

**INCIDENT-SPECIFIC ANNEX 5—NUCLEAR/RADIOLOGICAL INCIDENT**

**LEAD AGENCIES**

Washington State Department of Health-Office of Radiation Protection (DOH-ORP)  
Tacoma-Pierce County Health Department

**SUPPORT AGENCIES**

Washington State Department of Ecology  
U.S. Department of Energy (DOE)  
U.S. Environmental Protection Agency (EPA)  
Pierce County Department of Emergency Management (DEM)  
Pierce County Fire Services  
City and County Law Enforcement Agencies

**I. INTRODUCTION**

A. Radiation

The many types of radiation can be divided into two separate groups: ionizing and non-ionizing radiation. Ionizing radiation by definition is radiation of sufficient energy to ionize atoms. This annex is for response to incidents involving ionizing radiation. The five types of ionizing radiation that responders may come in contact with are Alpha, Beta, Gamma, X-Ray, and High Energy Neutrons. Materials that emit any one of these types of radiation are considered radioactive and may, in sufficient quantities, be hazardous to humans.

**II. POLICIES**

- A. The Washington Department of Health-Office of Radiation Protection (DOH-ORP) is the radiation control agency for the state. ORP must be contacted in a radiological emergency by telephone at 206-682-5327. ORP can also be reached through the Washington Military Department-Emergency Management Division (WMD-EMD) Duty Officer.
- B. Life safety of both accident victims and first responders is paramount in radioactive containment and rescue situations. In Pierce County very few accidents should release radioactive material that would expose accident victims or rescuers to high levels of radiation that would create acute radiation sickness. Excluding victim or citizen life safety issues, untrained, unprotected public safety personnel will not be expected to expose themselves in situations where radioactive material is suspected or confirmed.

**III. SITUATION**

A. Emergency/Hazardous Conditions and Hazards

1. Radioactive materials are transported through Pierce County. The frequency of such transport is unknown. In some instances, such as when there are major commercial or U.S. Navy shipments of radioactive material through the Port of Tacoma, the WMD-EMD Duty Officer makes notification to the Pierce County Department of Emergency Management Duty Officer. Most shipments of

radioactive material through Pierce County occur with no notification made to county or municipal government entities.

2. There is an unquantifiable risk of radiation exposure from a terrorist “dirty bomb” or nuclear device. Response to terrorist incidents is addressed in the Terrorism Incident Annex of this Comprehensive Emergency Management Plan.
3. Radiation exposure can result in radiation poisoning or radiation sickness consisting initially of nausea and vomiting with other symptoms such as weakness, loss of appetite, and diarrhea showing up later. In severe cases death may follow. Exposure insufficient to produce radiation poisoning may eventually lead to other chronic illnesses such as cancer.

B. Planning Assumptions

1. Radiation exposure can be accidental or intentional, and depending on the quantity of exposure may result in health consequences ranging from very limited harm to death.
2. Transportation containers (truck, rail, etc.) will have clearly visible placards warning of radiation hazards unless the cargo involves classified military shipments. Small quantities, as may be used in some industrial or medical instruments will not have placards on the transport vehicles exterior, only on the package labels stating that it contains radioactive material.
3. There are no fixed nuclear facilities within the boundaries of Pierce County; therefore, the risk of exposure from such a source is remote. The closest facility is the Hanford Nuclear Reservation in Benton County, Washington. There is a small research reactor at the University of Washington in Seattle that works with small quantities of material. It is believed there are large concentrations of nuclear weapons associated with the Bangor submarine base in Kitsap County. The Bremerton Naval Shipyard also overhauls and refuels nuclear reactors on ships and dismantles decommissioned nuclear reactors.

C. Limitations

For a radiological incident involving an act of war or terrorism, see the Terrorism Incident Annex.

**IV. CONCEPT OF OPERATIONS**

- A. Public safety responders must have a heightened level of caution when responding to incidents that have the potential of radiation exposure. A careful evaluation of the surroundings is critical.
- B. The Office of Radiation Protection will be called by the first responding public safety agency immediately after there is recognition of the potential for radiation exposure. Its emergency number is 206-682-5327 or 206-NUCLEAR.

**V. RESPONSIBILITIES**

A. Lead Agencies

1. Washington State Department of Health-Office of Radiation Protection
  - a. Maintain “The Emergency Response Plan” that sets forth the policies and procedures that the State of Washington will follow in the event of a radiological emergency. The plan delineates the roles and responsibilities of the state and the involved counties and facilities in various accident scenarios.
  - b. Maintain a 24-hour notification line (206-682-5327 or 206-NUCLEAR) for the sole purpose of reporting any radiation emergency.
  - c. Emergency response will:
    - Staff emergency response centers with appropriately trained staff.
    - Allocate state resources.
    - Provide information and education to the public.
    - Perform radiological assessments including public dose assessments and environmental assessments.
    - Make protective action recommendations.
    - May accept the leadership of response activities in certain situations.
    - Maintain contact with federal agencies and requesting federal resources.
  - d. Routine operations:
    - Organize and conduct training.
    - Participate in and coordinate emergency drills and exercises.
    - Provide and maintain instrumentation and equipment.
    - Conduct or participate in audits, both internal and external.
2. Tacoma Pierce County Health Department
  - a. Lead responsibilities for making protective action decisions.
  - b. If the incident involves mass casualties, the Tacoma Pierce County Health Department coordinates Pierce County public health, medical and mental health response, and recovery efforts. In a radiological incident involving mass casualties, ESF #8 of this Comprehensive Emergency Management Plan will be activated and invoked.
  - c. Determines when an impacted area can be safely reoccupied.

B. Support Agencies

1. Washington State Department of Ecology
  - a. Support the first responders and DOH operations.
  - b. Assist unified command in making decisions regarding appropriate emergency actions.
2. U.S. Environmental Protection Agency
  - a. Support local and state response and recovery efforts.

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3. Pierce County Department of Emergency Management
  - a. Pierce County Joint Information Center
    - Lead responsibility for the dissemination of warning and emergency information to the Pierce County public.
    - See ESF #15—External Affairs.
  - b. On direction and advice from DOH, TPCHD, and other governmental agencies, support the need for sheltering and/or evacuation of first responders and the public.
  - c. Coordinate sheltering and evacuation operations with appropriate first responder agencies.
  - d. Disseminate sheltering and/or evacuation orders via the JIC.
  - e. In support of TPCHD, assist in the establishment of decontamination reception centers.
  - e. Confirm occurrence of radiological incident.
  - f. Notify surrounding jurisdictions of radiological incident.
  - g. Seek and be prepared to act upon a Protective Action Decision from TPCHD or DOH, or other agents with radiological subject matter expertise.
  - h. Notify hospitals through the Disaster Medical Control Center (DMCC).
  - i. Coordinate with first responders the establishment of traffic control and access control points.
4. U.S. Department of Energy
  - a. Support local and state response and recovery efforts.
  - b. Assist unified command in making decisions regarding appropriate emergency actions.
5. Pierce County First Responders (fire services, municipal and county law enforcement agencies, etc.)
  - a. Take appropriate personal life safety actions.
  - b. Protect the public while preserving personal safety.
  - c. Fire service hazmat teams conduct on scene decontamination activities.

**VI. AUTHORITIES AND REFERENCES**

- (None)

**VII. TERMS AND DEFINITIONS**

- (See Appendices I and II)
- CST ..... Civil Support Team

**VIII. ATTACHMENTS**

- (None)