) as a result of exercises and drills will be corrected.

4. Incident scenarios will vary from year to year so that within an eight-year period, all major elements of the plan will be tested. Pierce County will exercise the ingestion/recovery portion of this plan as scheduled in coordination with the utility, state, other local and federal counterparts at least once during the eight-year exercise cycle. The State and utility will provide and develop the exercises for on and off-site participants and will submit the drafts of the entire exercise package for review and approval to the appropriate federal agencies before the exercise. A time schedule of real and simulated initiating events and a narrative summary describing the conduct of the exercise or drill will be provided in the exercise package. Basic objectives for each drill and exercise, including the evaluation criteria; dates, time period, places and participating organizations; simulated events; and materials for official observers will also be a part of the exercise package.

5. A medical emergency drill involving a simulated contaminated individual requiring ambulance and hospital transport and treatment will be conducted annually. The medical drill may be performed as part of the biennial exercise or as negotiated separately.

6. Local organizations will participate in training and retraining radiological monitoring drills in accordance with all federal regulations and under the direction of DHS-RPS.

V. REFERENCES, ATTACHMENTS AND CHECKLISTS

A. References

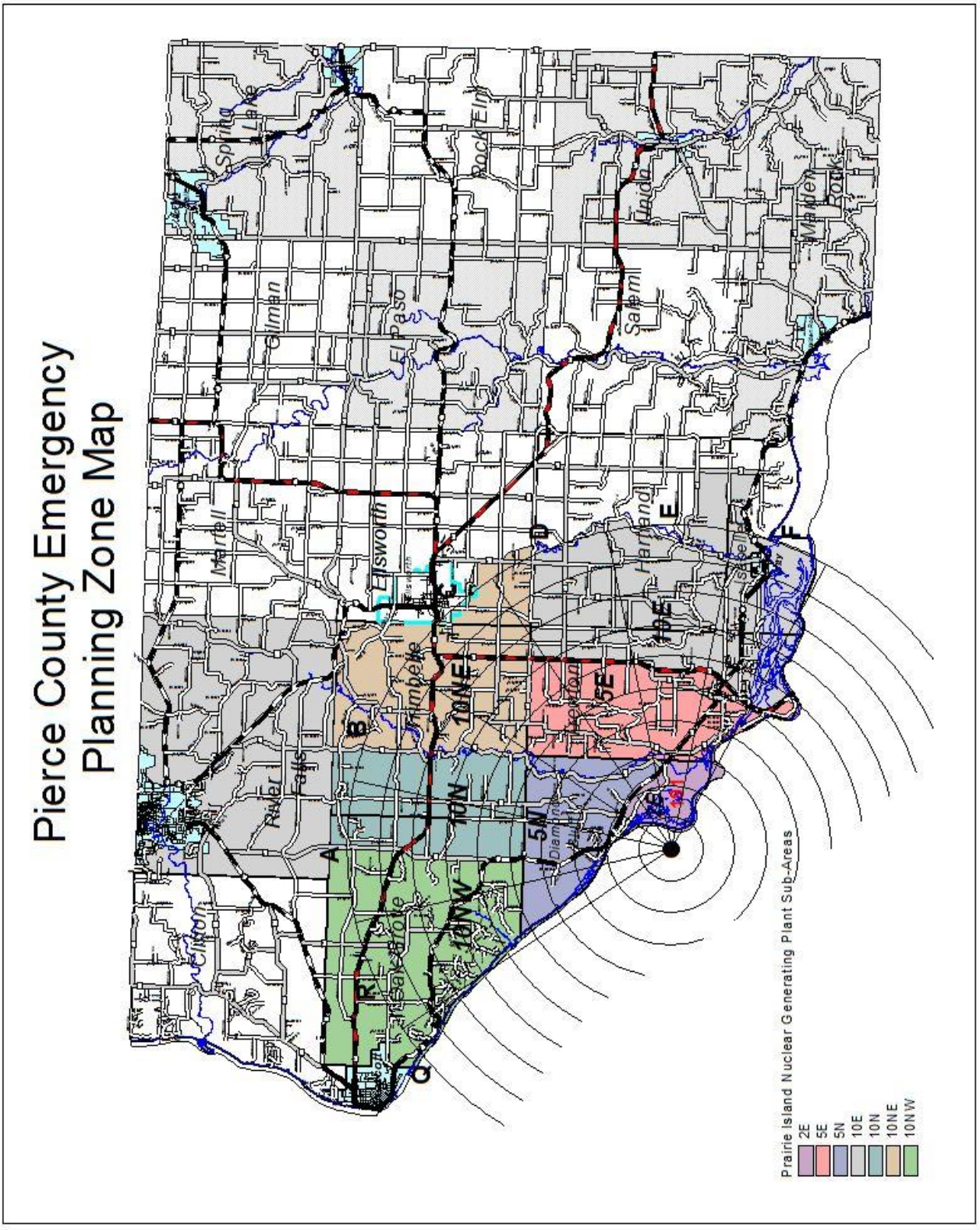
- Prairie Island NGP Pre-Scripted EAS Message Manual
- Prairie Island NGP Development of Evacuation Time Estimates
- Wisconsin Radiological Emergency Information for Farmers, Food Processors and (Rev. 12/2014)
- Various Memoranda of Agreement (See MOU Section)

B. Attachments

- Attachment 1 – Pierce County Emergency Planning Zone Map
- Attachment 2 – Pierce County Road Block and Check Points Table
- Attachment 3 – Pierce County Traffic Control Points Map
- Attachment 4 – Pierce County Shelter Locations Table
- Attachment 5 - Pierce County Evacuation Routes/Reception and Shelter Locations Maps
- Attachment 6 – Pierce County Population Distribution Map
- Attachment 7 - State of Wisconsin and County of Pierce Potassium Iodide – Release of All Claims
- Attachment 8 – Communication Block Diagram
- Attachment 9 – Emergency Kits
- Attachment 10 – Organization Table
- Attachment 11 - Restricted Zone Reentry Admission Form and Procedures
- Attachment 12 – Recovery Task Force
- Attachment 13 – Functional Responsibilities
- Attachment 14 – Additional Hospitals and Emergency Medical Services
- Attachment 15 – Special Radiological Supplemental insert
- Attachment 16 – EMS Treatment of Radioactivity Contaminated Patients
- Attachment 17 – Glossary of REP Terms
- Attachment 18 – Emergency Response Plan, Radiological annex, Hostile Action Based Events
- Attachment 19 – Signature Page

C. EOC Position Checklists Appendix

- Officer-in-Charge
- Dispatcher
- Law Enforcement
- Fire & EMS
- Human Services
- Public HealthPublic Information Officer (PIO)
- Highway & Transportation
- Radiological Officer
- County Agricultural Officer
- County Board Chair
- GIS representative
- Red Cross
- School Liaison
- WEM Liaison


Pierce County Emergency
Planning Zone Map
Prairie Island Nuclear Generating Plant Sub-Areas
2E
5E
5N
10E
10N
10NE
10NW
A
B
C
D
E
F
G
Spring Lake
Rock Elm
Linda
Maiden Rock
Gilman
El Paso
Salem
Martell
Ellsworth
Hartland
River Falls
Trimbelle
Isabelle
Clifton
Diamond Bluff

ANNEX I (Radiological Incidents)
Attachment 2 (Pierce County Road Blocks and Check Points Table)

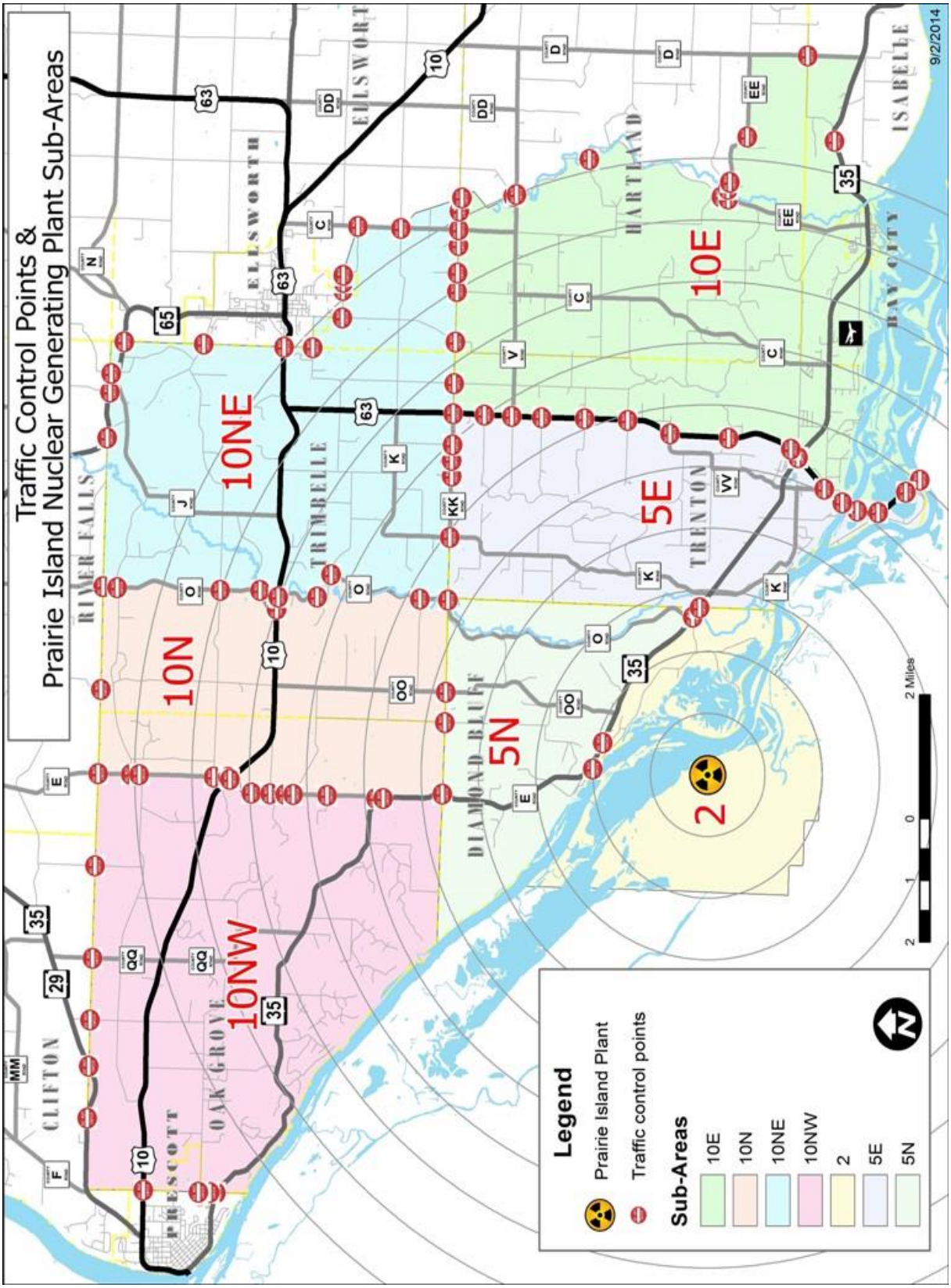
Road blocks and check points will be established after it has been determined which direction the plume is heading.

Intersections of roads have been identified by the Highway Department and are numbered on the map in Attachment 3 and on the map in the EOC. Barricades will be placed as deemed necessary. Each Highway Department vehicle will be told which intersection is to be blocked. Each barricade must be staffed.

TRAFFIC ACCESS and CONTROL POINTS

Sub-area	TACP	ROADWAY	LOCATION
10NW	5001	WI 35 SB	approx. 0.1 mi South of Hollister Ave.
10NW	5002	Hollister Ave. EB	approx. 0.1 mi East of WI 35
10NW	5003	Pleasant Dr. EB	approx. 175 feet East of Hillside Dr.
10NW	5004	US 10 EB	approx. 0.25 mi East of Dexter St.
10NW	5005	WI 29 & WI 35 NB	approx. 1.2 mi East of CR - F
10NW	5006	WI 29 & WI 35 SB	approx. 0.8 mi West of 1170th St.
10NW	5007	1170th St. SB	approx. 0.3 mi South of WI 29 & WI 35
10NW	5008	CR – QQ SB	approx. 0.7 mi South of WI 29 & WI 35
10NW	5009	1070th St. SB	approx. 1.0 mi South of 690th Ave.
10NW	5010	CR – E SB	approx. 1.5 mi South of 690th Ave.
10N	5011	640th Ave. EB	CR – E & 640th Ave.
10NW	5012	620th Ave. WB	CR – E & 620th Ave.
10N	5013	570th Ave. WB	570th Ave. & CR - E
10N	5014	US 10 SB	approx. 0.25 mi S of 570th Ave.
10NW	5015	US 10 WB	approx. 295 ft. West of CR - E
10N	5016	US 10 NB	approx. 0.32 mi N of 530th Ave.
10N	5017	530th Ave. EB	CR – E & 530th Ave.
10NW	5018	521st Ave. WB	521st Ave. & CR - E
10N	5019	500th Ave. EB	CR – E & 500th Ave.
10NW	5020	490th Ave. WB	490th Ave. & CR - E
10NW	5021	WI 35 NB	approx. 0.86 mi S of 490th Ave.
10NW	5022	WI 35 NB	CR – E & WI 35, approx. 1 mi S of 490th Ave.
10NW	5023	WI 35 SB	WI 35 SB and 410th Ave.
10NW	5024	970TH St. SB	970th St. & 410th Ave.
10NW	5025	CR – OO SB	CR – OO & 410th Ave.
10N	5026	950th St. SB	approx. 1.1 mi South of 690th Ave.
10N	5027	CR – O SB	approx. 0.25 mi South of 650th Ave.
10N	5028	640th Ave. WB	CR – O & 640th Ave.
10N	5029	570th Ave. WB	CR – O & 570th Ave.
10NE	5030	560th St. EB	CR – O & 560th St.
10N	5031	US 10 WB	CR – O & US 10
10NE	5032	US 10 EB	CR–O & US 10 appx. 0.3 mi E of Canary Ln.
10N	5033	501st Ave. WB	CR – O & 501st Ave.
10N	5034	480th Ave. EB	CR – O & 480th Ave.
10N	5035	430th Ave. WB	CR – O & 430th Ave.
10N	5036	CR – O SB	approx. 0.5 mi S of 430th Ave.
5E	5037	CR – K SB	CR – K and CR - KK
5E	5038	810th St.	CR – KK & 810th St.
5E	5039	800th St.	CR – KK & 800th St.
5E	5040	790TH St. NB	CR – KK & 790th St.
2	5041	290TH Ave. EB	approx. 0.4 mi E of 1005th St.
2	5042	985th St. SB	WI 35 & 985th St.
2	5043	290th Ave. SB	WI 35 & 290th Ave.
2	5044	WI 35 NB	approx.. 0.3 mi W of CR - K
5E	5045	US 63 NB	US 63 on the bridge

5E	5046	825th St. SB	US 63 & 825th St. approx. 1.25 mi S of 830th St.
5E	5047	825th St. SB	US 63 & 825th St. approx. 0.66 mi S of 830th St.
5E	5048	825th St. SB	US 63 & 825th St. approx. 0.3 mi S of 830th St.
5E	5049	830th St. WB	US 63 & 830th St. & 810th St.
5E	5050	CR – VV NB	US 63 & CR – VV & 150th Ave.
5E	5051	WI 35 SB	WI 35 & US 63
5E	5052	180th Ave. WB	US 63 & 180th Ave.
5E	5053	220th Ave. WB	US 63 & 220th Ave.
5E	5054	CR – VV SB	US 63 & CR – VV & 770th St.
5E	5055	290th Ave. WB	US 63 & 290th Ave.
5E	5056	320th Ave. WB	US 63 & 320th Ave.
5E	5057	350th Ave. WB	US 63 & 350th Ave.
5E	5058	370th Ave. WB	US 63 & 370th Ave.
5E	5059	390th Ave. WB	US 63 & 390th Ave.
5E	5060	US 63 NB	US 63 & 410th Ave. & CR - KK
10NE	5061	750th St.	750th St. & 410th Ave.
10E	5062	710th St. NB	410th Ave. & 710th St. & 730th St.
10E	5063	690th St. SB	690th St. & 410th Ave.
10NE	5064	683rd St.	410th Ave. & 683rd St.
10NE	5065	677th St.	410th Ave. & 677th St.
10NE	5066	790th St. SB	WI 65 & 650th Ave. & 790th St
10NE	5067	WI 65 SB	WI 65 & 750th St.
10NE	5068	750th St. SB	650th Ave. & 750th St. & 720th St.
10NE	5069	WI 65 NB	approx. 0.5 miles West of CR - J
10NE	5070	570th Ave. WB	CrossTown Rd. & 730th St. & 570th Ave.
10NE	5071	US 10 WB	730th St. (Willow Dr.) & US 10
10NE	5072	510th Ave. WB	South St. & 730th St. (Willow Dr.) & 510th Ave
10NE	5073	710th St. SB	Maple St. & 490th Ave. & 710th St.
10NE	5074	Southgate Dr. SB	490th Ave. (Ridge Rd.) & Southgate Dr.
10NE	5075	Hilden Dr. SB	490th Ave. (Ridge Road) & Hilden Dr.
10NE	5076	490th Ave. SB	approx. 0.1 mile East of Hilden Dr.
10NE	5077	490th Ave. WB	CR – C & 490th Ave.
10NE	5078	450th Ave. WB & CR – C	CR – C & 450th Ave.
10NE	5079	CR – C NB	CR – C & 410th Ave.
10E	5080	410th Ave. EB	approx. 0.3 mi East of CR - C
10E	5081	410th Ave. WB	approx. 0.5 mi West of 610th St.
10E	5082	610th St. WB	approx. 1.1 mi South of 410th Ave.
10E	5083	CR – V WB	approx. 0.9 mi West of 590th St.
10E	5084	300th Ave. WB	620th St. & 300th Ave.
10E	5085	650th St. WB	620th St. & 650th St.
10E	5086	CR – EE SB	CR – EE & 620th St.
10E	5087	617th St. SB	CR – EE & 617th St.
10E	5088	611th St. SB	CR – EE & 611th St.
10E	5089	590th St. SB	CR – EE & 590th St.
10E	5090	170th Ave.	CR – D & 170th St.
10E	5091	570th St.	WI 35 & 570th St.
10E	5092	WI 35	approx. 0.6 mi Southwest of 570th St.

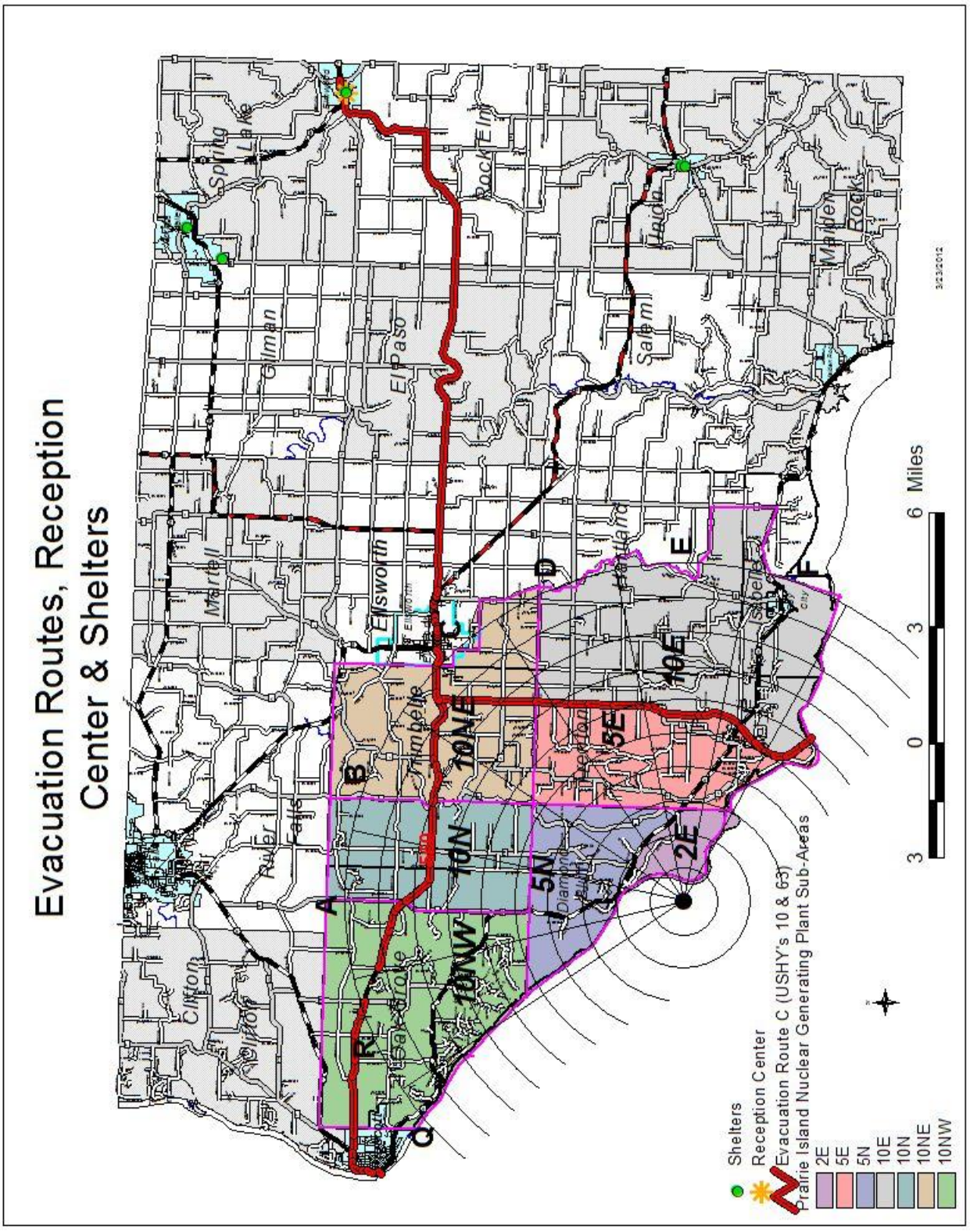

Traffic Control Points &
Prairie Island Nuclear Generating Plant Sub-Areas
9/2/2014
10E
10NE
10N
10NW
5E
5N
2
Legend
Prairie Island Plant
Traffic control points
Sub-Areas
10E
10N
10NE
10NW
2
5E
5N
2 Miles
0
1
2
ELLSWORTH
RIVER FALLS
TRIMBELLE
DIAMOND BLUFF
HARTLAND
TRENTON
BAY CITY
ISABELLE
CLIFTON
OAK GROVE
PRESCOTT

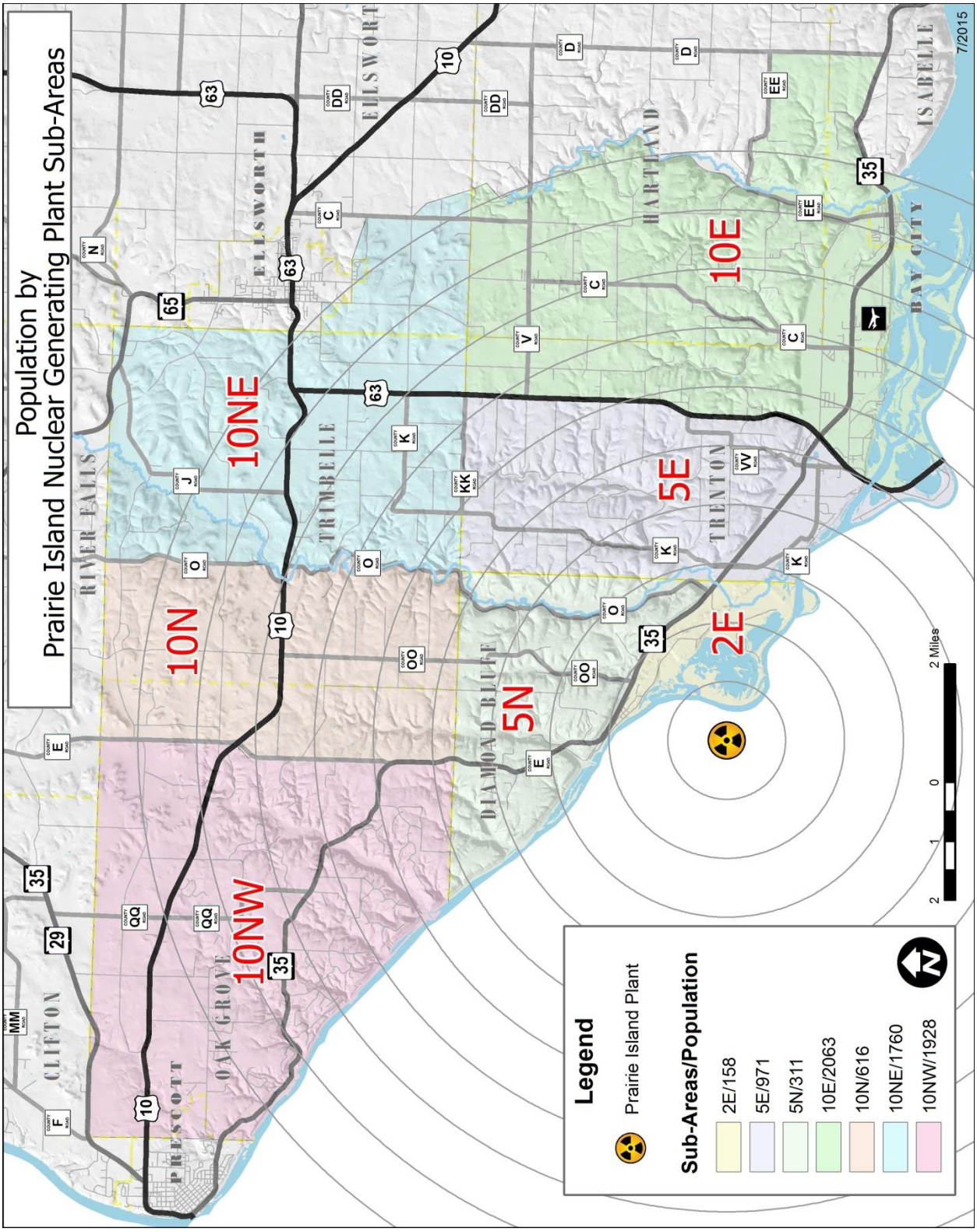
ANNEX I (Radiological Incidents)
Attachment 4 (Pierce County Shelter Locations Table)

#	Location	Normal Feeding Capacity*	Congregate Care Spaces**
1	Spring Valley Middle/High School S1450 County Road CC	333	800
2	Spring Valley Elementary School 200 Sabin Ave		210
Spring Valley Total		*333*	*1,010*
3	Elmwood High School 213 S Scott St and Elmwood Elementary School 213 S Scott St	385	1,042
Elmwood Total		*385*	*1,042*
4	Plum City Middle/High School 907 Main	284	1,250
5	Plum City Elementary 621 Main	100	870
Plum City Total		*384*	*2,545*
GRAND TOTAL		***1,102***	***4,597***

* Number of people that can be accommodated at one sitting
** 40 square feet per person
Note: All schools have adequate sanitary facilities for emergency living purposes.

ANNEX I (Radiological Incidents)
Attachment 5 (Pierce County Evacuation Routes/Reception and Shelter Locations Map)




Population by
Prairie Island Nuclear Generating Plant Sub-Areas
7/2015
10N
10NE
10NW
5N
5E
2E
10E
Legend
Prairie Island Plant
Sub-Areas/Population
2E/158
5E/971
5N/311
10E/2063
10N/616
10NE/1760
10NW/1928
2 Miles
RIVER FALLS
ELLSWORTH
TRIMBELLE
DIAMOND BLUFF
HARTLAND
TRENTON
BAY CITY
ISABELLE
CLIFTON
OAK GROVE
PRESCOTT

ANNEX I (Radiological Incidents)
Attachment 7 (State of Wisconsin and County of Pierce Potassium Iodide – Release of All Claims)

STATE OF WISCONSIN AND COUNTY OF PIERCE
POTASSIUM IODIDE - RELEASE OF ALL CLAIMS

PLEASE CAREFULLY READ THE FOLLOWING INFORMATION BEFORE SIGNING THIS FORM

For Your Protection

It is likely that you have been or will be exposed to radioactive iodines in the release resulting from the incident at the Prairie Island Nuclear Generating Plant. When radioiodines are inhaled or ingested, they rapidly accumulate in the thyroid gland and could exist there long enough to cause local radiation damage. Longer-term effects of radioactive iodines could include a higher incidence of thyroid cancer.

Potassium Iodide (KI) is a drug that if taken in advance of or shortly after exposure to radioiodines can effectively block their intake into the thyroid thus preventing or greatly reducing the possibility of any adverse effects of exposure.

KI offers protection only against radioiodines. It offers no protection against other radioactive materials that may be released. Currently there are no other drugs that can offer such protection from other radioactive materials.

Possible Side Effects

Potassium Iodide (KI) in large doses (300-1200 mg. daily for adults and 100 mg. or more daily for children) has been widely used for years in the long-term management of bronchial asthma and other pulmonary disorders. Possible side effects such as rashes, swelling, eye irritation, headaches, fever, nausea, vomiting and diarrhea have been noted in small numbers of cases where large doses of KI have been given over a sustained period. However, the incidence of significant adverse reactions from the above dose levels of KI as reported to the U.S. Food and Drug Administration have been low.

Dose requirements for thyroid blocking in the event of a radiation emergency are considerably lower than those referred to above. Normally recommended daily doses of KI 65 milligrams per day for children and for women who are or may be pregnant and 130 milligrams per day for all other adults. The incidence of significant adverse reactions from short-term administration of KI at these levels is unknown, but is expected to be low.

Your Decision

Based on FDA guidance the Wisconsin Department of Health Services has concluded that risks from the short-term use of relatively low doses of potassium iodide (KI) for thyroid blocking in a radiation emergency are outweighed by the risks of radioiodine-induced thyroid nodules or cancer at a projected radiation dose of 5 rem or greater. Since radiation-levels are now or are projected to exceed this rate, it is recommended that you consider taking KI. Doses will be provided at the recommended levels of 65 milligrams per day for children and for women who are or may be pregnant and 130 milligrams per day for all other adults.

ANNEX I (Radiological Incidents)
Attachment 7 (State of Wisconsin and County of Pierce Potassium Iodide – Release of All Claims)

Although the taking of KI is recommended, the decision to take it is your decision. It is entirely voluntary and not mandatory on your part. In order to protect the state, its legal subdivisions, and the administering physicians or other health professionals from any subsequent liability due to adverse side effects, in the event that you decide to take this KI, you are hereby requested to sign the following release-of-all-claims statement.

Release-of-All-Claims

The undersigned states that he or she has read this release form in its entirety and fully understands each and every statement contained herein. The undersigned understands that the decision to take or not to take KI is completely voluntary and consequently the undersigned agrees in advance to release, acquit, hold harmless and forever discharge the State of Wisconsin, any of its governmental subdivisions, and all employees, agents and officers of the State of Wisconsin or any of its governmental subdivisions of and from any and all actions, causes of action, claims, demands, costs, loss of services, expenses, and compensation, on account of, or in any way growing out of any and all known and unknown side effects, diseases or bodily injuries resulting or to result from the administration of KI on or after the date of the release form.

_____
Signature

_____
Date

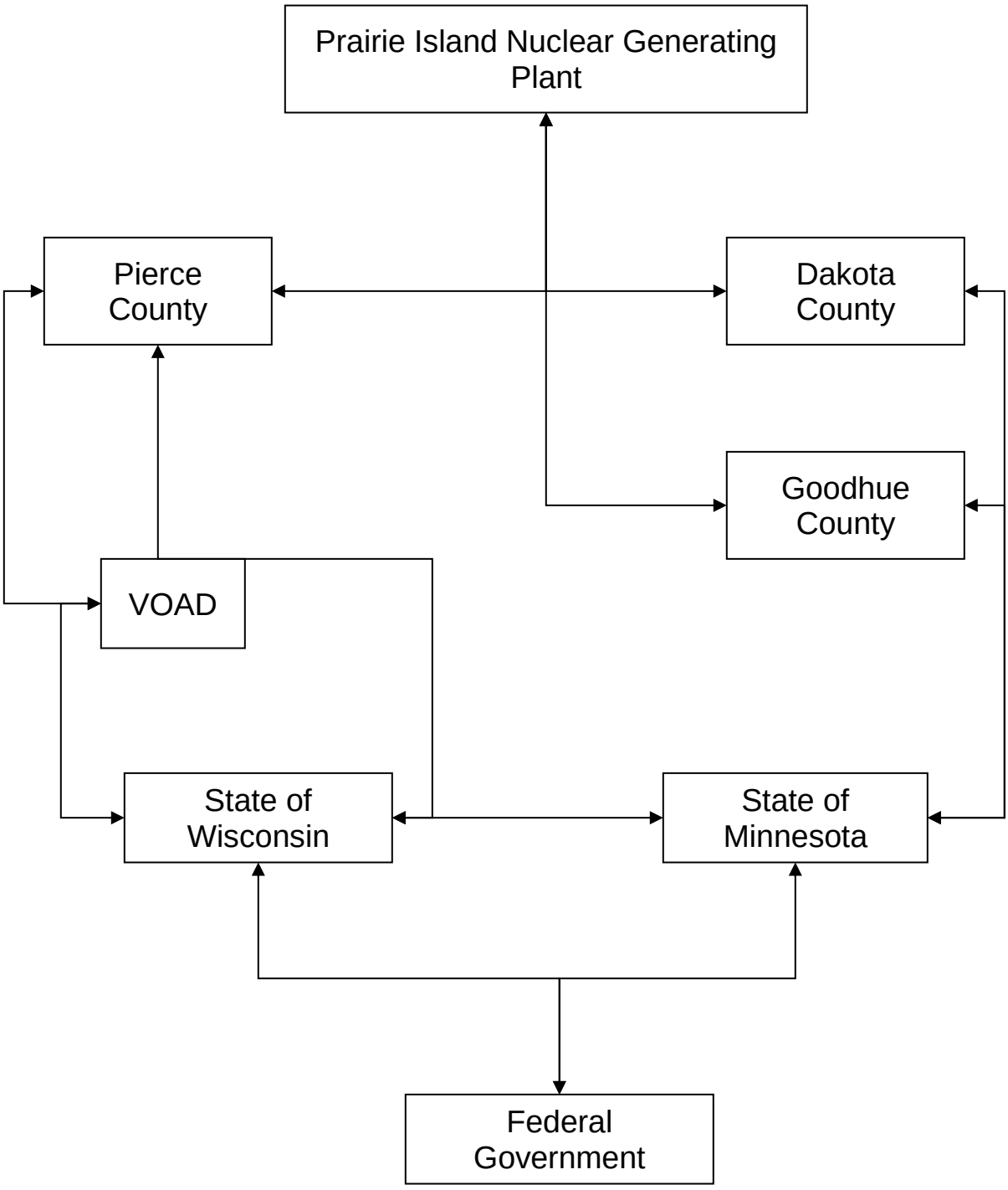
If circumstances permit, the above signature should be validated by two witnesses:

Witnessed by:

_____
Signature

_____
Signature

ANNEX I (RADIOLOGICAL INCIDENTS)
Attachment 8 (Communication Block Diagram)



ANNEX I (RADIOLOGICAL INCIDENTS)
Attachment 9 (Emergency Kits)

Pierce County equipment information is detailed within the body of this plan's text (primarily in Annexes I and B) and in the Annual Letter of Certification. In general, the following equipment exists:

Radiological Monitoring and Emergency Equipment

- 2 portal monitors
- handheld monitors
- decontamination equipment

Protective Equipment

- "Emergency Kits" for emergency workers that include dosimeters (i.e., low-level and medium-level), PRDs, KI, instructions and a card to record actions.
- Standard Personal Protective Equipment (PPE) consistent with the job performed by the agency (e.g., structural firefighting gear; EMS non-latex gloves, masks, eye shields)

Communications Equipment

- handheld and emergency vehicle radios
- Dispatch Center
- Amateur Radio equipment

ANNEX I (RADIOLOGICAL INCIDENTS)
Attachment 10 (Organization Table)

	Direction & Control	Alerting & Notification	Communications	Public Information	Accident Assessment	Public Health	Social Services	Fire and Rescue	Traffic Control	EMS	Law Enforcement	Transportation	Protective Response	Rad. Exposure Control
Chief Elected Official	P			S									P	
Officer in Charge	P	S	S	P	S	S	S	S					P	
Public Information Officer	S	S	S	P										
Dispatch	S	P	P	S										
Sheriff/Police Chief	S	S	S						P		P			
Fire Chief	S							P						
EMS Director	S					S				P				
Health Officer	S					P				S				
Human Services Director	S						P							
Radiological Officer	S				P	S		S		S				P
Highway Commissioner	S											P		
Agricultural Officer	S													

RESTRICTED ZONE RE-ENTRY ADMISSION FORM

COUNTY EOC

Name:_____ SS#:_____
Address:_____ Phone: _____
City:_____ State: _____
Purpose of reentry: _____
Point of reentry: _____
Location of visit: _____
Locally recommended route: _____
_____
Escort Required: _____YES _____ NO

Stay time limit this visit: _____ Exposure limit this visit: _____

Authorizing State Official: _____

County Radiological Officer: _____ Date/Time: _____
Signature

REQUEST0R

I understand I am entering a restricted area and agree to follow the instructions and limitations stated on this admission form. I have received instruction on dosimetry and understand that this admission form is non-transferable. In accepting this admission form, I acknowledge the responsibility for my personal safety.

Requester: _____ Date: _____
Signature

DOSIMETRY ISSUE STATION

Location: _____Date/Time: _____
Dosimetry Information:
TLD Serial #: _____
Direct Reading Dosimeter (DRD): Serial #: _____
Initial Reading: _____mRem Final Reading: _____mRem TotalDose: _____mREM

ACCESS POINT

Entry Time: _____ Expected Exit Time: _____
Actual Exit Time: _____ Date: _____
Comments:_____
_____

NOTE: For subsequent reentries, attach a *Reentry Continuation Form* and update information as necessary.

RE-ENTRY CONTINUATION FORM

REQUESTOR NAME: _____DATE:_____
Date of Birth: _____

INFORMATION UPDATES:_____
_____
_____
_____
_____
_____

COUNTY EOC

Escort Required: _____YES _____ NO

Stay time limit this visit: _____ Exposure limit this visit: _____

Authorizing State Official: _____

County Radiological Officer: _____ Date/Time: _____
Signature

DOSIMETRY ISSUE STATION

Location: _____Date/Time: _____
Dosimetry Information:
TLD Serial #: _____
Direct Reading Dosimeter (DRD): Serial #: _____
Accumulated Dose to Date: _____mRem
Initial Reading: _____mRem
Final Reading: _____mRem
Dose Received this Visit: _____mRem
New Total Dose: _____mRem

ACCESS POINT

Entry Time: _____ Expected Exit Time: _____
Actual Exit Time: _____ Date: _____
Comments:_____
_____

ANNEX I (RADIOLOGICAL INCIDENTS)
Attachment 11 (Restricted Zone Reentry Admission Form and Procedures)

RE-ENTRY PROCEDURE

- The requestor goes initially to reception center and gets the first part of the form completed. The county RO obtains stay time and exposure limit from SRC via telephone and relays that information to the dosimetry distribution station at the reception center.
- The requestor will obtain dosimetry and escort if necessary at the reception center.
- The person at the access point records entry time and expected exit time, and holds the form until the person reentering comes back out. If the person reentering is not out by expected time, access point personnel contact the county RO.
- When the person exits the area, he or she returns to the reception center to turn in dosimetry and gets monitored.
- The person returns the form to the reception center. Forms are kept on file there until evacuated area is cleared for unrestricted access.
- If the same person wants to enter the evacuated area again, then a continuation sheet is filled out, attached to the original form, and the process proceeds as before.

ANNEX I (Radiological Incidents)
Attachment 12(Recovery Task Force)

DEMARCATION/RECOVERY

I. PURPOSE

This Attachment describes but does not limit how Pierce County is organized to deal with the **RECOVERY PHASE** of an incident at the Prairie Island Nuclear Power Plant. It outlines the scope of the **RECOVERY** operations and identifies activities which must be carried out to return the affected off-site area around the plant, as nearly as possible, to its pre-incident condition. It also provides guidance for local efforts to seek reimbursement of public and private costs incurred in response to a nuclear plant incident.

II. AUTHORITY

Planning for County **RECOVERY** operations is a natural extension of County emergency responsibilities as delegated under Chapter 323 Wisconsin Statutes. NUREG 0654 FEMA-REP-1 Rev. 1 further details local recovery responsibilities under Planning Standard M.

III. CONCEPT OF OPERATIONS

The Pierce County Emergency Management Director, acting on behalf of the Pierce County Board of Supervisors Chairperson, shall create a County Recovery Task Force to guide recovery of off-site areas affected by an incident at the Prairie Island Nuclear Power Plant. The County Recovery Task Force will work in tandem with the State Recovery Task Force as defined in Attachment M of the State WRIRP. The following Concept of Operations describes the structure and functions of the County Recovery Task Force.

A. County Recovery Task Force

1. Membership. The County Recovery Task Force consists of one or more representatives from each county agency or organization identified in **ANNEX A** - Direction and Control, of the Pierce County Emergency Operations Plan, as follows:

   County Representatives

   County Board Chairperson
   Director, Office of Emergency Management
   Sheriff, Pierce County Sheriff's Department
   Highway Commissioner, Pierce County Highway Department
   Director, Department of Human Services
   Agent, Pierce County Extension Office

Public Information Officer

Director, Emergency Health Services/Public Health Nursing
Radiological Officer

Representatives of such other county agencies as deemed appropriate to completing the responsibilities of the Task Force may be added when the Task Force is convened.

Support Agency Representatives

Mayor, Village President, Town Chairperson(s) of affected area
Chief, Local Law Enforcement Agencies within EPZ's
Chief, Local Fire Agencies within EPZ
School District Administrator(s), affected school district(s)
Emergency Coordinator, Radio Amateur Civil Emergency Services (RACES)
Director, Red Cross Western Wisconsin Chapter
Representative of other volunteer agencies involved in the emergency response, demarcation, recovery operations

Utility Representatives

Representatives of the affected utility and its insurers will be requested to participate. Since the State will also be organizing a State Recovery Task Force, it is probable that the utility representatives will serve on that State Task Force and not be represented on the County Task Force. Communication between that entity and the County Task Force will obviously occur.

2. Task Force Chairperson. The Pierce County Emergency Management Director, acting on behalf of the County Board Chairperson, shall chair the County Recovery Task Force. The responsibilities of the Task Force Chairperson shall include, but not be limited to the following:

   a. Organizing and convening the County Recovery Task Force.

   b. Coordinating the development of task force procedures for the direction of the recovery effort and for coordination among all of the involved entities.

c. Setting up a Task Force meeting schedule and agendas for task force meetings.

d. Coordinating information, collection and research to support task force decision-making.

e. Being available to serve on the State Recovery Task Force if necessary, acting on behalf of the County Board Chairperson.

3. Staff Support for the Task Force. Administrative and public information support for the Task Force shall be provided by the operations officers, staff attendant to the county representatives on the County Task Force, the public information officers, with additional assistance to be provided, upon request, by other county agencies and the Pierce County Board. Temporary secretarial support may have to be hired.

4. Radiological Technical Support for the Task Force. The county radiological officer, with assistance from appropriate state and federal agencies, shall both serve on and be the principal radiological technical advisor to the County Task Force.

5. Task Force Meetings. Meetings of the County Recovery Task Force shall generally take place in the Pierce County Emergency Operations Center (EOC), located in the basement of the Pierce County Courthouse, 414 West Main Street, Ellsworth, or at some other designated Pierce County location. Occasionally the County Task Force may find it necessary to meet, either partially or fully staffed, with the State Task Force in Madison or in Pierce County.

6. Duration of the Task Force Operations. The County Recovery Task Force shall continue to function until recovery operations are complete, or until the County Board Chairperson or the Emergency Management Director determines that overall recovery management functions can be completed through the independent actions of state and local governments. The Task Force will obviously continue to operate in tandem with the State Recovery Task Force for as long as is necessary and may indeed function beyond the duration of the State Task Force operation.

B. COUNTY RECOVERY TASK FORCE RESPONSIBILITIES

County Recovery Task Force responsibilities shall include, but not be limited to:

1. Assisting the State Recovery Task Force in developing a recovery plan for all off-site areas in Pierce County affected by the nuclear plant incident, including restricted zones and ingestion areas.

2. Assisting the State Task Force in determining priorities for and scheduling restoration activities.

3. Determining which county and local agencies and organizations can provide personnel, equipment, and resources necessary to complete restoration activities and securing this assistance. Determining and identifying agency personnel, equipment, and resource inadequacies and conveying that information to the State Recovery Task Force for state and federal assistance.

4. Providing staff from the local and county community to assist in the appropriate disposition of contaminated materials which must be removed from the area during restoration as determined by the State Recovery Task Force.

5. Assisting in securing areas which must remain restricted on a long-term or permanent basis, as determined by the State Recovery Task Force, due to the radiological or economic considerations.

6. Arranging for services to the evacuated population.

7. Arranging for return and/or resettlement assistance as determined by the State Recovery Task Force.

8. Developing guidelines for tracking and recovering costs incurred for all activities associated with the incident and proposing a system wherein that can be accomplished through the State Recovery Task Force.

C. RECOVERY PLAN

The recovery plan, which will be prepared by the State Recovery Task Force, will include, but not be limited to the six elements listed below. The County Recovery Task Force should prepare to collect the necessary information and data, as well as provide any other assistance needed by the State Task Force so it can:

1. Provide appropriate services to the evacuated population.

2. Develop guidance for the restoration of both ingestion areas and restricted zones as closely as possible to their pre-incident condition.

3. Schedule restoration activities and identify agencies or organizations responsible for them.

4. Provide return and/or resettlement assistance to evacuated individuals, businesses, and industries.

5. Develop or indicate a process for identifying losses caused by or resulting from the incident and for negotiating reimbursement of those losses from the utility and the insurers.

6. Provide the format for continuing information about recovery actions, activities, and timetables to the public through the media.

D. RECOVERY ACTIVITIES

The remaining sections of this Concept of Operations describe activities expected to be carried out during the **RECOVERY PHASE** and suggest appropriate agencies to carry them out. They are meant to serve as a guide for the County Recovery Task Force as it assists the State Task Force in the development of the recovery plan data. As experience with ingestion and recovery is fine-tuned through future exercises, it is anticipated that these sections will be refined and improved.

E. RADIOLOGICAL ASSESSMENT

The on-going radiological assessment information will continue to be a direct responsibility of the SRC under the authority of the State DHS and numerous federal agencies. Radioactivity throughout the affected area will be monitored to determine natural radioactive decay and the need for decontamination and restoration activities.

The Pierce County Radiological Officer will assist the State Task Force, the SRC, and related federal agencies by keeping the County Task Force advised on state-federal radiological assessment activities periodically working with the public information officer and County Board Chairperson or their designee to reconsider, revise, and relax (where possible) protective action recommendations. The RO will provide the revised PAR information to recovery managers so recovery actions can be initiated, he/she will provide the information to the public information officer so the public can be informed of changing radiological conditions.

F. DECONTAMINATION/RESTORATION

Working in conjunction with the SRC and the State Task Force, the County Task Force will assist wherever possible in identifying local resources to execute decontamination and restoration activities within the affected area to reduce radiation to acceptable levels to promote the return of evacuated population. This includes, but is not limited to:

1. Providing the information and other resources to the State Task Force to assist in their developing a decontamination and restoration plan. Based on the advice of the radiological assessment function, the plan will include the appropriate kinds of decontamination actions or activities to recover the area and will establish priorities for decontamination and restoration actions.

2. Identifying individuals from the local community as well as organizations who will carry out decontamination and restoration activities. Determining their roles and responsibilities including coordination between governmental levels and local jurisdictions.

3. Assigning decontamination and restoration projects to the local individuals and organizations, including, but not limited to the following:

    a. Decontaminating and restoring buildings and equipment used to provide basic services such as general government, fire, law enforcement, postal, water, electricity, sewage, etc.

b. Decontaminating and restoring business, industrial and agricultural sites, buildings and equipment.

c. Removing and disposing of materials, equipment, soils, farm animals and pets, food products, farm or garden produce and other items which cannot be decontaminated or which have perished or spoiled while the area has been evacuated.

d. Decontaminating or otherwise restoring agricultural lands to productive use.

e. Posting and securing area hunting and fishing areas which have limitations (e.g. length of seasons, bag limits, etc.)

f. The local agencies and resources that will provide assistance for these decontamination/restoration activities include, but are not limited to the following:

1) Pierce County Fire Association and mutual aid agreement departments.

2) Type I Hazmat Team of Chippewa Falls/Eau Claire.

3) Pierce County Highway Department.

4) Municipal Departments of Public Works; Water Utilities.

5) Private Contractors.

6) Department of Human Services.

7) Local Environmental Organizations such as Fish and Game, etc.

8) County Farming Organizations such as co-ops, 4-H, etc.

9) Boy Scouts, Girl Scouts.

10) Business/service organizations such as Rotary, Jaycees, Kiwannis, Lions, Optimists, etc.

11) Others as defined by the County Task Force.

4. Identify the resources needed to continue to provide for radiological exposure control of local decontamination/ restoration personnel including protective clothing, dosimetry, personnel and vehicle decontamination sites, etc.

5. Periodically providing information on the progress of decontamination and restoration activities to the public information officer so the public can be informed through the media.

G. ACCESS CONTROL/RE-ENTRY

In support of State Task Force operations, the County Task Force, working through the Pierce County Sheriff and local law enforcement agencies, will coordinate the maintenance of access control to evacuated areas. This includes, but is not limited to:

1. Assisting the State Emergency Police Services function serving on the State Task Force in developing plans for maintaining access control to all evacuated areas during the decontamination and restoration period and for permanent or long-term access control to remaining restricted areas.

2. Assisting in the identification of agencies and organizations who will be handling long-term access control and determining their roles and responsibilities, including coordination between governmental levels and local jurisdictions.

3. Preventing or limiting public access to areas undergoing decontamination and restoration.

4. Assisting in the development and implementation of a procedure to control access to evacuated areas by monitoring and sampling teams, decontamination and restoration personnel; and other specially-identified groups such as farmers or other individuals performing limited maintenance missions.

5. Working with the radiological officer and the State Task Force to arrange for continued monitoring of radiological exposure

control for persons requiring access control including dosimetry, stay times, etc.

6. Periodically providing information about areas still under access control to the public information function so the public can be informed through the media.

H. <u>RETURN</u> (Physical Activities)

The State Task Force will coordinate federal, state, and local efforts to aid the return of resident individuals, businesses, and industries to previously evacuated areas, which have now been restored. The County Task Force will implement return plans, but will also identify personnel, equipment, and other resource limitations. This includes, but is not limited to:

1. Assisting in the development of a plan and procedures for the physical return of resident individuals, businesses, and industries to previously evacuated areas, which will indicate what kind of support can be offered, who can provide it, and how, when, and where it can be provided.

2. Identifying local agencies and organizations which will be able to manage the return effort with the assistance of state and federal agencies and determining their roles and responsibilities, including coordination between governmental levels and local jurisdictions.

3. Providing law enforcement, traffic control, and information services to returning evacuees.

4. Assisting with transportation of evacuees back to their homes, where needed.

5. Assisting with the return of evacuated special populations to institutions and facilities (e.g. nursing home(s), hospital, schools, elderly housing, etc.)

6. Closing the remaining public shelter locations facilities.

7. Providing information and advice to individuals, businesses, and industries about further personal decontamination activities that need to take place when they return to their homes and facilities as advised by the State Task Force, and its attendant agencies.

8. Assisting individuals, businesses, and industries with "clean-up" activities or referring to agencies or organizations which can provide this assistance.

9. Assisting state and the related federal agencies in re-establishing the use of natural and recreation areas.

10. Periodically providing information on the progress of the return activities to the public information function so the public can be informed through the media.

I. **RETURN** (Human and Economic Services)

The County Task Force will assist the State Task Force in coordinating the provision of federal, state, and local human services and economic assistance to returning resident individuals, businesses, and industries. This includes, but is not limited to:

1. Assisting in the development of a plan and procedures for human services and support to returning resident individuals, businesses and industries, which will indicate what kind of support can be offered, who can provide it, and how, when, and where it can be provided.

2. Assisting the State Task Force in identifying agencies and organizations which can provide this support in determining their roles and responsibilities including coordination between governmental levels and between local jurisdictions.

3. Assisting the State DHS and related federal agencies in providing individual and family counseling for stress and/or other evacuation-related emotional or psychological problems or conditions.

4. Providing assistance to the State DHS and related federal agencies as they develop and provide assistance to individuals with long-term medical problems associated with real or perceived radiation exposure.

5. Assist the State Task Force and related state and federal agencies in providing information about where economic assistance to individuals, businesses, and industries can be obtained or providing this assistance.

6. Assisting the State Task Force and other related agencies in working with public and private sector agencies and organizations on new marketing techniques and other ways of restoring confidence in the area and its products, goods, and services.

7. Periodically providing the information on the progress of the above listed return activities to the public information function so the public can be informed through the media.

J. <u>RESETTLEMENT</u> (Physical Activities)

The State Task Force will coordinate, state, and local efforts to aid the resettlement of individuals, businesses, and industries requiring such assistance. The County Task Force will provide assistance to the State Task Force wherever possible to accomplish this goal. This includes, but is not limited to:

1. Assisting the State Task Force in the development of a plan and procedures for the physical re-settlement of resident individuals, businesses and industries, which will indicate what kind of support can be offered, who can provide it, and how, when, and where it can be provided.

2. Assisting the State Task Force in identifying agencies and organizations which can provide the support in determining their roles and responsibilities, including coordination between governmental levels and local jurisdictions.

3. Assisting the State Recovery Task Force with the identification of temporary or permanent housing and jobs in other areas and with a re-settlement effort, if it becomes necessary.

4. Assisting the State Task Force and related federal and state agencies with the resettlement of evacuated special populations into other equivalent institutions or facilities (e.g. nursing homes, hospitals, etc.)

5. Closing the remaining congregate care centers.

6. Assisting the State Task Force and other related state and federal agencies with the identification of buildings or facilities which can support resettled businesses or industries and with the resettlement.

7. Periodically providing information on the progress of the above resettlement activities to the public information function so the public can be informed through the media.

K. <u>RESETTLEMENT</u> (Human and Economic Services)

The State Task Force will coordinate the provision of federal, state, and local human services and economic assistance to individuals, businesses, and industries requiring resettlement. The County Task Force will assist the State Task Force throughout that procedure to accomplish that goal. This includes, but is not limited to:

1. Assisting the State Task Force develop a plan and procedures for human services and support to resettled individuals, businesses, and industries, which will indicate what kind of support can be offered, who can provide it, and how, when, and where it can be provided.

2. Assisting the State Task Force in identifying agencies and organizations which can provide the support in determining their roles and responsibilities, including coordination between governmental levels and local jurisdictions.

3. Assisting the Department of Health Services, related state and federal agencies in providing individual and family counseling for stress and/or evacuation-related emotional or psychological problems or conditions.

4. Assisting DHS and related federal agencies in providing assistance to individuals with long-term medical problems associated with real or perceived radiation exposure.

5. Assisting state and federal agencies in providing information about where economic assistance to individuals, businesses, and industries can be obtained or actually providing this assistance.

6. Periodically providing information on the progress of the above resettlement activities to the public information function so the public can be informed through the media.

L. LOSS COMPENSATION

The State Task Force will work with the utility and its insurer's to identify, document, and seek and receive reimbursement for (1) incident-related losses experienced by individuals, businesses and industries; and (2) expenditures by local governments during emergency response and recovery operations. The County Task Force will assist the State Task Force in gathering data to accomplish that goal and any other implementation of policies and procedures developed. This includes, but is not limited to:

1. The County Task Force will work with the State Task Force and the appropriate federal, state, and local government agencies, the utility and its insurers, to determine the extent of utility, public and private liability for damages resulting from the accident.

2. The County Task Force will work with the State Task Force in conjunction with American Nuclear Insurers (ANI) in developing an insurance information system and claims processing system for injured parties, (individuals, businesses, industries, state and local governments).

3. The County Task Force will, through its individual agencies, assist injured parties in documenting their losses so this information can be relayed to the State Task Force and other concerned agencies including ANI.

4. The County Task Force will work with the State Task Force in assisting injured parties in settling claims with and recovering damages from the utility and its insurers under the provisions of the Price-Anderson Act or in seeking assistance from U.S. DEPARTMENT OF HOMELAND SECURITY - FEMA under the provisions of the Stafford Act (P.L. 100-707).

5. The County Task Force will assist the State Task Force and related agencies in assisting injured parties in litigation, if necessary, to recover damages sustained from the accident.

6. Periodically providing information on the progress of loss compensation activities to the public information function so the public can be informed through the media.

M. LONG-TERM IMPACT STUDIES

The State Task Force will develop and implement a process for monitoring and tracking the long-term affects of the accident on the population, the economy, and the environment in the affected area. The County Task Force will assist in this process as requested. This includes, but is not limited to:

1. Assisting the State Task Force in establishing study groups with local representation and developing agendas for research and reporting.

2. Assisting the State Task Force in developing a long-term environmental monitoring plan and identifying responsibilities at the local level for carrying it out.

3. Assisting the State in organizing a study of long-term health risks and a program of periodic follow-up health monitoring of the affected population.

4. Assisting the State and related federal agencies in investigating long-term agricultural land management practices (e.g. soil removal, crop rotation, tillage) which will further reduce future contamination of feed and food crops.

5. Examining the impacts on markets for local products, goods, and services and providing that data to the State Task Force.

6. Encouraging the Pierce County Partners in Tourism to investigate the impact on local tourism.

7. Working with the local tax assessor's in determining the long-term impact on local property values and supplying that information to the State Task Force.

8. Periodically providing information on the progress of long-term impact studies to the public information function so the public can be informed through the media.

ANNEX I (Radiological Incidents)
Attachment 13(Functional Responsibilities)

		Department/Agency/Office/Division												
		Emergency Management	Fire / EMS	Agriculture	Human Services	Law Enforcement	Public Health	Radiological	Public Information	Highway Department	ARES/ RACES	WI Dept. of Health Services-Radiation Protection Section
Incident Command System Functional Area and Function												
Command and Control	Command and Control (Annex A)	P	S			S						
	Public Information (Annex J)			S			S	S	P			
	Protective Response (Annex A)	P	S									
	Alerting and Notification (Annex B)					P						
Operations	Fire and Rescue (Annex K)		P									
	Law Enforcement (Annex D)					P						
	Communications (Annex B)										S	
	Public Health & Sanitation (Annex H)						P	S				
	Transportation (Annex G)				P					S		
	Social Services (Annex F)				P		S			S		
	Traffic Control (Annex G)					S				P		
	Radiological Exposure Control (Annex I)							P				S
	Accident Assessment (Annex I)											P
	Emergency Medical Services (Annex H)		P				S					
Logistics	Communications (Annex B)								S		S	
	Resource Support (Annex C)	P										
Planning	Command and Control (Annex A)	P	S			S						
	Public Information (Annex J)			S	S		S	S	P			

ANNEX I (Radiological Incidents)
Attachment 14 (Additional Hospital and Emergency Medical Services)

Hospitals

Regions Hospital in St. Paul, MN
Mayo Clinic Health System in Red Wing, MN
UW Hospital in Madison, WI

Ambulance Services

Prescott
Maiden Rock
River Falls
Spring Valley

SPECIAL RADIOLOGICAL SUPPLEMENTAL INSERT

for

LOCAL AGENCY EMERGENCY PREPAREDNESS PLANS

to address

RESPONSE TO A RADIOLOGICAL INCIDENT

Offered by:

Department of Health Services (DHS)
Division of Public Health (DPH)
Bureau of Environmental & Occupational Health (BEOH)
Radiation Protection Section (RPS)

Updated January 3, 2019
RBL

Reception Center(s) & Hospital Services

The primary purpose of a reception center is to monitor evacuees and their vehicles for radioactive contamination and to take the proper steps to decontaminate where necessary. This may also include pets accompanying evacuees. In addition, evacuees are screened for injuries and referred as needed for medical treatment to a qualified hospital or medical facility.

In the case of incidents involving a Nuclear Power Plant (NPP), reception center locations are predetermined and equipped, but in radiological emergencies not involving a NPP the reception center may have to be spontaneously established on short notice, at a convenient impromptu location and to a generic specification utilizing existing and obtainable supplemental resources.

Reception centers also provide a location where emergency workers and their vehicles, that enter evacuated (restricted) areas, can be monitored for radiation and decontaminated before leaving the affected area; and also where radiation protection supplies, equipment and information can be obtained.

Reception Center Facility Site Requirements

The reception center must be able to efficiently process large numbers of persons in a brief time frame. In counties potentially affected by a NPP incident, reception centers are pre-defined with trained staff and operational processes established. In the event that a reception center is needed in a county not having such pre-planning, it may be necessary to rely on mutual aid agreements to acquire needed resources, and provide “just-in-time” training to reception center staff.

The following list of suggested reception center site characteristics can be used to screen and select an adequate location and facility.

1. High visibility location with easy access and the ability to support equipment and power supply.
2. Large facility/building with sufficient space to support local population to gather and register people being prepared for medical screening, radiological monitoring and possible decontamination
3. Secure area in order to protect persons, pets and property from theft or vandalism, and to prevent the potential spread of contamination by uncontrolled access to property.
4. Sufficient parking areas to receive the anticipated numbers of people and their vehicles, as well as sufficient area for emergency responders and their equipment; and the ability to segregate clean/dirty vehicles as necessary.
5. Controlled triage area to receive, medically evaluate and treat and/or dispatch injured persons to a medical facility, as needed.

6. Controlled screening/survey area where individuals are monitored for radioactive contamination and segregated as either not contaminated or contaminated and referred to the on-site decontamination process.
7. A controlled, directed and monitored area equipped with separate female/male restrooms and shower/locker rooms for decontamination of victims.
8. Additional segregated female/male restrooms for those not needing decontamination.
9. A process for dealing with:
    - contaminated clothing that cannot be decontaminated on-site, i.e., replacement clothing for individuals
    - registration by receipt of any/all clothing and personal items confiscated from individuals.
    - storage of contaminated waste not able to be or not intended to be decontaminated.
10. Sufficient parking lot area to collect, monitor and decontaminate cars, including a way to manage runoff from vehicle decontamination. (A nearby commercial car wash could also be used to decontaminate vehicles.)
11. Sufficient communications to ensure operational needs are met, and direction and advice can be offered by state and county emergency management.

    Note: Schools, auditoriums and large athletic facilities may meet the above criteria.

Forward Operations Center (FOC) & Mobile Radiological Lab (MRL)

The Forward Operations Center (FOC) co-located with the State Mobile Radiological Laboratory (MRL) will serve as the state's field command post for the direction and control of dispatched radiological response monitoring and sampling teams, and will be the first location to conduct laboratory analysis of samples collected by those teams. The FOC/MRL will be deployed and managed at the direction of the State Radiological Coordinator (SRC).

The FOC/MRL is a self-contained motorized vehicle kept in Madison until dispatched to a location in the vicinity of a radiological incident. Activities occurring at this location include: (1) deployment of the restricted area field teams, (2) deployment of DATCP and DHS unrestricted area sampling teams, and (3) early and continuing analysis of samples collected by these teams. The FOC/MRL has a stand-alone operational capability but can operate most efficiently when provided additional site hookup resources. Below is a list of preferred on-location parameters that permit it to fully function while conducting special field operations.

FOC/MRL On-Location Site Requirements

In the case of a NPP incident, sites are pre-defined and equipped to receive the FOC/MRL. In the case of a non-NPP radiological incident of adequate magnitude, the FOC/MRL will likely be dispatched to a site near the incident not pre-configured to receive it. The FOC/MRL can be self-sufficient for the first 24 to 48 hours but operates best at a site having the following features:

1. A level, hard-surface parking area capable of maneuvering/parking a 40ft vehicle within a reasonably safe distance of the incident site.
2. Site security capable of monitoring and controlling access to the FOC/MRL.
3. A secure sample collection repository (heated if in the winter months).
4. Clearance for raising an on-board telescoping radio antenna (46 ft).
5. A waste collection area located within the security perimeter.
6. On-site or nearby access to restroom facilities.
7. Near or reasonable access to eating and sleeping accommodations.
8. Additional features if possible:
    - Power hookup for a fifty foot Marco 50A -125/240 vac shore power cord. If this particular power hookup cannot be acquired the FOC/MRL also has a standard six foot 50A-125/250 vac pigtail; however in order to use this option a compatible power source/connection is needed, and may require the local power company be contacted in order to provide this. (The FOC/MRL has an

- onboard generator which is fueled by the FOC/MRL's onboard 90 gallon diesel fuel tank.)
- Telephone lines (minimum of 1 line and a maximum of 3 lines) for activation and support of phone services (The FOC/MRL has one internal tellular line).
- An external RJ-45 ethernet cable to provide an external internet connection. (The FOC/MRL can provide its own internet connection).

EMS TREATMENT OF RADIOACTIVELY CONTAMINATED PATIENTS

Medical emergencies <u>always</u> have priority over concerns involving radioactive contamination.

1. Park upwind and outside controlled area set-up by police or fire dept. personnel. *If no controlled area is designated, park at least 100 ft. upwind of accident scene.*

2. Don protective clothing.
   Wear gloves, booties, and coveralls.

3. Provide emergency life-saving care to victim.

4. When medically feasible, remove victim from immediate area of suspected contamination. Remain within the controlled area.

5. Notify hospital as soon as possible to allow time to prepare receiving area.

6. Remove victim's clothing, if possible, and wrap victim in a clean sheet or similar covering.

7. Prior to leaving scene, remove outer protective clothing and change gloves.
   Clothing and non-essential equipment should remain within the controlled area.

8. Do not decontaminate personnel or equipment unless state health personnel are present.

9. Transport victim to hospital.
   Change gloves after handling victim while en route.

10. Transfer victim to clean hospital gurney.
    Ambulance personnel, sheets, blankets, and equipment should remain with the ambulance. The equipment and personnel are in a controlled area.

11. Ambulance personnel, equipment, and vehicle should not return to service until checked for radioactive contamination by state health or qualified hospital personnel.

NOTE: NO EATING, DRINKING, OR SMOKING IN CONTROLLED AREA

<u>24 HOUR EMERGENCY HOTLINE (608) 258-0099</u>

Absorbed dose: when ionizing radiation passes through living tissue, some of its energy is imparted to the tissue, which absorbs it. The amount of ionizing radiation absorbed per unit mass of the irradiated tissue is called the absorbed dose. It is measured in rads and rems.

Access control: all activities accomplished for the purpose of controlling entry or reentry into an area that has either been evacuated or is under a sheltering protective action decision to minimize the radiation exposure of individuals because of radiological contamination. This function is needed to prevent the general public from entering restricted areas (sheltered and/or evacuated) and permitting only emergency workers with essential missions and limited members of the general public to enter.

Access and functional needs: Those actions, services, accommodations, and programmatic, architectural, and communication modifications that a covered entity must undertake or provide to afford individuals with disabilities a full and equal opportunity to use and enjoy programs, services, activities, goods, facilities, privileges, advantages, and accommodations in the most integrated setting, in light of the exigent circumstances of the emergency and the legal obligation to undertake advance planning and prepare to meet the disability-related needs of individuals who have disabilities as defined by the ADA Amendments Act of 2008, P.L. 110-325, and those associated with them. Access and functional needs may include modifications to programs, policies, procedures, architecture, equipment, services, supplies, and communication methods. Examples of "access and functional needs" services may include a reasonable modification of a policy, practice, or procedure or the provision of auxiliary aids and services to achieve effective communication, such as: (1) an exception for service animals in an emergency shelter where there is a no pets policy; (2) the provision of way-finding assistance to someone who is blind to orient to new surroundings; (3) the provision of transferring and toileting assistance to an individual with a mobility disability; and (4) the provision of an interpreter to someone who is deaf and seeks to fill out paperwork for public benefits.

Accident assessment: the evaluation of the actual and potential consequences of a radiological incident.

Accident Response Group (ARG): Department of Energy response group. A team of scientists, engineers, and technicians that is trained, organized, and equipped to respond to a nuclear weapons accident/incident.

Action levels: see trigger/action levels.

Activated: an emergency operations center or other facility is considered activated as soon as notification of an incident is received and the Director/Commissioner/responsible Representative makes the determination to activate the facility. The facility is not considered *operational* until it is ready to carry out full emergency operations with key decision makers in place.

Activation of personnel: the process by which emergency response personnel are notified of an incident and instructed to report for duty.

Acute exposure: an exposure to radiation that occurs over a short period of time, usually less than an hour.

Adequate: as used in reviews of radiological emergency response plans/procedures, adequate means that the plan/ procedure contents are consistent and in full compliance with the requirements delineated in the Planning Standards and associated NUREG-0654/FEMA-REP-1 Evaluation Criteria or alternative approaches approved by FEMA.

Administration/Finance Section: as applied to an exercise planning team organized according to ICS principles, the team members providing grant management and administrative support throughout exercise development. This group is also responsible for the registration process and coordinates schedules for the exercise planning team, the exercise planning team leader, participating agencies, and the host community or communities.

Administrative Procedures: describe the interaction of the various organizations, as well as the responsibility of each organization involved in the alert and notification sequence.

Advisory Team (A-Team): an emergency response group within the Federal Radiological Preparedness Coordinating Committee tasked with providing protective action recommendations to State and local governments on behalf of its member agencies. The Advisory Team is incorporated into the National Response Framework and is comprised of the individuals from represented agencies who have been activated to respond as members of the Advisory Team during a radiological incident.

Aerial Measuring System (AMS): a Department of Energy asset consisting of an integrated remote-sensing capability for rapidly determining radiological and ecological conditions of large areas of the environment. In conjunction with modern laboratory and assessment techniques, state of-the-art airborne equipment is used for extremely low level gamma radiation detection, high-altitude photography, airborne gas and particulate sampling, and multi-spectral photography and scanning.

After-Action Meeting (AAM): as soon as possible after completion of the draft After-Action Report (AAR), the lead evaluator, members of the evaluation team, and other members of the exercise planning team conduct an AAM to present, discuss, and refine the draft AAR, and to develop an Improvement Plan. This meeting is a chance to present the AAR to participating entities in order to solicit feedback and make necessary changes. A list of corrective actions is generated identifying what will be done to address the recommendations, who (what agency or person) is responsible, and the timeframe for implementation.

After-Action Report / Improvement Plan (AAR/IP): the main product of the evaluation and improvement planning process is the AAR/IP. The AAR/IP has two components: an AAR, which captures observations of an exercise and makes recommendations for post-exercise improvements; and an IP, which identifies specific corrective actions, assigns them to responsible parties, and establishes targets for their completion. The lead evaluator and the exercise planning team draft the AAR and submit it to meeting participants prior to the After-Action Meeting (AAM). The draft AAR is completed first and distributed to meeting participants for review no more than 30 days after exercise conduct. The final AAR/IP is an outcome of the AAM. Final REP AAR/IPs are published no more than 90 days after exercise conduct. Even though the AAR and IP are developed through different processes and perform distinct functions, the final AAR and IP are printed and distributed jointly as a single AAR/IP following an exercise. However, sensitive material may be included in appendices that are not released to the public.

Agreement State: a State that has entered into an agreement under the Atomic Energy Act of 1954, as amended, in which the Nuclear Regulatory Commission has relinquished to such States the majority of its regulatory authority over source, by-product, and special nuclear material in quantities not sufficient to form a critical mass.

Airborne radioactivity: any radioactive material dispersed in the air in the form of dusts, fumes, mists, vapors, or gases.

ANNEX I (Radiological Incidents)
Attachment 17 (Glossary of REP Terms)

Air sampler: a device used to collect a sample of radioactive particulates suspended in the air.

As low as reasonably achievable (ALARA): a philosophy followed to achieve making every reasonable effort to maintain exposures to ionizing radiation as far below the dose limits as practical. A practice to ensure consistency with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations. These means are in relation to utilization of nuclear energy and licensed materials in the public interest.

Alert: licensee emergency classification level indicating that events are in process or have occurred that involve an actual or potential substantial degradation in the level of plant safety or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of a hostile act. Releases are expected to be limited to small fractions of the Environmental Protection Agency protective action guide exposure levels.

Alerting of personnel: transmission of a signal or message that places personnel on notice that an incident has developed that may require that they report for emergency duty.

Alerting the public: activating an attention-getting warning signal through such means as sirens, tone alert radios, route alerting, and speakers on cars, helicopters, and boats.

Alert system: the hardware system(s) used to get the attention of the public within the plume emergency planning zone. An alert system may include a combination of sirens; tone activated radios; vehicles (including boats and airplanes) that used loud speakers/sirens, and other equipment that provides an alert signal.

Alpha particle: a positively charged particle ejected spontaneously from the nuclei of some radioactive elements. It is identical to a helium nucleus that has a mass number of 4 and an electrostatic charge of plus 2. It has low-penetrating power and short range. The most energetic alpha particle will generally fail to penetrate the skin. Alpha is hazardous when an alpha-emitting isotope is introduced into the body. Alpha particles are the least penetrating of the three common types of radiation (alpha, beta, and gamma) and can be stopped by a piece of paper (cannot penetrate skin).

Alternate Emergency Operations Center: an emergency operations center outside the emergency planning zone to which an emergency response organization may relocate if they must evacuate the “home emergency operations center” due to possible radioactive exposure.

Assessment: the evaluation and interpretation of radiological measurements and other information to provide a basis for decision-making. Assessments can include projections of offsite radiological impact.

Atom: the smallest particle of an element that cannot be divided or broken up by chemical means. It consists of a central core called the nucleus, which contains protons and neutrons. Electrons revolve in orbits in the region surrounding the nucleus.

Atomic energy: energy released in nuclear reactions, more appropriately called “nuclear energy.” Of particular interest is the energy released when a neutron initiates the breaking up or fissioning of an atom’s nucleus into smaller pieces (fission), or when two nuclei are joined together under millions of degrees of heat (fusion).

ANNEX I (Radiological Incidents)
Attachment 17 (Glossary of REP Terms)

Automatic Telephone Dialer: a computer programmable telephone dialing system where phone numbers from a computer managed list are automatically called and distributed to destinations.

Background radiation: the level of naturally occurring radiation in the environment. Sources include air, water, soil, potassium-40 in the body and cosmic radiation from the sun. The usually quoted individual background radiation exposure in man's natural environment is an average of 125 millirem per year.

Backup systems: a separate system capable of covering essentially 100% of the population within the entire plume exposure EPZ in the event the primary method is unavailable. The backup means of alert and notification shall be conducted within a reasonable time, with a recommended goal of 45 minutes.

Best practice: an exemplary, peer-validated technique, procedure, good idea, or solution that works and is solidly grounded in actual operations, training, and exercises.

Beta particle: a charged particle emitted from a nucleus during radioactive decay, with a mass equal to 1/1827 that of a proton. A negatively charged beta particle is identical to an electron. A positively charged beta particle is called a positron. Large amounts of beta radiation may cause skin burns, and beta emitters are harmful if they enter the body. Most beta particles can be stopped by aluminum foil.

Body burden: the amount of radioactive material present in the body of a human or an animal.

Boiling water reactor (BWR): a nuclear reactor in which water, used both as coolant and moderator, is allowed to boil in the reactor vessel. The resulting steam is used directly to drive a turbine.

Breeder reactor: a nuclear reactor that produces or "breeds" more fissionable material than it consumes. The reactor is built with a core of fissionable plutonium-239, surrounded by a blanket of uranium-238. As the plutonium fissions, neutrons bombard the uranium converting the uranium blanket to more plutonium-239.

Btu: a British thermal unit. The amount of heat required to change the temperature of 1 pound of water 1 degree Fahrenheit at sea level.

Buffer zone: an area adjacent to a restr1icted zone, to which residents may return, but for which protective measures are recommended to minimize exposure to radiation.

Buffer zone (medical facilities): an area (within a hospital or other medical facility) adjacent to the radiological emergency area (restricted zone) for which protective measures are recommended to minimize both exposure to radiation and the spread of radiological contamination to radiologically clean areas of the facility.

Calibration: the check or correction of the accuracy of a measuring instrument to ensure proper operational characteristics.

Cask: a heavily shielded container used to store and/or ship radioactive materials. Lead and steel are common materials used in the manufacture of casks.

Chain-of-custody form: the documentation of the transfer of samples from one organization and individual to another with respect to the name of the organization and individual and dates of acceptance and/or transfer of samples.

Chain reaction: a fission chain reaction occurs when a fissionable nucleus absorbs a neutron and fissions, relating additional neutrons. These in turn can be absorbed by other fissionable nuclei, releasing more neutrons. A chain reaction is achieved when this process becomes self-sustaining.

Check source: a radioisotope with a known, relatively fixed activity level used to determine the responsiveness of survey instruments.

Chronic exposure: exposure to small doses of radiation over an extended period of time.

Cladding: the outer jacket of nuclear fuel elements. It prevents corrosion of the fuel and the release of fission products into the coolant. Aluminum or its alloys, stainless steel and zirconium are common cladding materials.

Cobalt-60 (Co-60): a radioactive isotope of cobalt formed from natural cobalt-59 by neutron activation in reactors. It is used for medical and industrial applications.

Cognizant Federal Agency (CFA): the Federal agency that owns, authorizes, regulates, or is otherwise deemed responsible for the radiological activity causing the emergency and that has the authority to take action on site.

Cognizant Federal Agency Official (CFAO): lead official designated by the Cognizant Federal Agency to manage its response at the site of a radiological emergency.

Combined License (COL): a joint construction permit and operating license with conditions for a nuclear power facility issued under Subpart C of 10 CFR Part 52.

Command Staff: as applied to an exercise planning team organized according to ICS principles, the team members responsible for coordinating all exercise planning activities. Within this group is the exercise planning team leader, who assigns exercise activities and responsibilities, provides guidance, establishes timelines, and monitors the development process. The safety controller and the liaison coordinator report directly to the exercise planning team leader.

Commercial Mobile Alert System (CMAS): CMAS (also known as Wireless Emergency Alerts (WEA) or Personal Localized Alerting Network (PLAN)) is a new public safety system that allows customers who own an enabled mobile device to receive geographically-targeted, text-like messages alerting them of imminent threats to safety in their area. The new technology ensures that emergency alerts will not get stuck in highly congested user areas, which can happen with standard mobile voice and texting services. CMAS was established pursuant to the Warning, Alert and Response Network (WARN) Act.

CMAS enables government officials to target emergency alerts to specific geographic areas through cell towers (e.g., lower Manhattan), which pushes the information to dedicated receivers in CMAS-enabled mobile devices.

CMAS complements the existing Emergency Alert System (EAS) which is implemented by the FCC and FEMA at the federal level through broadcasters and other media service providers.

Wireless companies volunteer to participate in CMAS. CMAS is the result of a unique public/private partnership between the FCC, FEMA and the wireless industry with the singular objective of enhanced public safety.

Participating wireless carriers were required to deploy CMAS by April 7, 2012.

Commercial nuclear power plant (NPP): facility licensed by the Nuclear Regulatory Commission to use a nuclear reactor to produce electricity for sale to the general public. While there are many types of nuclear facilities, FEMA's responsibility for offsite planning and preparedness and the guidance in the REP Program Manual are applicable only to commercial nuclear power plants.

Committed dose: the dose that will be received over a period of 50 years from the ingestion or inhalation of a particular quantity of a radionuclide or a specific mix of radionuclides.

Committed dose equivalent (CDE): the dose equivalent to organs or tissues of reference that will be received from an intake of radioactive material by an individual during the 50-year period following ingestion.

Committed effective dose equivalent (CEDE): the sum of the 50-year committed doses to individual organs from inhalation (or ingestion) of radionuclides, where the individual organ doses have been weighted so that the associated risk of fatal cancer can be added to the risk of fatal cancer from whole-body dose.

Common Alerting Protocol (CAP): is a digital format for exchanging emergency alerts that allows a consistent alert message to be disseminated simultaneously over many different communications systems.

Concepts and Objectives (C&O) Meeting: the formal beginning of the exercise planning process. It is held to ensure that exercise planners agree upon the already identified type, scope, capabilities, objectives, and purpose of the exercise. For less complex exercises and for entities with limited resources, the C&O Meeting can be conducted in conjunction with the Initial Planning Meeting (IPM); however, when exercise scope dictates, the C&O Meeting is held first. Representatives from the sponsoring agency or organization, the exercise planning team leader, and senior officials typically attend the C&O Meeting to identify an overall exercise goal, develop rough drafts of exercise capabilities and objectives, and identify exercise planning team members.

Congregate care (CC): the provision of temporary housing and basic necessities for evacuees.

Congregate care center (CCC): a facility for temporary housing, care, and feeding of evacuees.

Containment: the provision of a gas-tight shell or other enclosure around a reactor that confines fission products and prevents their release to the environment in an accident.

Contaminated: the condition resulting from the adhesion of radioactive particulates to the surface of structures, areas, objects, or personnel.

Contaminated injured individuals: individuals who are: (1) contaminated with radioactive material that cannot be removed by the simple methods described in NUREG-0654/FEMA-REP-1, Evaluation Criteria J.12 and K.5.b; or (2) contaminated and otherwise physically injured. Individuals exposed to high levels of radiation may be injured but not contaminated.

Contamination: refers to radioactive materials not in their intended containers. Whether the contamination is considered "fixed" or "loose" depends on the degree of effort required to unfix or remove the contamination from a surface.

Contextual inject: a controller-introduced message to a player to help build the exercise operating environment. For example, if the exercise is designed to test information sharing capabilities, a Master Scenario Events List inject can be developed to direct a controller to select an actor to portray a suspect. The inject could then instruct the controller to prompt another actor to approach a law enforcement officer and inform him/her that this person was behaving suspiciously.

Contingency inject: a controller message introduced verbally to a player if players are not performing the actions needed to sustain exercise play. This ensures that play moves forward, as

needed, to adequately test performance of activities. For example, if a simulated secondary device is placed at an incident scene during a terrorism response exercise, but is not discovered, a controller may want to prompt an actor to approach a player to say that he/she witnessed suspicious activity close to the device location. This prompts the responder's discovery of the device, and result in subsequent execution of the desired notification procedures.

Control cell: exercise personnel who facilitate interfaces with nonparticipating groups, such as ORO officials and persons with disabilities and access/functional needs.

Control rod: a rod containing a material that readily absorbs neutrons (such as boron). It is used to control the power of a nuclear reactor. By absorbing neutrons, a control rod slows the fission chain reaction by preventing neutrons from causing further fission.

Control room: the area in a nuclear power plant from which most of the plant power production and emergency safety equipment can be operated by remote control.

Controlled area: a defined area in which the occupational exposure of personnel to radiation or radioactive material is under the supervision of an individual in charge of radiation protection.

Controller: the individual directing the flow of scenario events in order to ensure that the conduct of an exercise is conducted in accordance with the agreed-upon exercise objectives and the extent of play.

Controller/Evaluator (C/E) briefing: a pre-exercise overview for controllers, evaluators, and exercise administrative staff. The briefing summarizes the C/E Handbook (or the Controller/Staff Instructions and Evaluation Plan) and focuses on explaining the roles and responsibilities of controllers and evaluators. This is the time to address any changes in the exercise and answer final questions. It is generally 1-2 hours in length and is conducted the day before an operations-based exercise.

Controller/Evaluator (C/E) Handbook: an exercise overview and instructional manual for controllers and evaluators. A supplement to the Exercise Plan, it contains more detailed information about the scenario, and describes controllers' and evaluators' roles and responsibilities. Because the C/E Handbook contains information on the scenario and exercise administration, it is distributed only to those individuals specifically designated as controllers or evaluators. Larger, more complex exercises may use a separate Controller/Staff Instructions and Evaluation Plan in place of the C/E Handbook.

Controller injects: the introduction of events, data, and information into exercises to drive the demonstration of objectives.

Coolant: a substance, usually water, circulated through a nuclear reactor to remove or transfer heat.

Cool down: the gradual decrease in reactor fuel rod temperature caused by the removal of heat from the reactor coolant system.

Cooling tower: a heat exchanger designed to aid in the cooling of water that was used to cool exhaust steam exiting the turbines of a power plant. Cooling towers transfer exhaust heat into the air instead of into a body of water.

Coordinate: to bring into common action so as not to unnecessarily duplicate or omit important actions (does not involve direction of one agency by another).

Core: the central portion of a nuclear reactor containing the fuel elements, moderator, neutron poisons, and support structures.

Core Capabilities: distinct critical elements necessary to achieve the specific mission areas of prevention, protection, mitigation, response, and recovery. Capabilities provide a common vocabulary describing the significant functions required to deal with threats and hazards that must be developed and executed across the whole community to ensure national preparedness.

Core melt accident: a reactor accident in which the fuel core melts because of overheating.

Corrective action: corrective actions are the concrete, actionable steps outlined in Improvement Plans that are intended to resolve preparedness gaps and shortcomings experienced in exercises or real-world events.

Corrective action plan (CAP): an element of improvement planning through which corrective actions from the After- Action Report/Improvement Plan are prioritized, tracked, and analyzed continuously until they have been fully implemented and validated.

Counting: using an instrument to detect individual particles or gamma rays which interact with the detector on the instrument. For example, ambient radiation can be counted, or, alternatively, the radiation emitted by specific samples can be counted in units of counts per minute (cpm) or counts per second (cps).

Criticality: a term used in reactor physics to describe the state when the number of neutrons released by fission is exactly balanced by the neutrons being absorbed (by the fuel and poisons) and escaping the reactor core. A reactor is said to be “critical” when it achieves a self-sustaining nuclear chain reaction.

Cumulative dose (radiation): the total dose resulting from repeated exposure to radiation of the same body region, or of the whole body.

curie (Ci): the basic unit to describe the intensity of radioactivity in a sample of material. One curie is equal to 37 billion disintegrations (nuclear transformations) per second. So, in 1 curie, 37 billion atoms decay in 1 second. Several commonly used fractions of the curie include:

millicurie: 1/1,000 of a curie, (one-thousandth of a curie, abbreviated mCi)

microcurie: 1/1,000,000 of a curie, (one-millionth of a curie, abbreviated µCi)

nanocurie: 1/1,000,000,000 of a curie, (one-billionth, (one-billionth of a curie, abbreviated nCi)

picocurie: 1/1,000,000,000,000 of a curie (one-trillionth of a curie, abbreviated pCi)

dB(C): the measurement of audio signals. The C weighting approximates the human ear sensitivity to relatively high sound levels.

Debrief: a forum for planners, facilitators, controllers, and evaluators to review and provide feedback after the exercise is held. It is a facilitated discussion that allows each person an opportunity to provide an overview of the functional area they observed and document strengths and areas for improvement. The exercise planning team leader facilitate debriefs, and results are captured for inclusion in the After-Action Report/Improvement Plan. (NOTE: Other sessions, such as a separate debrief for hospitals during an operations-based exercise, may be held as necessary.) A debriefing is different from a hot wash, in that a hot wash is intended for players to provide feedback.

Decay (radioactive): the decrease in the radiation intensity of any radioactive material with respect to time.

Decontamination: the process of making any person, object, or area safe by absorbing, destroying, neutralizing, making harmless, or removing chemical or biological agents, or by removing radioactive material clinging to or around it.

Decontamination station: a building or location suitably equipped and organized where personnel and material are cleansed of chemical, biological, or radiological contaminants.

Demonstrated Strength: an observed action, behavior, procedure, and/or practice that is worthy of special notice and recognition.

Demonstration Criterion: one of the 34 specific demonstration standards outlined in the FEMA REP Program Manual for offsite response organization response capability that are evaluated during a REP exercise.

Depleted uranium: uranium having a percentage of uranium-235 smaller than the 0.7% found in natural uranium. It is obtained from spent (used) fuel elements or as byproduct tails or residues from uranium isotope separation.

Derived intervention levels (DILs): concentration derived from the intervention level of dose at which the Food and Drug Administration recommends consideration of protective measures. DILs correspond to the radiation concentration in food throughout the relevant time period that, in the absence of any intervention, could lead to an individual receiving a radiation dose equal to the protective action guide or in international terms the intervention levels of dose.

Derived response level (DRL): the calculated concentration of a particular radionuclide in a particular medium (e.g., food) that will produce a dose equal to a protective action guide.

Design and development: building on the exercise foundation, consists of identifying capabilities, tasks, and objectives; designing the scenario; creating documentation; coordinating logistics; planning exercise conduct; and selecting an evaluation and improvement methodology.

Direction and control: the management of emergency functions within a particular context (e.g., an emergency operations center) through leadership and use of authority.

Direct-reading dosimeter (DRD): a small ionization detection instrument that indicates radiation exposure directly. An auxiliary charging device is usually necessary. DRDs can be read in real time by the user. A DRD is also referred to as a “pocket dosimeter.”

Dose: the quantity of energy absorbed from ionization per unit mass of tissue. The rad is the unit of absorbed dose.

Dose equivalent: (1) A term used to express the amount of effective radiation when modifying factors have been considered. (2) The product of absorbed dose multiplied by a quality factor multiplied by a distribution factor. It is expressed numerically in rem. (3) The product of the absorbed dose in rad, a quality factor related to the biological effectiveness of the radiation involved and any other modifying factors.

Dose limits for emergency workers: the allowable accumulated dose during the entire period of the emergency. Action to avoid exceeding the limit is taken based on actual measurements of

integrated gamma exposure. In contrast, protective action guides are trigger/action levels of projected dose at which actions are taken to protect the public. These actions are taken prior to the dose being received.

Dose rate: the radiation dose delivered per unit time. The dose rate may be expressed numerically in rads per second or rads per hour.

Dosimeter: a portable device such as a thermoluminescent film badge or direct-reading ionization chamber used for measuring and registering the total accumulated exposure to ionizing radiation.

Dosimetry: the measurement of radiation doses. It applies to both the devices used (dosimeters) and to the techniques.

Drill: a coordinated, supervised activity usually employed to validate a specific function or capability in a single agency or organization. Drills are commonly used to provide training on new equipment, validate procedures, or practice and maintain current skills.

Early phase: (also referred to as the plume or emergency phase) the period at the beginning of a nuclear incident when immediate decisions for effective use of protective actions are required and must therefore usually be based primarily on the status of the nuclear power plant and the prognosis for worsening conditions. When available, predictions of radiological conditions in the environment based on the condition of the source or actual environmental measurements may also be used. Precautionary actions may precede protective actions based on the protective action guides. This phase lasts hours to several days and ends when the radioactive release ends.

Early Site Permit (ESP): a permit through which the NRC resolves site safety, environmental protection, and emergency preparedness issues, in order to approve
one or more proposed sites for a nuclear power facility, independent of a specific nuclear plant design or an application for a construction permit or CL. An ESP is valid for 10 to 20 years, but can be renewed for an additional 10 to 20 years.

Effective dose equivalent (EDE): the sum of the products of the dose equivalent to each organ on a weighting factor, where the weighting factor is the ratio of the risk of mortality from delayed health effects arising from irradiation of a particular organ or tissue to the total risk of mortality from delayed health effects when the whole body is irradiated uniformly to the same dose.

Electron: a stable, negatively charged elementary particle of matter. Electrons orbit the positively charged nucleus of the atom.

Element: one of the 103 known chemical substances that cannot be broken down further without changing its chemical properties. Some examples include hydrogen, nitrogen, gold, lead, and uranium.

Emergency: an unexpected event during the operation of a nuclear power plant that has a significant effect on the safety of the facility, personnel or the public.

Emergency Action and Coordination Team (EACT): the Department of Energy senior management team at Department of Energy headquarters that coordinates the initial National Response Framework response to a radiological emergency.

Emergency Alert System (EAS): a system of radio and television stations responsible for providing official government instructions to the public (formerly the Emergency Broadcast System).

Emergency Classification Level (ECL): classifications used by the licensee to classify incidents. The four ECLs are Notification of Unusual Event, Alert, Site Area Emergency, and General Emergency.

Emergency Information and Coordination Center (EICC): the FEMA 24-hour national emergency center from which the Emergency Support Team operates. Emergency Information and Coordination Center communications link the Senior Federal Official, FEMA Regional and headquarters staff, and other Federal departments and agencies at the national level with one another.

Emergency information: material designed to improve public knowledge or understanding of an emergency.

Emergency instructions: information provided to the general public during an emergency pertaining to protective action recommendations for actions such as evacuation and sheltering.

Emergency Operations Center (EOC): a facility that is the primary base of emergency operations for an offsite response organization in a radiological emergency.

Emergency Operations Facility (EOF): a facility that is the primary base of emergency operations for the Licensee in a radiological incident. An onsite operations facility provided by the NRC Licensee to facilitate the management of an overall emergency response. Utility and State officials, and a very limited number of Federal personnel may be accommodated.

Emergency phase: see “early phase.”

Emergency Planning Zone (EPZ): a geographic area surrounding a commercial nuclear power plant for which emergency planning is needed to ensure that prompt and effective actions can be taken by offsite response organizations to protect the public health and safety in the event of a radiological accident. The plume pathway EPZ is approximately 10 miles in radius, while the ingestion pathway EPZ has a radius of approximately 50 miles.

Emergency protective actions: protective actions to isolate food to prevent its introduction into commerce and to determine whether condemnation or other disposition is appropriate.

Emergency response planning area: see “planning area.”

Emergency Support Team (EST): the FEMA Headquarters’ team that carries out notification, activation, and coordination procedures from the FEMA Emergency Information and Coordination

Center. The EST is responsible for Federal agency headquarters coordination, staff support of the FEMA Administrator, and support of the Senior Federal Official.

Emergency worker (EW): individual who has an essential mission to protect the health and safety of the public who could be exposed to ionizing radiation from the plume or from its deposition. Some examples of emergency workers are: radiation monitoring personnel; traffic control personnel; fire and rescue personnel, including ambulance crews; medical facilities personnel; emergency operations center personnel; personnel carrying out route alerting procedures; and essential services or utility personnel; and evacuation vehicle (e.g., bus, van, etc.) drivers. Note that evacuation vehicle drivers who will be transporting individuals or groups out of the emergency planning zone and who are not expected to return to the emergency planning zone are not considered "Emergency Workers."

Emergency Worker Exposure Control Plan: demonstrates that OROs have the capability to assess and control the radiation exposure received by emergency workers. OROs should include

in their Plans the methods or options for the following: direct-reading dosimetry and permanent record dosimetry; reading of direct-reading dosimetry by emergency workers; maintaining a radiation dose record; establishing a decision chain or authorization procedures for emergency workers to incur radiation exposures in excess of the PAGs; and the capability to provide KI for emergency workers, always applying ALARA.

Equipment: FEMA currently recognizes fixed sirens, route alerting, TARs, and NOAA weather radio as acceptable primary and backup alert systems. , EAS, NOAA weather radio, and route alerting are acceptable notification systems.
OROs may submit alternative systems and other newer technologies for approval if they can document that the system meets the minimum acceptable design objectives. OROs may use alternative systems not yet approved by FEMA concurrently with approved systems to augment the alert and notification process.

Essential emergency functions: these include communications, direction and control of operations, alert and notification of the public, accident assessment, information for the public and media, radiological monitoring, protective response, and medical and public health support.

Evacuation (Citizen Evacuation): a population protection strategy involving orderly movement of people away from an actual or potential hazard, and providing reception centers for those without their own resources for temporary relocation.

Evacuation Time Estimate (ETE): an estimate, contained in emergency plans/procedures, of the time that would be required to evacuate general and persons with disabilities and access/functional needs within the plume pathway emergency planning zone under emergency conditions.

Evaluation: the process of observing exercise performance to document strengths and opportunities for improvement in an entity's preparedness and response capability. Evaluation is the first step in the improvement process.

Evaluation module: the former term for a tool used by evaluators to document exercise performance. The current terminology for this tool is Exercise Evaluation Guide.

Evaluation team: a group of individuals trained to observe and record player actions. These individuals are familiar with the exercising entity's plans, policies, procedures, and agreements.

Evaluator: a qualified individual who observes, measures, and assesses performance, captures issues, and analyzes exercise results. Evaluators assess and document players' performance

against established emergency plans/ procedures and Demonstration Criteria. Evaluators note the actions/decisions of players without interfering with exercise flow.

Exception area: an area located approximately 5 to 10 miles from a nuclear power plant and specifically designated in an offsite response organization's plans/procedures for which FEMA has granted an exception to the requirement for the capability to complete alert and notification of the public within 15 minutes. Most exception areas are recreation areas or similar low-population within the emergency planning zone. Offsite response organizations must have the capability to complete alert and notification of the public in approved exception areas within 45 minutes.

Exclusion area: the area surrounding a nuclear reactor in which the facility operator has the authority to determine all activities, including exclusion or removal of personnel and property from the area. A specific area off-limits (expressed in miles) from a nuclear power plant.

Exercise: an instrument to train for, assess, practice, and improve performance in prevention, protection, mitigation, response, and recovery capabilities in a risk-free environment. Exercises can

be used for testing and validating policies, plans, procedures, training, equipment, and interagency agreements; clarifying and training personnel in roles and responsibilities; improving interagency coordination and communications; improving individual performances; identifying gaps in resources; and identifying opportunities for improvement.

Exercise Evaluation Guides (EEGs): documents that support the exercise evaluation process by providing evaluators with consistent standards for observation, analysis, and After-Action Report/Improvement Plan development. Each EEG is linked to a core capability.

Exercise issue: a problem in organizational exercise performance that is linked with specific Planning Standards or associated NUREG-0654/FEMA-REP-1 Evaluation Criteria. There are two categories of exercise issues: Level 1 and Level 2 Findings.

Exercise Plan (ExPlan): general information document that helps operations-based exercises run smoothly. The ExPlan is published and distributed prior to the start of exercise and provides a synopsis of the exercise. In addition to addressing exercise objectives and scope, the ExPlan assigns activities and responsibilities for successful exercise execution. It enables participants to understand their roles and responsibilities in exercise planning, execution, and evaluation. The ExPlan is intended for use by exercise players and observers—therefore, it does not contain detailed scenario information that may reduce the realism of the tasks to be performed. Players and observers review all elements of the ExPlan prior to exercise participation.

Exercise Planning Team: group of individuals responsible for all aspects of an exercise, including exercise planning, conduct, and evaluation. The planning team determines exercise capabilities, tasks, and objectives; tailors the scenario to the entity's needs; and develops documents used in exercise simulation, control, and evaluation. The exercise planning team is ideally comprised of representatives from each major participating jurisdiction and agency, but should be kept to a manageable size. While entities may find it advantageous to include team members with previous exercise planning experience, membership can be modified to fit the type or scope of an exercise. Planning team members are ideal selections for controller and evaluator positions during the exercise because advanced scenario knowledge renders them ineligible to participate as players. An exercise planning team leader manages the exercise planning team, which can be structured using the principles of the ICS, with Command Staff, Planning Section, Logistics Section, Administration/Finance Section, and Operations Section.

Exercise Planning Team Leader: individual who oversees the exercise planning team; develops the exercise project management timeline and the exercise project management assignment list;

assigns exercise responsibilities; provides overall guidance; and monitors the development process.

Exercise Program Management: the functions required for an entity to sustain a variety of exercises targeted toward preparedness priorities on an ongoing basis. It includes project management, budgeting, grant management, staff hiring, funding allocation, and expenditure tracking. Program management functions cyclically. First, a Multi-Year TEP is developed in consideration of an entity's preparedness priorities. Next, specific exercises are carried out according to the multi-year plan's timelines and milestones. Finally, Improvement Plan corrective actions identified through exercises are taken into account when developing priorities for the next multi-year plan. Responsibilities for these tasks are complementary and require that all relevant parties collaborate to successfully administer exercises.

Exposure: the absorption of radiation or ingestion of a radionuclide. The exposure at a given point is a measurement of radiation in relation to its ability to produce ionization. The unit of measurement of the exposure is the roentgen. A measure of radiation dose received by a person,

usually broken down and used to refer to whole-body exposure compared with exposure to the hands only.

Exposure rate: the amount of gamma radiation that an individual would receive in 1 hour as measured in air (typically expressed in units of microrem per hour, millirem per hour or rem per hour).

Extent of play: the level of play vs. simulation at an emergency response exercise. Each REP Demonstration Criterion contains a "default" extent of play that evaluators and response organizations use to define parameters for the expected performance under that criterion.

Extent-of-Play Agreement: a document negotiated during the exercise planning process that customizes the default performance expectations found in the Assessment Area Demonstration Criteria. The Extent-of-Play Agreement may include identification of the Demonstration Criteria that will or will not be evaluated during the exercise, entities responsible for demonstrating specific criteria, equipment (including vehicles to be used), personnel to be deployed, facilities to be activated, etc.

Extremities: the hands and forearms and, with restrictions, the head, feet, and ankles. (Permissible radiation exposures in these regions are generally greater than in the whole body because they contain less blood-forming material and have smaller volumes for energy absorption.)

Facility: any building, center, room(s), or mobile unit(s) designed and equipped to support emergency operations.

Federal or other support organizations: Federal agencies such as FEMA, Department of Energy, the Nuclear Regulatory Commission, or any other governmental, quasigovernmental, or private organizations (e.g., American Red Cross, Civil Air Patrol, Amateur Radio Emergency Services, and Radio Amateur Civil Emergency Services, cooperating State compact radiological monitoring or sampling personnel, and national or university laboratories) that may provide assistance in radiological emergencies.

Federal Coordinating Officer (FCO): the Federal official appointed by the President upon declaration of a major disaster or emergency under Public Law 93-288 to coordinate the overall Federal response.

Federal Emergency Management Agency (FEMA): the agency responsible for establishing Federal policies for and coordinating all civil defense and civil emergency planning, management, mitigation, and assistance functions of executive agencies. FEMA assists State, local, and Tribal agencies in their emergency planning. Its primary role is one of coordinating Federal, State, local, Tribal, and volunteer response actions.

Federal Radiological Emergency Response Plan (FRERP): a former plan for coordinating Federal response to any type of peacetime radiological emergency requiring significant Federal response. Issued in 1996 (61 FR 20944), it superseded the Interagency Radiological Assistance Plan and the Federal Radiological Monitoring and Assessment Plan. The FRERP has been superseded by the National Response Framework.

Federal Radiological Monitoring and Assessment Center (FRMAC): a center usually located at an airport near the scene of a radiological emergency from with the Department of Energy Offsite Technical Director conducts the National Response Framework response. This center need not be located near the onsite or Federal-State operations centers as long as its operations can be coordinated with them.

Federal Radiological Monitoring and Assessment Plan (FRMAP): a former plan to provide coordinated radiological monitoring and assessment assistance to the offsite response organizations in response to radiological emergencies. The FRMAP was superseded in 1996 by the Federal Radiological Emergency Response Plan. The Federal Radiological Emergency Response Plan has been superseded by the National Response Framework.

Federal Radiological Preparedness Coordinating Committee (FRPCC): the National level coordination mechanism to provide technical assistance to offsite response organizations (see 44 CFR Part 35l).

Federal Response Center (FRC): the on-scene focal point established by the Senior FEMA Official, as required, for coordinating the Federal response to an incident. Representatives of other Federal, State, local, Tribal, and volunteer agencies will be located in the center.

Feed water: water supplied to the reactor pressure vessel (in a boiling water reactor) or the steam generator (in a pressurized water reactor) that removes heat from the reactor fuel rods by boiling and becoming steam. The steam becomes the driving force for the plant turbine generator.

Field Command Post (FCP): a center, either mobile or fixed, set up in a location convenient to the accident site, to facilitate emergency response, especially, for example, accident assessment activities such as direction of the field monitoring teams.

Field Team Coordinator (FTC): the individual who manages the functions of field teams and coordinates data with the dose assessment group located in emergency operation centers and facilities.

Film badge: a photographic film packet to be carried by personnel, usually in the form of a badge, used for measuring and permanently recording gamma ray dosage. A thermoluminescent dosimeter is a type of film badge.

Field Monitoring Team (FMT): includes groups used to detect and monitor radiation in the environment (e.g., measuring the concentration of radiation in the air, water, vegetation, soil, etc.).

Final Planning Meeting (FPM): the final forum for the exercise planning team to review the process and procedures for exercise conduct, final drafts of all exercise materials, and all logistical requirements. During the FPM, there are no major changes made to either the design or the scope

of the exercise, nor to any supporting documentation. The FPM ensures all logistical requirements have been arranged, all outstanding issues have been identified and resolved, and all exercise products are ready for printing.

Fission: the splitting of an atomic nucleus into two approximately equal parts accompanied by the release of large amounts of energy and one or more neutrons.

Fission gases: those fission products that exist in the gaseousstate. Primarily the noble gases (e.g., krypton, xenon, radon).

Fixed nuclear facility (FNF): a stationary nuclear installation that uses or produces radioactive materials in its normal operations. Fixed nuclear facilities include commercial nuclear power plants and other fixed facilities.

Fixed contamination: contamination that remains after loose contamination has been removed by decontamination.

Fixed (reproducible) geometry: a method of measuring levels of radioactivity in samples by using a standard size or volume of samples held at a fixed distance from the measuring instrument.

Fixed sirens: FEMA classifies any device used to provide an audible alerting signal outdoors from a fixed location as a siren. This includes mechanical (e.g., whistles, horns), electro-mechanical, and electronic devices capable of producing audible tones.

Food chain: the pathway of any material through the environment to edible plants, animals and ultimately to humans.

Forward emergency operations center: if the State emergency operations center is a significant distance from the plant site, the plans/procedures may indicate that a near-site or forward emergency operations center will be established at the time of an accident.

Forward Command Post (FCP): a location near the affected area used to direct the activities of State field personnel performing emergency tasks in support of local government response. This location may also be used for location for field team coordination.

Forward Operations Post: a location in or near the affected area used to coordinate the monitoring and sampling activities of the Radiological Emergency Response Teams.

Forward Staging Area (FSA): location near the incident site for collection and preparation of resources for deployment.

Fuel cycle: the series of steps involved in supplying fuel for nuclear power reactors. It includes mining, fabrication of fuel elements and assemblies, their use in a reactor, reprocessing spent fuel and refabrication into new fuel elements.

Fuel element: a rod or other form into which nuclear fuel is fabricated for use in a nuclear reactor.

Full participation exercise: per 44 CFR 350.2(j), a joint exercise in which: (1) State, local, and Tribal organizations, licensee emergency personnel, and other resources are engaged in sufficient numbers to verify the capability to respond to the actions required by the accident/incident scenario; (2) the integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant is tested; and (3) the implementation of the observable portions of State, local, and Tribal plans/procedures is tested.

Full-Scale Exercise: in accordance with HSEEP, a full-scale exercise is a multi-agency, multi-jurisdictional, multidiscipline exercise involving functional (e.g., joint field office, emergency operations centers, etc.) and "boots on the ground" response (e.g., firefighters decontaminating mock victims). For the purposes of the REP Program, a full-scale exercise meets the intent of the full-participation exercise.

Functional Exercise: an exercise that sufficiently engages organizations to test their abilities to respond to the scenario, but participation is less than full-scale. Most REP biennial joint exercises are functional exercises because they simulate some response capabilities or demonstrate them out of sequence from the scenario, and the exercise may not require participation of all offsite entities that would respond in a real radiological emergency.

Functional Needs Support Services (FNSS): Services that enable children and adults to maintain their usual level of independence in a general population shelter. FNSS includes reasonable modifications to policies, practices, and procedures, durable medical equipment (DME), consumable medical supplies (CMS), personal assistance services (PAS), and other goods and services as needed. Children and adults requiring FNSS may have physical, sensory, mental

health, and cognitive and/or intellectual disabilities affecting their ability to function independently without assistance. Others who may benefit from FNSS include women in late stages of pregnancy, elders, and those needing bariatric equipment.

Fusion: the formation of a heavier nucleus from two lighter ones, with the release of energy.

Gamma rays: the most penetrating of the three types of ionizing radiation, gamma rays are electromagnetic radiation like light, radio waves and microwaves. Similar to X-rays, but usually more powerful, they have no mass; they are only energy. Gamma rays are best stopped or shielded against by dense material such as concrete or lead.

Geiger-Mueller (G-M) detector: a type of radiation detector that can be used to measure the gamma, or beta plus gamma radiation depending on whether the detector is covered by a beta shield.

General Emergency (GE): licensee emergency classification level indicating that events are in process or have occurred that involve actual or imminent substantial core degradation or melting, with potential for loss of containment integrity or security events that result in an actual loss of physical control of the facility. Releases can reasonably be expected to exceed Environmental Protection Agency protective action guide exposure levels offsite for more than the immediate site area.

Groundshine: gamma and/or beta radiation from radioactive material deposited on the ground.

Half-life: the time required for the activity of a given radioactive substance to decrease to half of its initial value due to radioactive decay. The half-life is a characteristic property of each radioactive species and is independent of its amount or condition. The effective half-life of a given isotope on the body is the time in which the quantity in the body will decrease to half as a result of both radioactive decay and biological elimination. Half-lives vary from millionths of a second to billions of years.

Health physics: the science of recognizing, evaluating and controlling health hazards from ionizing radiation.

Health physics technician (HPT): an individual trained in radiation protection.

High exposure rate: an exposure rate greater than 2.5 milliroentgens per hour.

High levels of radiation exposure: doses of 100 rem or greater.

High-level waste: materials from nuclear operations that are no longer useful and have radioactivity concentrations of hundreds to thousands of curies per gallon or cubic foot.

Homeland Security Exercise Evaluation Program (HSEEP): a capabilities- and performance-based exercise program that provides standardized policy, doctrine, and terminology for the design, development, conduct, and evaluation of homeland security exercises. HSEEP also provides tools and resources to facilitate the management of self-sustaining homeland security exercise programs.

Homeland Security Presidential Directive-5 (HSPD-5): an Executive-Branch-issued policy requiring the Department of Homeland Security to coordinate with other Federal departments and agencies, as well as State, local, and Tribal governments to establish the National Response Framework and the National Incident Management System.

Homeland Security Presidential Directive-8 (HSPD-8): an Executive-Branch-issued policy drafted to strengthen the preparedness of the United States to prevent and respond to threatened or actual domestic terrorist attacks, major disasters, and other emergencies by requiring a national domestic all-hazards preparedness goal; establishing mechanisms for improved delivery of Federal preparedness assistance to State and local governments; and outlining actions to improve the capabilities of Federal, State, and local entities. HSPD-8 has been superseded by Presidential Policy Directive-8 (PPD-8).

Host/support jurisdiction: a geographical area that is at least 5 miles, and preferably 10 miles, beyond the boundaries of the 10-mile plume pathway emergency planning zone (i.e., 15-20 miles from the commercial nuclear power plant) where functions such as congregate care, radiological monitoring, decontamination, and registration are conducted.

Host regional office: the FEMA Regional Office that has program jurisdiction for a site because of the location of a commercial nuclear power plant within its regional borders.

Hostile action: as defined in Nuclear Regulatory Commission Bulletin 2005-02, Emergency Preparedness and Response Actions for Security-Based Events, a hostile action is “an act toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force.”

Hot spot: region in a contaminated area in which the level of radioactive contamination is considerably greater than in neighboring regions.

Hot wash: a facilitated discussion held immediately following an exercise among exercise players from each functional area. It is designed to capture feedback about any issues, concerns, or proposed improvements players may have about the exercise. The hot wash is an opportunity for players to voice their opinions on the exercise and their own performance. This facilitated meeting allows players to participate in a self-assessment of the exercise play and provides a general assessment of how the entity performed in the exercise. At this time, evaluators can also seek clarification on certain actions and what prompted players to take them. Evaluators take notes

during the hot wash and include these observations in their analysis. The hot wash should last no more than 30 minutes.

Implementing procedure: instructions used by personnel that provide a detailed description, including checklists, of the operations that are to be conducted by either a specific group of individuals or a designated position. Implementing procedures are also referred to as standard operating guidelines.

Improvement Plan (IP): for each task, lists the corrective actions that will be taken, the responsible party or agency, and the expected completion date. The IP is included at the end of the After-Action Report.

Inadequate: as used in reviews of radiological emergency response plans/ procedures, inadequate means the plan/procedure contents do not meet the intent of a particular Planning Standard and/or associated NUREG-654/ FEMAREP-1 Evaluation Criterion.

Incident: an occurrence, natural or man-made, that requires a response to protect life or property. Incidents can include major disasters, emergencies, terrorist attacks, terrorist threats, civil unrest, wildland and urban fires, floods, hazardous materials spills, nuclear accidents, aircraft accidents,

earthquakes, hurricanes, tornadoes, tropical storms, tsunamis, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response.

Incident Command Post (ICP): the field location where the primary response functions are coordinated. The ICP may be co-located with other incident facilities.

Incident Command System (ICS): a standardized management tool for meeting the demands of small or large emergency or non-emergency situations.

Ingestion Exposure Pathway Emergency Planning Zone (EPZ): a geographic area, approximately 50 miles in radius surrounding a commercial nuclear power plant, in which it has been estimated that the health and safety of the general public could be adversely affected through the ingestion of water or food which has been contaminated through exposure to radiation primarily from the deposition of radioisotopes after a radiological accident. The duration of such exposures could range in length from hours to months.

Ingestion Pathway exercise: an exercise involving ingestion exposure pathway protective action decision making and implementation. A State fully participates in the ingestion pathway portion of exercises at least once every 8 years. In States with more than one site, the State rotates this participation from site to site.

Ingestion phase: see “intermediate phase.”

Initial Planning Meeting (IPM): typically the first step in the planning process and lays the foundation for the exercise. Its purpose is to gather input from the exercise planning team on the scope; design requirements and conditions (such as assumptions and artificialities); objectives; level of participation; and scenario variables (e.g., location, threat/hazard selection), and Master Scenario Events List. During the IPM, the exercise planning team decides on exercise location, schedule, duration, and other details required to develop exercise documentation.

Injects: events, typically planned through entries on the Master Scenario Events List that controllers must simulate, including directives, instructions, and decisions. Exercise controllers provide injects to exercise players to drive exercise play towards the achievement of objectives.

Injects can be written, oral, televised, and/or transmitted via any means (e.g., fax, phone, e-mail, voice, radio, or sign). See also contextual injects and contingency injects.

Institutionalized individuals: individuals who reside in institutions, such as nursing homes or correctional facilities, who may need to depend on others for assistance with protective actions. Institutionalized individuals may or may not have disabilities and access/functional needs.

Integrated Public Alert and Warning System (IPAWS): a comprehensive, coordinated, integrated system that can be used by authorized public officials to deliver effective alert messages to the American public. IPAWS is the nation's next-generation infrastructure of alert and warning networks and ensures the President can alert and warn the public under any condition. IPAWS will provide Federal, State, territorial, tribal, and local warning authorities the capabilities to alert and warn their communities of all hazards impacting public safety and well-being via multiple communication pathways.

Interagency Radiological Assessment Plan (IRAP): former Federal response plan published in 1965, revised in 1975. Superseded by the Federal Radiological Monitoring Assistance Plan, Federal Radiological Emergency Response Plan, and the National Response Framework.

Intermediate phase: the period beginning after the utility has verified that the release has been terminated. Reliable environmental measurements are available for use as a basis for decisions on additional protective actions. It extends until these additional protective actions are terminated. This phase may overlap the late phase and may last from weeks to many months. The intermediate phase encompasses REP post-plume activities associated with both ingestion and relocation.

Internal radiation: the nuclear radiation resulting from radioactive substances in the body. Some examples are iodine-131 found in the thyroid gland, and strontium-90 and plutonium-239 found in bone.

Iodine (I): an element of the periodic table. Only one stable isotope exists, the rest are radioactive and artificially created. The most common, iodine-131 and iodine-125, are used for medical treatment of the thyroid gland and in research.

Ion: an atom or molecule with a negative or positive electrical charge.

Ionization: the process of adding or removing electrons from atoms or molecules, thereby creating ions. High temperatures, electrical discharges or nuclear radiation can cause ionization.

Ionizing radiation: any radiation that displaces electrons from atoms or molecules, thereby producing icons. Alpha, beta and gamma radiation are examples. Ionizing radiation may damage skin and tissue.

Irradiation: exposure to radiation.

Isotope: nuclides having the same number of protons in their nuclei and the same atomic number, but differing in the number of neutrons and atomic mass number. Some isotopes of a particular element may be radioactive while the others are not.

Joint Information Center (JIC): a central point of contact for all news media at the scene of the incident. News media representatives are kept informed of activities and events via public information officials from all participating Federal, State, and local agencies, which, ideally, are collocated at the JIC.

Joint Information System (JIS): a structure that integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, accurate, accessible, timely, and complete information during a crisis or incident operations. The mission of the joint information system is to provide a structure and system for developing and delivering coordinated interagency messages; developing, recommending, and executing public information plans/ procedures and strategies on behalf of the Incident Commander; advising the incident command concerning public affairs issues that could affect a response effort; and controlling rumors and inaccurate information that could undermine public confidence in the emergency response effort.

Just-in-time training: instructions provided to personnel immediately prior to performing the assigned task or function.

Key staff: those emergency personnel, sufficient in numbers and functions, necessary to carry out emergency operations as set forth in the plans/procedures.

KI (potassium iodide): see potassium iodide.

Late phase: the period beginning when recovery action designed to reduce radiation levels in the environment to acceptable levels for unrestricted use are commenced, and ending when all

recovery actions have been completed. This period may extend from months to years. REP postplume activities associated with return and recovery occur during the late phase.

Lead Agency Official (LAO): the designated official on scene from each participating Federal agency authorized to direct that agency's response.

Lesson Learned: knowledge and experience, positive or negative, derived from observations and historical study of operations, training, and exercises.

Letter of Agreement (LOA): a document executed between two or more parties outlining specific agreements relating to the accomplishment of an action. REP letters of agreement may cover personnel, equipment, or other types of emergency support, and may take the form of letters, contracts, purchase orders, or other procurement mechanisms.

Level 1 Finding: An observed or identified inadequacy of organizational performance in an exercise that could cause a determination that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a NPP.

Level 2 Finding: an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact health safety.

Licensed day cares: a specialized program or facility that is licensed to provide care for children from infants through preschool age, usually within a group framework, and dependent children or adults, either as a substitute for or an extension of home care.

Licensed material: source material, special nuclear material, or by-product material received, possessed, used, or transferred under a general or special license issued by the NRC or a State.

Licensee: the utility or organization that has applied for or has received from the Nuclear Regulatory Commission (1) a license to construct or operate a commercial nuclear power plant, (2) a possession-only license for a commercial nuclear power plant, with the exception of licensees

that have received an NRC-approved exemption to 10 CFR § 50.54(q) requirements, (3) an early site permit for a commercial nuclear power plant, (4) a combined construction permit and operating license for a commercial nuclear power plant, or (5) any other NRC license that is now or may become subject to requirements for offsite radiological emergency planning and preparedness activities.

Limited response: response to a request for radiological assistance that involves limited Department of Energy or other agency resources and does not require the formal field management structure.

Local government: the government of a town, city, county, or region at a local level by locally elected politicians.

Logistics Section: as applied to an exercise planning team organized according to ICS principles, the team members providing the supplies, materials, facilities, and services that enable the exercise to function smoothly without outside interference or disruption. This group consists of two subsections: service and support. The service section provides transportation, barricading, signage, food and drinks, real-life medical capability, and exercise-site perimeter security. The support section provides communications, purchasing, general supplies, very important personnel (VIP)/observer processing, and recruitment/management of actors.

Low-level waste: wastes containing types and concentrations of radioactivity that require little or no shielding against personnel exposure.

Master Scenario Events List (MSEL): a chronological timeline of expected actions and scripted events that controllers inject into exercise play to generate or prompt player activity. It ensures necessary events happen so that all objectives are met. Larger, more complex exercises may also employ a Procedural Flow, which differs from the MSEL in that it only contains expected player actions or events. The MSEL links simulation to action, enhances exercise experience for players, and reflects an incident or activity meant to prompt players to action. Each MSEL record contains a designated scenario time; an event synopsis; the name of the controller responsible for delivering the inject; and, if applicable, special delivery instructions, the task and objective to be demonstrated, the expected action, the intended player, and a note-taking section.

Maximally exposed individual: a hypothetical individual who receives the greatest possible projected dose in the area of highest radiation levels over a specified period of time.

May: The term *may* denotes an option, neither requirement nor recommendation. See also *shall* and *should*.

Measuring: refers to counting to detect radiation levels or determining other parameters, such as the energy of radiation or physical characteristics of samples, such as the volume of an air sample.

Media center: a facility staffed by public information officers from multiple emergency response organizations for the purpose of providing a single designated point of contact with the news media and to facilitate exchange and coordination of information among public information officers from different organizations. This type of facility is also referred to as a Public Information Center, a Joint Information Center, a Public Affairs Center, or an Emergency News Center.

Medical Services Hospital: designated hospitals with staff trained and capable of treating members of the general public who may be injured and/or considered to have substantial radiation related injuries, or who may have been exposed to and contaminated by radioactive materials.

Medical Services Drill: a drill in which offsite response organizations demonstrate the ability of the transportation services and medical facilities to handle a contaminated individual without spreading contamination.

Met: the status of a REP exercise Demonstration Criterion indicating that the participating offsite response organization performed all activities for the criterion to the level required in the Extent-of-Play Agreement, with no Level 1 or Level 2 Findings assessed in the current exercise for that criterion and no unresolved prior Level 2 Findings.

Meteorological Unified Dose Assessment Center (MUDAC): an area within or near the facility which houses the personnel responsible for the coordination of radiological monitoring teams, collection of radiological monitoring data, calculation of dose projections and the recommendation of protective actions for the emergency planning zones.

micro: A prefix that divides a basic unit by 1 million. It is represented by the Greek letter “mu” (“μ”). Example: 1 micrometer = 1 μm = 1/1,000,000 meters (1x10-3 m).

microcurie (μCi): a one-millionth part of a curie (see curie).

Midterm Planning Meeting (MPM): an operations based exercise planning meeting used to discuss exercise organization and staffing concepts; scenario and timeline development; and

scheduling, logistics, and administrative requirements. It is also a session to review draft documentation (e.g., scenario, Exercise Plan, Controller/ Evaluator Handbook, Master Scenario Events List).

Milestone: a date at which FEMA recommends that a specified task in the planning, development, conduct, and documentation of exercises be completed. Milestones are measured by the number of calendar days before or after the date of a REP exercise. Some milestones are dictated by regulations.

milli: A prefix that divides a basic unit by one thousand. It is represented by the Greek letter “m.” Example: 1 millimeter = 1 mm = 1/1,000 meters (10-3 m).

millicurie (mCi): a one-thousandth part of a curie (see curie).

millirem (mrem): a one-thousandth part of a rem (see rem).

milliroentgen (mR): a one-thousandth part of a roentgen (see roentgen).

mrem/yr: amount of radiation received in l year (see rem).

Mobility impaired: those without transportation, including those without their own cars, those who are unable to drive and those who need assistance, any of whom will need transportation assistance to evacuate.

Mobilized organization: an organization that has completed the activation process and is able to carry out the essential emergency functions, as required by scenario events and as set forth in emergency response plans/procedures.

Monitoring: the act of detecting the presence of radiation and the measurement of radiation levels, usually with a portable survey instrument.

Monitoring and decontamination facility: a temporary facility established outside the plume emergency planning zone for the purpose of monitoring and decontaminating emergency workers and their vehicles and equipment used in the plume and/or areas contaminated by the plume.

Multi-Year Training and Exercise Plan (TEP): the foundational document guiding a successful exercise program. The multi-year plan provides a mechanism for long-term coordination of training and exercise activities toward an entity's preparedness goals. This plan describes the program's training and exercise priorities and associated capabilities, and aids in employing the building-block approach for training and exercise activities. Within the Multi-Year TEP, the multi-year schedule graphically illustrates training and exercise activities that support the identified priorities. The schedule is color-coded by priority and presents a multi-year outlook for task and priority achievement. As training and exercises are completed, the document can be annually updated, modified, and revised to reflect changes to the priorities and new capabilities that need to be assessed. The Multi-year TEP and schedule are produced through the work completed at the Training and Exercise Planning Workshop (TEPW). The TEPW focuses on discussion of capabilities-based planning, overview of the National Priorities, review of the entity's priorities, and analysis of previous training and exercises. After this information is synthesized, participants develop the plan and schedule for their entity.

nano: a prefix that divides a basic unit by one billion (109). It is represented by the Greek letter "n." Example: 1 nanocurie = 1 nCi = 1/1,000,000,000 Ci (1x10-9 Ci)

nanocurie (nCi): one-billionth part of a curie (see curie).

Narrative: a body of text, prepared by the exercise evaluator, to describe an organization's performance under the Demonstration Criterion and document in narrative form the events that transpired during the exercise. The narrative also identifies and describes pertinent exercise issues (Level 1 Findings, Level 2 Findings, or Plan Issues), and recommends appropriate corrective actions for each issue identified by the evaluator.

National Atmospheric Release Advisory Center (NARAC): a Department of Energy asset capable of providing a computer-generated model of the most probable path of the radioactive contamination released at a radiological accident site.

National Exercise Schedule (NEXS): a compilation of all national-level, Federal, State, and local exercises. The National Exercise Schedule provides basic information on each planned exercise including the exercise name, location, date, major participants, and points of contact. It also serves as a management tool and reference document for exercise planning and enables exercise visibility to planners and leadership.

National Incident Management System (NIMS): a set of principles that provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.

Neutron: an uncharged particle found in the nucleus of every atom heavier than hydrogen. Neutrons sustain the fission chain reaction in a reactor.

Noble gases: the chemically inert radioactive gases that are released during an accident at a nuclear power plant.

Non-participating organizations: offsite response organizations that are not participating in emergency planning and preparedness for incidents at a commercial nuclear power plant.

Not Demonstrated: term applied to the status of a REP exercise Demonstration Criterion indicating that, for a justifiable reason, the jurisdiction or functional entity did not perform activities under the Demonstration Criterion as specified in the Extent-of-Play Agreement or at the frequency required in the FEMA REP Program Manual. In general, an organization may justify not demonstrating a criterion because of (1) the offsite response organization's response to a real-life emergency during the time that the exercise was being conducted or (2) extenuating circumstances, such as a fire, flood, or other emergency, at the facility that was to be demonstrated.

Notification: distributing an instructional message, either through the EAS or some other system.

Notification and mobilization of personnel: the transmission of messages to emergency personnel informing them of an incident and directing them to report for emergency duty at their assigned duty stations.

Notification of Unusual Event (NOUE): licensee emergency classification level indicating that unusual events are in process or have occurred that indicate a potential degradation in the level of plant safety or indicate a security threat to facility protection. No releases of radioactive material requiring offsite response or monitoring are expected, unless further degradation of safety systems occurs.

Notifying the public: distributing an instructional message, either through the Emergency Alert System or some other system.

Nuclear Weapon Accident Response Procedures (NARP) Manual: Department of Defense and Defense Nuclear Agency Manual.

Nuclear radiation: the particulate and electromagnetic radiation emitted from atomic nuclei in various nuclear processes. The important types of nuclear radiation (from the weapons standpoint) are alpha and beta particles, gamma rays and neutrons. All nuclear radiations are ionizing radiations, but the reverse is not true.

Nucleus: the dense, central, positively charged core of an atom. All nuclei contain protons and neutrons except the nucleus of hydrogen, which has a single proton.

Nuclide: a general term referring to all known isotopes, both stable (279) and unstable (about 5,000), of the chemical elements.

NUREG: a Nuclear Regulatory Commission (NRC) nuclear regulatory publication.

Objective: formerly, one of the 33 areas of ORO capability defined in FEMA-REP-14 and FEMA-REP15 that are evaluated during a REP exercise. Objectives have been replaced by the Assessment Areas and associated Sub-elements and Demonstration Criteria.

Observer: observers do not directly participate in the exercise; rather, they observe selected segments of the exercise as it unfolds, while remaining separated from player activities. Observers view the exercise from a designated observation area and are asked to remain within the observation area during the exercise. A dedicated group of exercise controllers should be assigned to manage these groups.

Offsite: beyond the boundaries of the owner-controlled area around a commercial nuclear power plant.

Offsite Response Organization (ORO): any State, local, and Tribal government; supporting private industry and voluntary organizations; and Licensee offsite response organizations (that are formed when State, local, and Tribal governments fail to participate in the REP Program) that are responsible for carrying out emergency functions during a radiological emergency.

On-scene: the area surrounding a site that is, or potentially could be, impacted by an incident. This area includes both onsite and offsite areas.

Onsite: the owner-controlled area of a commercial nuclear power plant.

Onsite personnel: Licensee or contract personnel working at commercial nuclear power plants.

Operational: status of a facility (e.g., emergency operations center, emergency operations facility, media center, assistance center, emergency worker center, laboratory, etc.) when all key decision makers, as identified in plans/procedures, are at their duty stations and capable of performing all emergency functions assigned to that facility.

Operationally mobilized organization: an organization that has completed the activation process required by events and their emergency response plans/procedures. Operational mobilization is achieved when all key personnel are at their duty stations.

Operations Section: as applied to an exercise planning team organized according to ICS principles, the team members providing most of the technical or functional expertise for the participating entities. This group develops scenarios, selects evaluation tools, and has personnel with the expertise necessary to serve as evaluators.

Out of sequence demonstration: demonstration of criteria not conducted in conjunction with the scenario timeline. For the purposes of demonstrating required criteria, activities conducted during the exercise week may be considered in-sequence as negotiated as part of the Extent of-Play Agreement.

Partial Participation Exercise: as set forth in 44 CFR 350.2(k), the engagement of State, local, and Tribal personnel in an exercise sufficient to adequately test direction and control functions for protective action decision-making related to the emergency action levels and communication capabilities among affected offsite response organizations and the licensee.

Participants: players, controllers, evaluators, and staff involved in conducting an exercise.

Particulate radiation: radiation in the form of particles (e.g., neutrons, electrons, alpha and beta particles) as opposed to electromagnetic radiation.

Persons with disabilities and access/functional needs: individual(s) within a community that may have additional needs before, during, and after an incident in one or more of the following functional areas: maintaining independence, communication, transportation, supervision, and medical care. Individual(s) in need of additional response assistance may include those who have disabilities (sensory, motor skills, mental/emotional); who live in institutionalized settings; who are elderly; who are children; who are from diverse cultures; who have limited or no English-speaking proficiency; or who are transportation-disadvantaged.

pico: a prefix that divides a basic unit by one trillion (10-12). It is represented by the letter “p.” For example, 1 picocurie = 1 pCi = 1/1,000,000,000,000 Ci (1x10-12 Ci).

picocurie (pCi): one-trillionth part of a curie (see curie).

Plan Issue: an observed or identified inadequacy in the OROs' emergency plan/implementing procedures, rather than that of the ORO's performance.

Planning Area: a pre-designated geographic subdivision of the plume exposure pathway EPZ. In some plans/procedures, it may be referred to as an Emergency Response Planning Area or an equivalent term.

Planning Meetings: the exercise planning team holds planning meetings as forums to design and develop exercises. The scope, type, and complexity of an exercise determines the number of meetings necessary to successfully conduct an exercise. These milestones of the exercise planning process are typically comprised of the Initial Planning Meeting (IPM), the Midterm Planning Meeting (MPM), and the Final Planning Meeting (FPM).

Planning Section: as applied to an exercise planning team organized according to ICS principles, the team members responsible for compiling and developing all exercise documentation. To accomplish this effectively, the Planning Section also collects and reviews policies, plans, and procedures that will be validated during the exercise. During the exercise, the Planning Section may be responsible for developing simulated actions by agencies not participating in the exercise and setting up a Simulation Cell for exercises that necessitate one (such as Functional Exercises).

Plans/Procedures: an organization's documented concept of operations and implementing procedures for managing its internal response to emergencies and coordinating its external response with other organizations. The term plans/procedures as used in this manual includes radiological emergency preparedness/response plans, associated implementing procedures such as Standard Operating Guides, and other supporting and referenced materials, all of which are subject to review. The generic term plans/procedures is used specifically for flexibility. Procedures

may be either incorporated in the main plans or into separate procedural documents at the discretion of the offsite response organization.

Player: players have an active role in preventing, responding to, or recovering from the risks and hazards presented in the exercise scenario, by either discussing (in a discussion based exercise) or performing (in an operations-based exercise) their regular roles and responsibilities. Players initiate actions that will respond to and/or mitigate the simulated emergency.

Plume: generally a gaseous atmospheric release from a nuclear power plant, in an accident or emergency, which may contain radioactive noble gases and volatile solids. While emergency plans/procedures must recognize the very low probability that particulates could be released in a serious accident, primary emphasis is given to the development of protective actions against the release of noble gases and volatiles such as radioiodines. This cloud is not visible to the eye, but can be measured, or "seen" with radiation measurement equipment.

Plume phase: see "early phase."

Plume dose projections: estimates of dosage to the public from exposure to the plume, over a period of time, in the absence of any protective actions.

Plume Exposure Pathway: (1) For planning purposes, the area within approximately a 10-mile radius of a commercial nuclear power plant site. (2) A term describing the means by which whole body radiation exposures occur as a result of immersion in a plume release. The area in which plume exposures are likely is described in NUREG-0396 as an area extending out approximately 10 miles from the reactor site and forming roughly a "keyhole" shape, with the keyhole oriented downwind. In the plume emergency planning zone, actions may be required to protect the public

from the effects of whole-body external exposure to gamma radiation from the plume and from deposited materials and inhalation exposure from the passing radioactive plume's released materials. The duration of exposure in this mode could range from hours to days in the case of particulate deposition.

Plume Exposure Pathway Emergency Planning Zone: a geographic area approximately 10 miles in radius surrounding a commercial nuclear power plant within which the health and safety of the general public could be adversely affected by direct whole body external exposure to gamma radiation from deposited materials as well as inhalation exposure from the passing radioactive plume during a radiological accident. The duration of such exposures could range in length from hours to days.

Plutonium (Pu): an element of the periodic table that is an artificially-produced fissile material. The Pu-239 isotope is used primarily in nuclear weapons.

Population dose projection: projection made by a Federal agency under the Federal Radiological Monitoring and Assistance Plan pertaining to the levels of radiation to which the population within the emergency planning zone will be exposed.

Portal monitor: a radiation monitor consisting of several radiation detectors arranged in a fixed position within a frame that forms a passageway for individuals being monitored.

Post-emergency phase: the Environmental Protection Agency term for the period beginning after the utility determines that the release has terminated, and the responsible offsite response organization determines that public safety is ensured by appropriate protective actions in accordance with applicable protective action guides and that valuable property has been protected. See also "postplume phase."

Post-plume phase: includes REP activities (ingestion, relocation, reentry, and return) that occur after a release has been terminated. These activities can be demonstrated in an exercise with the plume phase or separately.

Potassium-40 (K-40): a naturally occurring radioactive isotope of potassium, which is an element of the periodic table. It is a beta and gamma emitter and has an exceedingly long half-life. The average person receives about 20 millirems a year from the K-40 in his/her body.

Potassium iodide (KI): a prophylactic compound commonly referred to as a radioprotective drug containing a stable (i.e., non-radioactive) form of iodide that can be used effectively to block the uptake of radioactive iodine by the thyroid gland in a human being.

Potential dose: the radiation dose that could result from a particular set of plant conditions, not based on estimated or measured releases or environmental levels.

Precautionary protective actions: any preventive or emergency protective actions implemented without the verification of radionuclide measurements by field monitoring or laboratory analysis.

Pre-operational exercise: an exercise conducted prior to the issuance of a full-power license of a commercial nuclear power plant by the Nuclear Regulatory Commission.

Presidential Policy Directive-8 (PPD-8): On March 30, 2011, PPD-8 on National Preparedness was signed. This directive replaces Homeland Security Presidential Directive (HSPD)-8 (National Preparedness), issued December 17, 2003, and HSPD-8 Annex I (National Planning), issued

December 4, 2007, which are hereby rescinded, except for paragraph 44 of HSPD-8 Annex I. Individual plans developed under HSPD-8 and Annex I remain in effect until rescinded or otherwise replaced.

Pressure vessel: a strong-walled container housing the core of most types of power reactors.

Pressurized water reactor (PWR): a power reactor in which heat is transferred from the core to the heat exchanger by water kept under high pressure. The primary system is pressurized to allow the water to reach high temperatures without boiling. Steam is generated in a secondary circuit.

Preventive protective actions: protective actions to prevent or reduce contamination of milk, food, and drinking water such as covering water sources and providing dairy cows with stored feed. Preventive protective actions also include washing, brushing, scrubbing, or peeling fruits and vegetables to remove surface contamination.

Primary coolant: water used to cool and carry heat away from the core of a pressurized water reactor. Heat is transferred from the primary coolant to a secondary loop using a heat exchanger, producing steam to drive the turbine.

Principal Federal Official (PFO): pursuant to the Homeland Security Act of 2002 and HSPD-5, the Secretary of Homeland Security is the principal Federal official for all domestic incidents requiring multiagency Federal response. The Secretary may elect to designate a single individual to serve as his or her primary representative to ensure consistency of Federal support as well as the overall effectiveness of the Federal incident management. When appointed, such an individual serves in the field as the Principal Federal Official for the incident.

Projected dose: the estimated or calculated amount of radiation dose to an individual from exposure to the plume and/or deposited materials, over a period of time, in the absence of protective action.

Protective Action Decision (PAD): measures taken in anticipation of, or in response to, a release of radioactive material to the environment. The purpose of PADs is to provide dose savings by avoiding or minimizing the radiation exposure received by individuals, thereby minimizing the health risks resulting from radiation exposure. Sheltering and evacuation are the two PADs relied upon for limiting the direct exposure of the general public within the plume exposure emergency planning zone. Preventive and emergency PADs are two categories of PADs relied upon for limiting exposure from contaminated food and water in the ingestion exposure emergency planning zone.

Protective Action Guide (PAG): projected dose to an individual in the general population that warrants the implementation of protective action. The Food and Drug Administration and Environmental Protection Agency have recommended specific protective action guides in terms of the level of projected dose that warrants the implementation of evacuation and sheltering, relocation, and limiting the use of contaminated food, water, or animal feed.

Protective Action Recommendation (PAR): advice to the State on emergency measures it should consider in determining action for the public to take to avoid or reduce their exposure to radiation.

Protective response: implementation of a protective action, including authority to request Federal assistance and to initiate other protective actions.

Proton: a positively charged atomic particle. Protons, along with neutrons, are the prime components of atomic nuclei. The atomic number of an atom is equal to the number of protons in its nucleus.

Public instruction: instructions (warning messages) that are protective action recommendations for the public. Instructions are given by a public official and delivered directly to the public via the notification system (i.e., Emergency Alert System radio). Message content and timeliness are very important. Messages are repeated by the notification system at least every 15 minutes until updated by public authorities. If applicable, public instructions are coordinated with other authorities.

Public information: information delivered to the media via press conferences, interviews, technical briefings, printed media releases, and telephonic distribution of printed releases. Information needs to be current, accurate, and timely. All printed releases are coordinated with other authorities before distribution to the media. Ideally, information released in news conferences, briefings, and interviews is coordinated before release. If pre-coordination does not occur, then post-notification of other authorities of critical points discussed in interviews, conferences, etc., is necessary. rad: radiation absorbed dose, the basic unit of absorbed dose radiation. One rad represents the absorption of 100 ergs of nuclear (or ionizing) radiation per gram of the absorbing material or tissue (see roentgen).

Radiation Safety Officer: a health physicist or other individual experienced in radiation protection who advises medical facility staff regarding the hazards associated with high levels of radiation. Radiation sickness: the complex of symptoms characterizing the disease known as radiation injury, resulting from excessive exposure of the whole body (or large part) to ionizing radiation.

Radioactivity: the spontaneous decay or disintegration of an unstable atomic nucleus, usually accompanied by the emission of ionizing radiation, generally alpha or beta particles, often accompanied by gamma rays from the nuclei of an unstable isotope.

Radioisotope: an unstable isotope of an element that decays or disintegrates spontaneously, emitting radiation. Approximately 5000 natural and artificial radioisotopes have been identified. Radiological Assistance Program (RAP) team: a team dispatched to the site of a radiological incident by the Department of Energy Regional Office responding to the incident.

Radiological emergency: a type of radiological incident that poses an actual or potential hazard to public health or safety or loss of property.

Radiological emergency area: an area established either on an ad hoc basis or pre-identified in a medical facility for monitoring, decontamination, and treatment of contaminated injured individuals, and for contamination control.

Radiological Emergency Preparedness (REP) Exercise: an event involving organizational responses to a simulated commercial nuclear power plant incident with radiological and other offsite consequences. The purpose of an exercise is to test the integrated capabilities of involved offsite response organizations to implement emergency functions set forth in offsite response organization radiological emergency response plans/procedures.

Radiological Emergency Response Plan (RERP): a detailed plan that describes and coordinates the emergency response organizations, responsibilities, and capabilities of utilities, offsite response organizations, and private organizations to ensure public health and safety during an incident in which there is a potential for radiological release.

Radiological Emergency Preparedness (REP) Program: the FEMA program that administers emergency preparedness for all commercial nuclear sites.

Radiological Emergency Response Team (RERT): a team located near the affected area that coordinates all field teams and sampling activities.

Radiological survey: the directed effort to determine the distribution of radiological material and dose rates in an area.

Radiology: that branch of medicine dealing with the diagnostic and therapeutic applications of radiant energy, including x-rays and radioisotopes.

Radionuclide: a radioactive isotope of a particular element.

Range of Reading Sticker: indicates the acceptable range of readings that the meter indicates when it is response checked using a standard test source. If the response check results in readings that fall outside of the range specified on the sticker, the instrument is removed from service and ot used for recording activity levels.

Rapidly-escalating incident: an incident that develops potential or actual severe core damage within a short time. Such an incident results in an initial declaration of or rapid escalation (within 30 minutes) to a Site Area Emergency or General Emergency.

Reasonable Assurance: a determination that State, local, Tribal, and utility offsite plans and preparedness are adequate to protect public health and safety in the emergency planning areas of commercial nuclear power plants.

Reasonable time: (usage specific to backup alert and notification of the public) the responsible offsite response organization personnel/representatives demonstrate appropriate actions with a recommended goal of 45 minutes, taking into account but not limited to the effects of weather, topography, population density, and existing organization resources.

Reception center (RC): see Reception/relocation center.

Reception/relocation center (RC): a pre-designated facility located outside the plume exposure pathway emergency planning zone (at a minimum 15 miles from the nuclear power plant) at which the evacuated public can register; receive radiation monitoring and decontamination; receive assistance in contacting others; receive directions to congregate care centers; reunite with others; and receive general information. It generally refers to a facility where monitoring, decontamination, and registration of evacuees are conducted. A reception/relocation center is also referred to as a registration center or public registration and decontamination center.

Recommendation(s): as used in the Homeland Security Exercise and Evaluation Program, broad suggestions for the best path for improvement to address additional observations, based on the judgment and experience of the evaluation team. Recommendations should be listed in all After-Action Reports/Improvement Plans.

Recommended: (as used in this document) a Federally approved approach for meeting the intent of regulatory requirements.

Recovery: the process of reducing radiation exposure rates and concentrations of radioactive material in the environment to acceptable levels for return by the general public for unconditional occupancy or use after the emergency phase of a radiological emergency.

Recovery plan: a plan developed by the State to restore the affected area with Federal assistance if needed.

Recovery worker: an individual who is permitted to enter the restricted zone under controlled conditions to perform work or to retrieve valuable property.

Reentry: workers or members of the public going into a restricted zone on a temporary basis under controlled conditions.

Reentry recommendation: advice provided to the State by the Cognizant Federal Agency in conjunction with the Senior Federal Official and appropriate Federal departments and agencies concerning offsite response organization guidance or recommendations that may be issued to the public for returning to an area affected by a radiological emergency.

Regional Office Support Team (ROST): a FEMA Regional team that supports the Emergency Response Team. The Regional Office Support Team facilitates deployment of the Emergency Response Team; interfaces with the Emergency Support Team at FEMA Headquarters, with other regional departments or agencies, and with State, local, or Tribal agencies and organizations during deployment; provides regional support during deployment; and assists with recall of the Emergency Response Team.

Regional Radiological Assistance Committee (RAC): a committee of representatives from a number of Federal agencies which have agreed to assist the FEMA Region in providing technical assistance to offsite response organizations and to evaluate radiological emergency response plans/procedures and exercises on the basis of their special authorities, missions, and expertise.

Regional Response Force (RRF): force identified in the Nuclear Accident Response Capabilities Listing (at the Joint Nuclear Accident Coordinating Center) belonging to Department of Defense or Department of Energy installations, facilities, or activities within the US and its territories. The Regional Response Force may be tasked with taking emergency response actions necessary to maintain command and control onsite pending arrival of the Service or Agency Response Force. Functions with which the Regional Response Force may be tasked, within its capabilities, are: (1) rescue operations; (2) accident site security; (3) firefighting; (4) initial weapon emergency safing; (5) radiation monitoring; (6) establishing command, control and communications; and (7) public affairs activities.

Release: escape of radioactive materials into the environment.

Relocation: the removal or continued exclusion of people (households) from contaminated areas to avoid chronic radiation exposure.

Relocation center (RC): see Reception/relocation center.

rem: The unit of dose of any ionizing radiation that produces the same biological effect as a unit of absorbed dose of ordinary x-rays. A unit of dose for measuring the amount of ionizing radiation energy absorbed in biological tissue.

Remedial exercise: an exercise that tests deficiencies of a previous joint exercise that are considered significant enough to potentially impact the public health and safety. A remedial exercise is conducted within 120 days after the biennial REP exercise for the purpose of demonstrating remedial actions to correct one or more deficiencies.

Remote and low-population areas: The ANS must possess the capability for providing both an alert signal and an information or instructional message to the population on an area wide basis

throughout the 10 mile EPZ within 15 minutes. The initial notification system will assure direct coverage of essentially 100% of the population within 5 miles of the site. ANS designers must consider all areas, including open water, parks, and other remote portions of the 10-mile EPZ. However, in rural, low-population areas in the 10-mile EPZ that are at least five miles from the NPP, FEMA may allow up to 45 minutes for providing an alert signal to the permanent and transient populations. FEMA will review these "exception areas" for approval on a case-by-case basis.

REP Branch Chief: FEMA Headquarters individual responsible for implementation of the national Radiological Emergency Preparedness Program.

Residual contamination: contamination that remains after steps have been taken to remove it. These steps may consist of nothing more than allowing the contamination to decay naturally.

Responsible offsite response organization (responsible ORO): an organization designated in emergency response plans/procedures as that organization responsible for a specific emergency function.

Responsible school official: the school official participating in an exercise or drill, who is responsible for implementing school emergency procedures according to the plan.

Restricted zone: an area of controlled access from which the population has been evacuated, relocated or sheltered-in-place.

Return: reoccupation of areas cleared for unrestricted residence/use by previously evacuated or relocated populations.

roentgen (r): a unit of exposure of gamma (or X-ray) radiation in field dosimetry. One roentgen is essentially equal to one rad (see "rad"). A unit for measuring the amount of radiation energy imparted to a volume of air. The roentgen can be used only to measure X-rays or gamma rays.

roentgen equivalent man/mammal (rem): one rem is the quantity of ionizing radiation of any type which, when absorbed by man or other mammals, produces a physiological effect equivalent to that produced by the absorption of 1 roentgen of X-ray or gamma radiation.

Rumors: information circulated by individuals and organizations during an emergency that may or may not be true. (Usually, rumors originate and are spread on an ad hoc, not official basis.)

Sampling: collecting specimens of materials (e.g., particles or radioiodine in the air, animal feed, vegetation, water, soil, or milk) at field locations.

Scenarios: time-based simulations of emergency incidents postulated to allow the demonstration of response capabilities.

Schools: in the context of the REP Program, the term "schools" refers to public and private schools, and licensed or government supported preschools.

Scram (Safety Control Rod Axe Man): the sudden shutdown of a nuclear reactor, usually by rapid insertion of the control rods. Emergencies or deviations from normal reactor operation cause the reactor to automatically scram.

Senior FEMA Official (SFO): official appointed by the director of FEMA, or his representative, to direct the FEMA response at the scene of a radiological emergency.

Service animal: dogs that are individually trained to do work or perform tasks for people with disabilities. Examples of such work or tasks include guiding people who are blind, alerting people who are deaf, pulling a wheelchair, alerting and protecting a person who is having a seizure, reminding a person with mental illness to take prescribed medications, calming a person with Post Traumatic Stress Disorder (PTSD) during an anxiety attack, or performing other duties. Service animals are working animals, not pets. The work or task a dog has been trained to provide must be directly related to the person's disability. Dogs whose sole function is to provide comfort or emotional support do not qualify as service animals under the ADA. (Department of Justice, Americans with Disabilities Act (ADA), 42 USC 1201 et seq., implementing regulations at 28 CFR § 36.104)

Shall (Must and Require): mandatory items originating in regulatory material.

Shelter-In-Place: a protective action that includes going indoors listening to an Emergency Alert System radio or television station, closing all windows and doors, closing exterior vents, and turning off heating and air conditioning equipment using outside air.

Shield: material used to reduce or stop radiation.

Should (Suggest and Recommend): guidance outlining a Federally-approved means of meeting the intent of the REP regulations. The term may denotes an option, neither requirement nor recommendation.

Single Point of Failure (SPOF): A single point of failure (SPOF) is a potential risk posed by the design, implementation, or configuration of a system in which one fault or malfunction causes the entire system to stop operating. It is "critical" when there are no mitigating factors such as back-up or redundant systems.

Site Area Emergency (SAE): licensee emergency classification level indicating that events are in process or have occurred that involve actual or likely major failures in the plant functions needed

for protecting the public or security events that result in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) prevents effective access to equipment needed for the protection of the public. Releases are not expected to exceed Environmental Protection Agency protective action guide exposure levels beyond the site boundary.

Special facility: includes schools, licensed day cares, hospitals, nursing homes, certain types of industrial plants that may require a lengthy shutdown period, etc., within the plume emergency planning zone that need to be considered separately from the general population when planning for an incident or accident at a nuclear power plant.

Special nuclear material: by law, includes plutonium, uranium-233, and uranium containing more than the natural concentration of uranium-235.

Spent fuel: nuclear reactor fuel that has been irradiated to the extent that it can no longer effectively sustain a chain reaction.

Standard Operating Guideline (SOG): see implementing procedures

State Coordinating Officer (SCO): an official designated by the governor of an affected State to work with the Cognizant Federal Agency Official and Senior FEMA Official in coordinating the response efforts of Federal, State, local, Tribal, volunteer, and private agencies.

Strontium: a high-energy beta source that can be used as an energy source for satellites, remote weather stations and navigation buoys. Four naturally stable and 12 unstable isotopes of strontium exist. The most common unstable isotope is strontium-90, a product of nuclear fallout that has a half-life of 28 years.

Substantial change: a change in plans/procedures, equipment, or facilities that has a direct effect or impact on emergency response operations. Examples of substantial changes include: changing emergency planning areas, modifying the size or configuration of an emergency operations center, adding more function to a center, or changing the equipment available for use in a center.

Support jurisdiction: see host/support jurisdiction.

Survey meter: a portable instrument used in radiological monitoring to detect and measure ionizing radiation.

Tabletop Exercise: a discussion-based exercise that may test single or multiple scenarios and outcomes. OROs may use tabletop exercises to assess key elements in decision-making and implementation.

Thermoluminescent dosimeter (TLD): a type of dosimetry badge used to measure an individual's level of exposure to ionizing radiation. It is characteristic of thermoluminescent material that radiation produces internal changes that cause the material, when subsequently heated, to give off a measurable amount of light directly proportional to the radiation dose. This type of dosimeter cannot be read directly by the wearer; it must be read by a laboratory.

Thyroid exposure: exposure of the thyroid gland to radiation from radioactive isotopes of iodine that have been either inhaled or ingested.

Timeline: the tabular illustration, in an After-Action Report, of the time at which significant events occurred at all participating offsite response organizations in a biennial REP exercise.

Timely (timely manner): the responsible offsite response organization personnel/representatives demonstrate appropriate actions with a sense of urgency and without undue delay.

Total effective dose equivalent (TEDE): the sum of the deep dose equivalent (for external exposures) and for committed effective dose equivalent (for internal exposures).

Traffic control: all activities accomplished for the purpose of facilitating the evacuation of the general public in vehicles along specific routes.

Training and Exercise Plan (TEP): is the foundation document guiding a successful exercise program. The TEP articulates overall exercise program priorities and outlines a schedule of training and exercise activities designed to meet those priorities. The TEP is the result of a Training and Exercise Planning Workshop (TEPW).

Training and Exercise Planning Workshop (TEPW): usually conducted in order to create a Multi-Year Training and Exercise Plan (TEP). During the workshop, participants review priority preparedness capabilities and coordinate exercise and training activities that can improve those capabilities. As a result of the workshop, the Multi-Year TEP outlines multi-year timelines and milestones for execution of specific training and exercise activities.

Transient persons: non-residents. Persons who do not permanently reside in the plume exposure pathway emergency planning zone, but may be present during an emergency.

Transuranic elements: all elements above uranium on the periodic table — those with an atomic number greater than 92. All transuranics are produced artificially and are radioactive.

Trigger/Action levels: is a designated value whereby an individual is directed to perform a specific action. Also, the threshold for contamination levels that trigger the need for decontamination established in the plans/procedures.

Tritium: the one radioactive isotope of hydrogen. A small percentage of natural hydrogen is tritium, but the primary source of tritium is nuclear reactors. It has a half-life of 12 years, but will remain in the body only a few days if taken internally. It is not considered a major health hazard since it is a very weak beta emitter and not harmful unless consumed in very large quantities.

Trusted agent/confidential representative: individuals on the exercise planning team who are trusted to not reveal scenario details to players prior to exercise conduct.

Uranium: an element of the periodic table. There are two primary isotopes: uranium-238, which accounts for 99 percent of all uranium; and uranium-35, the fissionable isotope that sustains the fission reaction in a nuclear reactor.

Vapor: the gaseous form of substances that are normally in liquid or solid form.

Whole-body exposure: an exposure of the body to radiation, in which the entire body rather than an isolated part is irradiated. Where a radioisotope is uniformly distributed throughout the body tissues, rather than being concentrated in certain parts, the irradiation can be considered as a whole-body exposure.

X-ray: a penetrating form of electromagnetic radiation that is used in medical and industrial applications.

Pierce County

Emergency Response Plan, Radiological Annex
Hostile Action Based Events

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I. Pierce County Hostile Action Based Planning

A Hostile action (as defined in NRC Bulletin 2005-02, Emergency Preparedness and Response Actions for Security-Based Events) is an act toward a nuclear power plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force.

This attachment is intended for Pierce County and emergency responders working with nuclear generating plant preparedness in Wisconsin. This document defines the roles, responsibilities, and actions needed for Hostile Action Based (HAB) incident response in Pierce County that are in addition to the normal activities described in the Pierce County Emergency Operations Plan. The basis for this plan supplement is the FEMA Radiological Emergency Preparedness Program Manual dated June 2013.

The hostile action response planning needs to accommodate three major events happening simultaneously:

- A HAB event occurring at a nuclear generating plant.
- A radiological emergency situation at the nuclear generating plant.
- Increased state and national threat level and the precautionary measures (heightened security) that should be implemented at other locations.

This response document addresses various types of Hostile Action Based incidents that could occur at a nuclear generating plant including:

- Land-based attack on the plant.
- Water-based attack on the plant.
- Aircraft-based attack on the plant.

- Insider-based attack.
- Combination of insider and external attack on the plant.

II. Planning Overview & Assumptions

Some of the activities listed below deviate from the practiced procedures for a mechanical accident at one of the nuclear plants.

- The basis for Wisconsin's Hostile Action planning for an event at Prairie Island Nuclear Generating Plant is for events that exceed the plant security design basis threat. Planning assumes that adversaries will penetrate the plant boundaries and cause damage to the infrastructure with at least a partial loss of control for critical plant systems.

- The initial response to the plant by law enforcement is to a hostile action, not a radiological emergency. Response objective is to maintain vital plant systems, neutralize the adversaries and prevent a radiological emergency.

- The initial response could be based on a 911 call. The 911 call will not automatically initiate a full REP response. A full REP response will not be initiated until an Emergency Classification notification is made and validated.

- A HAB incident could rapidly escalate through the Emergency Classification Levels (ECL) or begin at a higher classification level. By the time the initial notification is made, the site may be at a higher classification level.

- The tactical response will be managed by an Incident Commander, rather than by the State and County EOCs. Previously, the State Radiological Coordinator made all Protective Action Recommendations based on analysis of radiological data collected in the field and projection models. For tactical response, the Incident Commander will make the decision, based on the status of the event. He or she may seek input from radiological experts, but will ultimately make the decision when no radiological emergency exists.

- For a radiological emergency involving hostile action-based events the MN SEOC will solicit information from the Incident Commander and in coordination with the WI SEOC will make the recommendation to the counties following normal procedures.

- An initial predetermined Protective Action Decision (PAD) for a hostile action based radiological emergency has been agreed upon to "shelter in place" the 2-mile area surrounding the plant and evacuate the 5-mile downwind sub-areas. Prior to starting evacuation, siren sounding times, EAS messages and media notifications should be coordinated by all off-site response organizations (OROs) in accordance with normal procedures. When the Incident Commander determines that the situation has stabilized and gives an "all-clear" message, the 2-mile sub-area may also be evacuated.

- All normal REP activities for each Emergency Classification Level (ECL) should continue to be implemented in accordance with Pierce County's approved plans and procedures to the extent possible dependent on the incident.

- Any attack on a nuclear plant will become a federal crime scene. The Federal Bureau of Investigation (FBI) will be the lead response agency for the federal government. Crime scene preservation measures should be taken. Information being disseminated to the public will be reviewed by the FBI and/or law enforcement before release.

- Threat information is disseminated differently than the required notification from a nuclear plant. Information about suspicious activities or threats should be shared between the utility, local law enforcement, state fusion centers, local government, county, state and federal agencies.

- For incidents at Prairie Island Nuclear Generating Plant, Pierce County will not have representation at the Incident Command Post (unless requested to provide assets or expertise). Communication will be accomplished through the ICP to Goodhue County EOC and then to

Pierce County EOC. Pierce County will provide a representative to the tactical command post for coordination of tactical efforts if requested.

- The Incident Command Post should be responsible for tracking resources and personnel on or near the site; however, the county EOC should track county assets that are deployed for off-site activities.

- Just-in-time training and dosimeter briefings will be provided to all responders at the staging area(s).

- Plant security forces are there to protect the vital areas of the plant and maintain defensive positions in the protected area. Generally, plant security will not actively pursue adversaries outside the protected area.

- All initial public information should be coordinated through the Joint Information Center (JIC) at the Minnesota State Emergency Operations Center. Since Pierce County PIO's will not be able to arrive immediately at the JIC, virtual coordination will be necessary.

- Utilities and OROs should implement "heightened security" procedures at each plant if there is a credible threat or reported attack at another nuclear plant.

- To maintain continuous plant operations, tactical responders will need to coordinate with plant security to move critical workers on-site. All incoming and outgoing plant employees will be identified and interviewed by law enforcement in the post-attack environment.

III. Management of Threat Information

The utilities will only notify agencies outside of local law enforcement when it is determined that a threat is credible. All credible threat information should be shared between Local Units of Government, States of Minnesota and Wisconsin, utilities and Federal agencies, such as Department of Homeland Security (DHS), Nuclear Regulatory Commission (NRC) and the FBI. Credible threat information may result in an Emergency Classification Level Notification by the plant.

General threat information that does not meet the criteria for Emergency Classification by the utility should still be shared as listed below. General

threat information may include a nationwide threat to nuclear plants, or other information that indicates a potential escalation to a heightened security status.

Threat communication pathways for disseminating information:

Info received by:	**Info should *initially* be shared with:**
WI Duty Officer	WEM Sr. Duty Officer, Pierce County LE & EM, WSIC, Plant Security, MN Duty Officer, FBI
Pierce County LE Plant Security	WI Duty Officer, MN Duty Officer, Goodhue County,
Utility	WI Duty Officer, MN Duty Officer, NRC (as per normal procedures)

Notes:

- The receiving organizations listed above will initially contact the organizations listed in the second column. In most cases, additional contacts will be made by these organizations.
- The organization initially receiving the information should *ensure* that the organizations listed in the second column receive the information, but are not required to make direct contact. For example, if the WI DO receives threat information, they should contact the WSIC and ask that the WSIC contact the FBI.
- Threat information that is distributed should contain the name and phone number of the person to contact directly for follow-up as needed.
- If the NRC receives credible site-specific threat information, that information would be passed from the NRC to the licensee control room, most likely using the NRC authentication codes. The NRC does not notify state or local units of government. These notifications would be done by either DHS or the FBI and made to State Fusion Centers or the Homeland Security Advisor.

IV. Management of Heightened Security level

- Actions may be required by Pierce County for heightened security in the event that a different nuclear power plant is attacked within or outside of the state. The plant security status would be elevated to a “heightened” level. The plant is notified of heightened status by Federal sources; primarily the Nuclear Regulatory Commission, and will implement increased on-site security measures. Note: There may be other national

- level events that may require a heightened security as well - events like 9-11 for example.
- The State of Wisconsin through WEM Emergency Police Services will assist Pierce County if Mutual Aid is requested. Wisconsin State Patrol and DNR may also be requested for assistance. Long-term security may require additional assistance from National Guard through the required approval process. Examples of assistance might be visible water patrols on the Mississippi River, manning traffic control points and/or traffic and access control points, or providing mutual aid to Goodhue County.

Hostile Action Based (HAB) Emergency Classification Levels

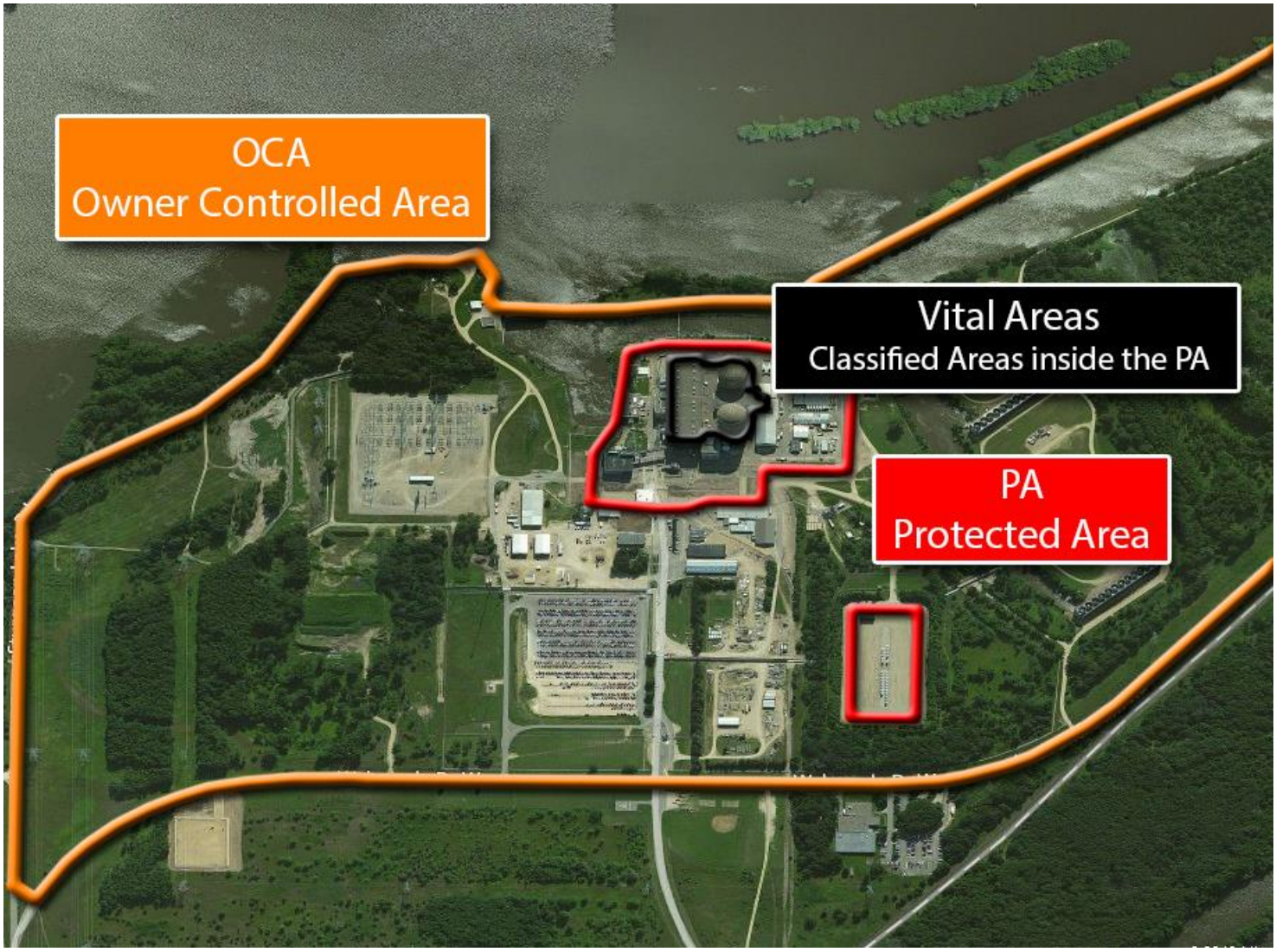
For Hostile Action Based events, the Emergency Classification Levels (ECLs) are based on the area of the plant property impacted by adversaries. Emergency response actions are based on the ECL determined for the hostile action incident.

- **Security Condition NUE** = activity outside of Owner Controlled Area (OCA)
  (NOTE: not a HAB event.) A low level event which poses no threat to public safety but which warrants an increased awareness on the part of plant security and off-site personnel.

- **Alert =** events/ adversaries inside the Owner Controlled Area. Also a low level condition which poses no threat to public safety, but precautionary mobilization of certain response functions is appropriate in case conditions degrade.

- **Site Area Emergency (SAE)** = events/adversaries inside the Protected Area. At this level, conditions have degraded to a point warranting the full activation of response functions. Precautionary protective actions for high risk portions of the general public might be recommended.

- **General Emergency (GE)** = events/adversaries inside the Vital Areas. Conditions have degraded to a point threatening public safety and some form of protective actions should be initiated.



❖ Notification of Unusual Event

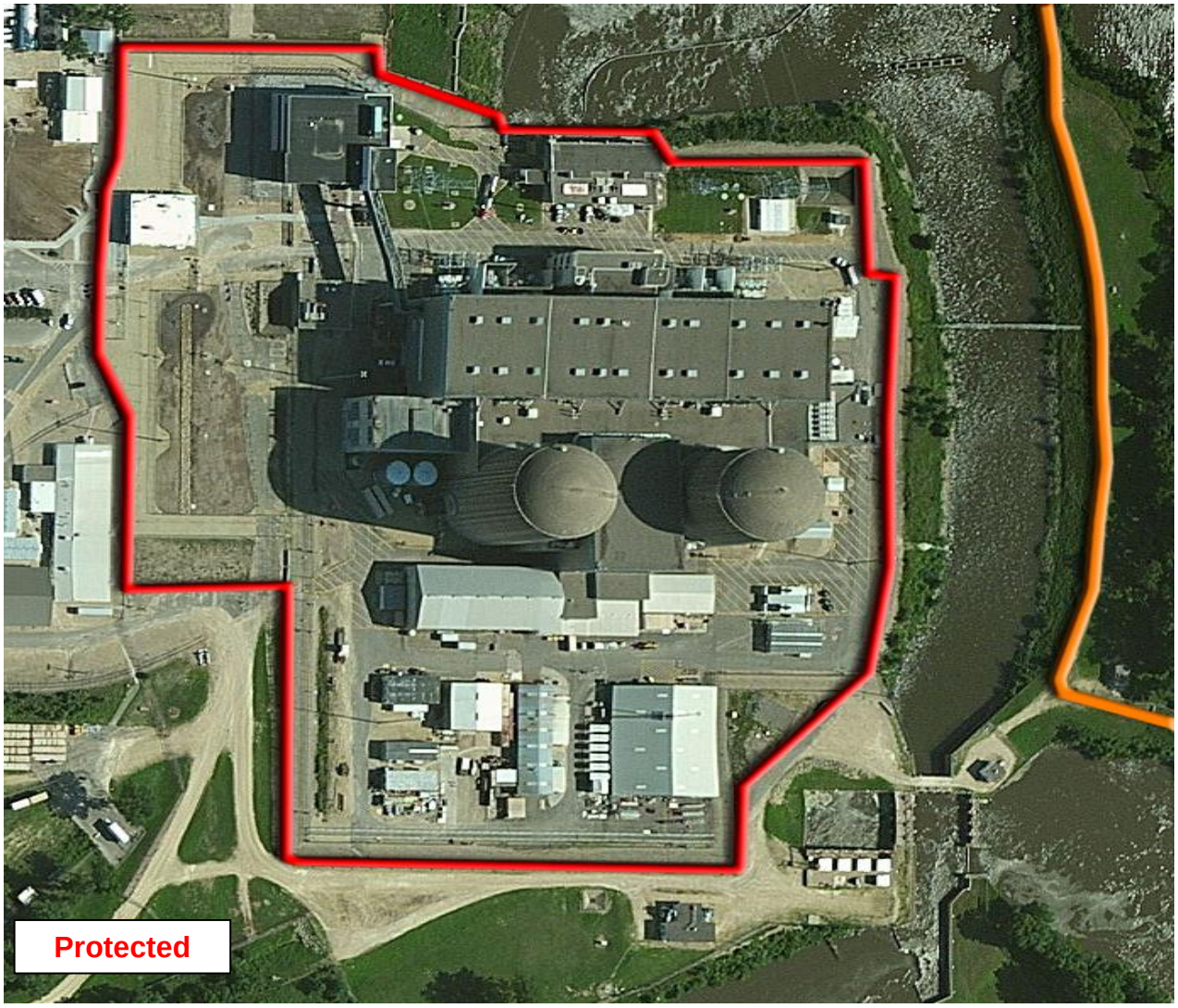
Response Actions at a Security Condition NUE Classification *Level (A Security Condition- any security event that constitutes a threat/compromise to site security, threat/risk to site personnel, or a potential degradation to the level of safety of the plant. A security condition does not involve an occurring hostile action.)*

A. Pierce County should take the following actions

1. Receive notification of NUE from the utility
2. Notify the appropriate staff according to procedures

❖ Alert, Emergency Classification Level

Response Actions at an Alert Emergency Classification level *(a hostile action is occurring or has occurred within the Owner Controlled Area or, a validated notification from NRC of an airliner attack threat within 30 minutes of the site).* All REP Alert functions should be performed in accordance with the plan.



A. Pierce County should take the following actions

1. Receive Alert status update from utility
2. Activate the Pierce County EOC per protocol

3. Dispatch Pierce County ERU team representative as requested

4. Ensure the first notice to the public has been issued

❖ Site Area Emergency, Emergency Classification Level

Response Actions at a HAB Site Area Emergency Classification Level (a hostile action is occurring or has occurred within the protected area). All REP Site Area Emergency functions should be performed in accordance with the plan as appropriate dependent on the incident.

A. Pierce County should take the following actions

1. Pierce County personnel will ensure all activities have been implemented for a Hostile Action Based Alert Emergency Classification level, to the extent possible.
2. Establish 2-mile traffic control points to restrict traffic entering the area on all roads as identified in the REP Plan. TACP personnel should allow plant employees with proper identification to pass the TACPs to support on-site response activities.
3. Activate the EOC if not previously activated
4. Evacuation of schools in the 10-mile EPZ is initiated once approved in the Pierce County EOC
5. Coordinate the State RAD Field Monitoring Teams with Pierce County Law Enforcement into and around the 2-mile area when tactically safe to do so.

❖ General Emergency, Emergency Classification Level

Response Actions at a HAB General Emergency classification level (a hostile action has occurred such that plant personnel are unable to operate equipment required to maintain safety functions, or a hostile action has caused failure of spent fuel cooling systems and imminent fuel damage is likely for a freshly off-loaded reactor core pool). All REP Site Area Emergency functions should be performed in accordance with the plan as appropriate due to the incident.

A. Pierce County should take the following actions

1. Ensure that all activities have been implemented for HAB Alert and Site Area Emergency ECLs to the extent possible.
2. Exposure control should be implemented at the General Emergency. Pierce County ROs should coordinate with the SRC for approval to exceed state exposure levels up to EPA levels for life saving operations near the plant.
3. Implement the default PAD to shelter the 2-mile Sub Area and evacuate the 5-mile Sub Area downwind, as determined for the HAB General Emergency ECL.
4. Distribute dosimetry and KI to all staff working in impacted sub area(s).

Definitions (Utility Terms)

Duck and cover - The term used for plant employees to follow lock down procedures which could be for an extended period of time.
Attack Phase- Hostile Action within the Owner Controlled/Protected Area. On-site protective measures in effect (e.g. sheltering in-place, take cover, hide, etc.) The Attack Phase ends when all known adversaries are neutralized and/or accounted for. Offsite responders (fire-fighting, medical, etc.) begin staging at pre-determined Incident Staging Area.
Initial Sweep Phase: Known adversaries are neutralized or accounted for. The site is secure enough to allow prioritized, limited movement of Control Room personnel with armed escorts. On-site protective measures remain in effect (e.g. sheltering in-place, take cover, hide, etc.) Offsite responders (fire-fighting, medical, etc.) continue staging.
Post-Airborne Impact Environment: Determination of safe access phase, Emergency Response Organization mobilization phase, and event mitigation phase.
Emergency Response Organization Mobilization Phase: Local Law Enforcement has completed initial sweep of Protected Area and/or Owner-Controlled Area and establishes safe movement areas/corridors. Personnel released from on-site protective measures are accounted for. Crime scene preservation actions are in effect. Operations and Emergency Response Organization personnel may move in accordance with directions from Incident Command post and Security. Licensee liaison personnel report to Incident Command Post. Offsite first-responders enter the Protected Area and commence operations (e.g., firefighting and medical response).
Event Mitigation Phase: Emergency Response Facilities (normal or alternate) are activated. Repair Response Teams dispatched to perform event mitigation actions. Safe movement areas/corridors remain in effect. Crime scene preservation actions remain in effect.
All-Clear: Special consideration should be noted with this term. While to Utility personnel this may mean the entire site is secure and normal operations may

resume the Law Enforcement definition may mean just one room or small defined area is clear but there may be adversaries in other nearby areas which are NOT clear. Personnel should be knowledgeable of both definitions.

ANNEX I (Radiological Incidents)
Attachment 19 (SIGNATURE PAGE)

The undersigned have hereby reviewed and approved Annex I of the County Emergency Operating Plan.

_____	_____
County Board Chairperson	**Date**
_____	_____
Emergency Management Director	**Date**
_____	_____
Pierce County Sheriff	**Date**