X. EVALUATION PROCESS FOR NO/MINIMAL RELEASE SCENARIOS IN BIENNIAL EXERCISES

OROs can utilize these defined methods to address all applicable exercise demonstration criteria in a No/Minimal Release Scenario (without a general emergency declaration) during a biennial exercise without the need to extend the exercise, or conduct additional Out-of-Sequence exercises.

A No/Minimal Release Scenario is required once every eight years for licensees and is an option for OROs once every eight years. If OROs decide not to participate in such an exercise, they must participate in a "traditional" scenario response, involving a General Emergency declaration and a resulting PAR/PAD process. There are currently **32** Demonstration Criteria, of the **32** criteria, **7** apply *only* to an Ingestion/Post Plume scenario and **1** applies *only* to a MS-1 Exercise. That leaves 24 criteria which focus on a radiological release scenario.

REP DEMONSTRATION CRITERIA – RADIOLOGICAL RELEASE EXERCISES

Of the **24** plume criteria, **17** are required to be demonstrated biennially at *each* appropriate location. The **7** *not* requiring biennial demonstration at each appropriate location (no less than once every eight years) include:

- Facilities (1.b.1)
- Implementation of Protective Actions for persons with disabilities and access/functional needs (3.c.1 and 3.c.2)
- Activation of the Prompt Alert and Notification System (5.a.3)
- Monitoring, Decontamination, and Registration of Evacuees (6.a.1)
- Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles (6.b.1)
- Temporary Care of Evacuees (6.c.1)

Of the **17** biennial criteria, **7** criteria *are not* impacted by a no/minimal release scenario

- Mobilization (1.a.1)
- Direction and Control (1.c.1)
- Communications Equipment (1.d.1)
- Equipment and Supplies to Support Operations (1.e.1)
- Activation of the Prompt Alert and Notification Systems (5.a.1 and 5.a.4)
- Emergency Information and Instructions for the Public and the Media (5.b.1)

The following **10** criteria *are* impacted by a no/minimal release scenario:

- Emergency Worker Exposure Control (2.a.1)
- Dose Assessment & PARS & PADs for the Emergency Event (2.b.1 and 2.b.2)
- PADs for the Protection of persons with disabilities and those with access/functional needs (2.c.1)
- Implementation of Emergency Worker Exposure Control (3.a.1)
- Implementation of KI Decision for Institutionalized Individuals and the Public (3.b.1)
- Implementation of Traffic and Access Control (3.d.1 and 3.d.2)
- Plume Phase Field Measurement and Analyses (4.a.2 and 4.a.3)

The following matrix shows how these remaining 10 criteria can be demonstrated.

Exhibit IV-XX: Means for Demonstrating the 10 Criteria Impacted by a No/Minimal Release Scenario

ASSESSMENT AREA 2. PROTECTIVE ACTION DECISION-MAKING	
Emergency Worker Exposure Control (2.a.1)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**
OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. As appropriate, OROs must demonstrate the capability to make decisions on the distribution and administration of KI as a protective measure for emergency workers, based on their plans/procedures or projected thyroid dose compared with the established PAGs for KI administration.	OROs would be expected to make a decision on the need for KI, based on relevant factors and appropriate coordination.
	Participating OROs must also demonstrate the capability to make decisions concerning authorization of exposure levels in excess of pre-authorized levels and the number of emergency workers receiving radiation doses above pre-authorized levels.
	The decision on the distribution and administration of KI as a protective measure for emergency workers and the authorization process for emergency workers to exceed pre-authorized levels can be addressed through an interview.
Dose Assessment & PARS & PADs for the Emergency Event (2.b.1)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**
Appropriate protective action recommendations (PARs) are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. The ORO must demonstrate the capability to use appropriate means, described in the plans/procedures, to develop PARs for decision-makers based on available information and recommendations provided by the licensee as well as field monitoring data, if available. The ORO must also consider any release and meteorological data provided by the licensee.	OROs would be expected to make a decision on the need for a PAR (evacuation and/or sheltering), based on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions, including release and meteorological data provided by the licensee.
	The ORO must demonstrate a reliable capability to independently validate dose projections. In all cases, calculation of projected dose must be demonstrated. When the licensee and ORO projected doses differ by more than a factor of 10, the ORO and licensee must determine the source of the difference by discussing input data and assumptions, using different models, or exploring possible reasons. Actual data and/or "what if" calculations will be made to determine the scope of the release (including confirming if no release has occurred).

	The decision-making process used to make protective action recommendations can be addressed through an interview.
Dose Assessment & PARS & PADs for the Emergency Event (2.b.2)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**
A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). OROs must have the capability to make both initial and subsequent PADs. OROs must demonstrate the capability to make initial PADs in a timely manner appropriate to the incident, based on information from the licensee, assessment of plant status and potential or actual releases, other available information related to the incident, input from appropriate ORO authorities (e.g., incident command), and PARs from the utility and ORO staff. In addition, a subsequent or alternate PAD may be appropriate if various conditions (e.g., an HAB incident, weather, release timing and magnitude) pose undue risk to an evacuation, or if evacuation may disrupt the efforts to respond to a hostile action.	OROs would be expected to make a decision on the need for a PAD (evacuation and/or sheltering), considering appropriate factors and necessary coordination.
	The decision-making process used to make protective action decisions can be addressed through an interview.
	Precautionary actions/measures can be, and are, made by OROs at a Site Area Emergency (SAE), to include: placing animals on stored feed and water, transfer of school children, and establishing air and waterway restrictions, etc.
PADs for the Protection of persons with disabilities and access/functional needs (2.c.1)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**
PADs are made, as appropriate, for groups of people with disabilities and those with access/ functional needs. Factors that must be considered include weather conditions, shelter availability, availability of transportation assets, risk of evacuation versus risk from the avoided dose, and precautionary school evacuations. In addition, decisions must be coordinated/ communicated with the incident command. In situations where an institutionalized population cannot be evacuated, the ORO must consider use of KI.	OROs would be expected to make a *decision* on the need for a PAD (evacuation and/or sheltering), considering appropriate factors and necessary coordination.

	Applicable OROs must demonstrate the capability to alert and notify all public school systems/districts of emergency conditions that are expected to or may necessitate protective actions for students. Demonstration requires that the OROs actually contact public school systems/districts during the exercise. Many, if not all, OROs accomplish this during an Alert or SAE. If not, the decision-making process used to make protective action decisions can be addressed through an interview.
ASSESSMENT AREA 3: PROTECTIVE ACTION IMPLEMENTATION	
Implementation of Emergency Worker Exposure Control (3.a.1)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**
The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. Appropriate record-keeping of the administration of KI for emergency workers is maintained.	OROs would be expected to: 1. Brief personnel, issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers. 2. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. Many, if not all, OROs accomplish this during an Alert or SAE.
Implementation of KI Decision for Institutionalized Individuals and the Public (3.b.1)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**
KI and appropriate instructions are made available if a decision to recommend use of KI is made. Appropriate record keeping of the administration of KI for institutionalized is maintained.	OROs would be expected to make a *decision* on the need for KI, based on relevant factors and appropriate coordination. The decision-making process used to make a decision on the need for KI can be addressed through an interview.
Implementation of Traffic and Access Control (3.d.1)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**
Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.	OROs must demonstrate the capability to select, establish, and staff appropriate traffic and access control points consistent with current conditions and PADs (e.g., evacuating, sheltering, and relocation) in a timely manner. Traffic and access control staff must demonstrate accurate knowledge of their roles and responsibilities.

	These capabilities may be demonstrated by actual deployment or by interview, in accordance with the Extent of Play Agreement. Many OROs address this during a SAE.
Implementation of Traffic and Access Control (3.d.2)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**
Impediments to evacuation are identified and resolved.	Would require a Controller inject; all contacts, actual or simulated, must be logged. At least one impediment must occur during the evacuation and be on an evacuation route such that re-routing of traffic is required, triggering decision-making and coordination with the JIC to communicate the alternate route to evacuees leaving the area. Other locations can address the impediment issue by interview.
ASSESSMENT AREA 4: FIELD MEASURE-MENTS AND ANALYSES	
Plume Phase Field Measurement and Analyses (4.a.2)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**
Field teams (two or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure	Field teams are dispatched to a standby location, usually at an SAE, and monitor dose rates. For a no or minimal release scenario, this data would be very limited, but would still characterize the limited release, or verify that no release occurred. Responsible OROs must demonstrate the capability to brief FMTs on predicted plume location and direction, plume travel speed, and exposure control procedures before deployment. Teams must be directed to take measurements at such locations and times as necessary to provide sufficient information to characterize the plume and its impacts.
Plume Phase Field Measurement and Analyses (4.a.3)	
Sub-Element	**Means of Demonstration per Negotiated Extent of Play**

Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low-background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.	Two or more FMTs must demonstrate the capability to make and report measurements of ambient radiation to the field team coordinator, dose assessment team, or other appropriate authority. FMTs must also demonstrate the capability to obtain an air sample for measurement of airborne radioiodine and particulates, and to provide the appropriate authority with field data pertaining to measurement. If samples have radioactivity significantly above background, the authority must consider the need for expedited laboratory analyses of these samples. OROs must share data in a timely manner with all other appropriate OROs. As stated above, field teams will be dispatched and monitor dose rates. An air sample could be demonstrated at the first location dispatched, independent of a trigger level for an air sample, per the negotiated Extent of Play. In accordance with plans and procedures, the level at which they would take an air sample could be discussed via interview.