

## Reactive Inspection Guidance for Non-Power Production and Utilization Facilities

### Purpose:

Provide supplemental information to Management Directive 8.3 (MD 8.3), "NRC Incident Investigation Program," and clarifying guidance to the Office of Nuclear Reactor Regulation, Division of Advanced Reactors and Non-Power Production of Utilization Facilities, Non-Power Production and Utilization Facility Oversight Branch (NRR/DANU/UNPO) staff for evaluation of significant operational events (SOEs) at Non-Power Production and Utilization Facilities (NPUFs) and to support reactive inspection decision-making.

### Background:

MD 8.3 provides guidance for evaluating SOEs at U.S. Nuclear Regulatory Commission (NRC) regulated facilities, however, it does not clearly define the responsibility for SOE decision-making for a special inspection team (SIT) at NPUFs. MD 8.3 defines an SOE as a radiological, safeguards, or other safety related operational event that poses an actual or potential hazard to public health and safety, property, or the environment. MD 8.3 section I.E.2(b) provides a list of SOEs that would warrant an Incident Investigation Team (IIT) or Augmented Investigation Team (AIT) at NPUFs, but MD 8.3 does not discuss criteria for a SIT at NPUFs. A SOE may occur at NPUFs in which the DANU staff may need an early, independent assessment of the details associated with the event including the cause, current facility status, safety significance, and actions taken to determine the appropriate regulatory response to the event. Because resident inspectors are not permanently stationed at NPUFs, the DANU staff needs guidance to assist in decision-making regarding the need to dispatch timely inspection resources to the facility following an event of any significance. Therefore, for NPUF SOEs that do not rise in significance to the level of IIT or AIT, the staff has developed the following guidance to assess when to allocate additional inspection resources such as an SIT or other focused inspection activity.

### Guidance:

UNPO shall evaluate SOEs at NPUFs (including externally-initiated events such as a severe natural phenomenon) to determine if additional NRC inspection should be conducted using MD 8.3 as supplemented by the following guidance:

1. Determine if any of the MD 8.3 SOE criteria are met for consideration of conducting an IIT or an AIT. If an IIT or AIT is recommended, coordinate with the director of NRR and the applicable Regional Administrator to perform the appropriate actions in the sections of MD 8.3.
2. If no IIT or AIT criterion from MD 8.3 is met, determine if the event meets any of the criteria listed below. Gather as much information as possible from the licensee for input into this determination within a reasonable amount of time. Since special inspections (SIs) are meant to occur shortly after the event occurs, the decision to conduct an SI should be timely and considers both the criteria and the risk insights of the event based on the information available and should not wait for lengthy analyses of facility conditions.

### Reactor/Criticality Safety

- a. unplanned degraded conditions (including degradations caused by external events) that result in loss of function to a system(s) meant to mitigate accidents
- b. operations that exceeded, or were not included in, the design bases of the facility
- c. a deficiency in design, construction, or operation having potential generic safety implications
- d. failure to implement the emergency preparedness program during an actual event, including the failure to classify, notify, or augment onsite personnel

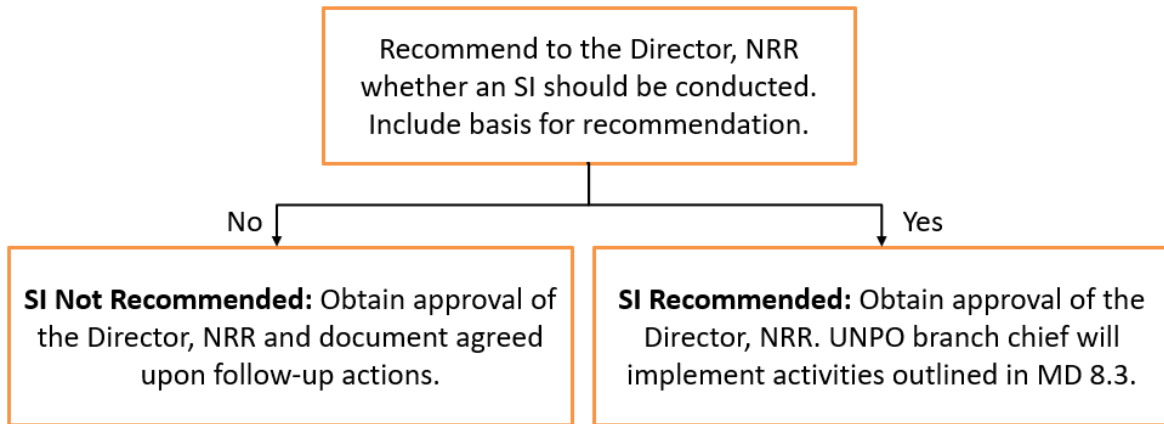
### Radiation Safety

- e. an unplanned exposure resulting in an occupational exposure in excess of the regulatory limits in Title 10 of the *Code of Federal Regulations* (10 CFR) 20.1201; exposure to an embryo/fetus in excess of the regulatory limits in 10 CFR 20.1208; exposure to a member of the public in excess of the regulatory limits in 10 CFR 20.1301
- f. unplanned changes in dose rates or airborne radioactivity concentrations which meet the definition of Unusual Event or higher per American National Standards Institute/American Nuclear Society-15.16, "Emergency Planning for Research Reactors"
- g. uncontrolled, unplanned, or abnormal release of radioactive material to an unrestricted area
- h. failure of radioactive material packaging that resulted in external radiation levels exceeding 5 times the accessible area dose rate limits specified in 10 CFR Part 71, or 50 times the contamination limits specified in 49 CFR Part 173

### Safeguards/Security

- i. inadequate nuclear material control and accounting provisions to protect against theft or diversion, as evidenced by inability to locate an item containing special nuclear material (such as a fuel rod, rod piece, pellet, or instrument)
- j. a safeguards infraction that demonstrates the ineffectiveness of facility security provisions
- k. actual discharge of a weapon within the restricted area
- l. substantial failure of the intrusion detection system (not weather related)

3. If one or more of the SI criteria are met, then consider, based on the unique set of circumstances and associated risks for the event, if an SI should be recommended. Risk insights may provide perspectives that demonstrate that an SI is not necessary to ensure effective oversight of the facility. As appropriate, consideration may also be given to leveraging a planned inspection or conducting focused inspection activities during the next regularly scheduled inspection. Document the decision on the form below and do the following:



<b>UNPO Decision Documentation for Reactive Inspection</b>		
Facility:	Event Date:	Evaluation Date:
Brief Description of Event:		
Y/N	IIT Criteria Met? If yes, then state which criteria is met below and proceed to MD 8.3.	
Y/N	AIT Criteria Met? If yes, then state which criteria is met below and proceed to MD 8.3	
Y/N	NPUF SIT Supplemental Criteria Met? If yes, then state which criteria is met below and continue.	
	Reactive inspection decision. Provide recommendation with basis below. Include any risk-insights.	
<u>Recommendation:</u>  <u>Basis:</u>  <u>Final Decision:</u>		
Person performing evaluation:		