

Enclosure 1: Decision Documentation for Reactive Inspection
(Deterministic and Risk Criteria Analyzed)

Decision Documentation for Reactive Inspection	
(Deterministic and Risk Criteria Analyzed)	
<p>Note: The results of this assessment are based on an initial or preliminary set of information and do not prejudice or imply deficient performance on the part of the licensee or the lack thereof. The purpose of this assessment is to determine whether to conduct a reactive inspection; it is independent of determining the significance of any inspection findings that may be associated with these circumstances.</p>	
PLANT: Surry Unit 1	EVENT DATE: 8/6/2025
EVALUATION DATE: 8/20/2025	
<p>Brief Description of the Significant Event or Degraded Condition:</p> <p>On August 6, 2025, at 1847 EST, Surry Unit 1 tripped from 100% power due to a spurious Train B Hi Consequence Limiting Safeguards (CLS) signal. All safety systems responded as designed and the unit is stabilized in Hot Shutdown. Decay heat is being removed via the steam dumps, steam generator bypass valves and 'A' main feedwater pump (AFWs secured in auto). As part of the event, high head safety injection was actuated but secured manually shortly after the reactor trip. The pressurizer level did reach approximately 90% due to safety injection but did not impact plant operations.</p>	
Y/N	DETERMINISTIC CRITERIA
N	<p>Involved operations that exceeded, or were not included in, the design bases of the facility</p> <p>Remarks: A transient resulting from the Hi Consequence Limiting Safeguard signal is analyzed and the transient did not exceed its design basis calculations.</p>
N	<p>Involved a major deficiency in design, construction, or operation having potential generic safety implications</p> <p>Remarks: No major deficiency in design, construction, or operation having potential generic safety implications was identified.</p>
N	<p>Led to a significant loss of integrity of the fuel, primary coolant pressure boundary, or primary containment boundary of a nuclear reactor</p> <p>Remarks: No loss of integrity of the fuel, primary coolant pressure boundary, or primary containment boundary of the Unit 1 reactor.</p>
N	<p>Led to the loss of a safety function or multiple failures in systems used to mitigate an actual event</p>

	Remarks: All safety systems responded as designed. No loss of safety function occurred, and there were not multiple failures in systems used to mitigate an actual event.
N	Involved possible adverse generic implications
	Remarks: No possible adverse generic implications were identified.
N	Involved significant unexpected system interactions
	Remarks: No unexpected system interactions occurred during the transient. All safety systems responded as designed.
N	Involved repetitive failures or events involving safety-related equipment or deficiencies in operations
	Remarks: No repetitive failures occurred during the transient. No deficiencies in operations occurred during the transient or in getting the reactor safely shutdown. The safety systems responded as designed to the spurious signal.
N	Involved questions or concerns pertaining to licensee operational performance
	Remarks: No questions or concerns pertaining to the licensee's operational performance during the transient.

CONDITIONAL RISK ASSESSMENT	
RISK ANALYSIS BY:	DATE:
<p>Brief Description of the Basis for the Assessment (may include assumptions, calculations, references, peer review, or comparison with licensee's results):</p> <p>No risk assessment was performed due to none of the deterministic criteria being met.</p>	
<p>The estimated conditional core damage probability (CCDP) is ___ and places the risk in the range of a ___ and ___ inspection.</p>	

Enclosure 2: Decision Documentation for Reactive Inspection and Examples
(Deterministic-only Criteria Analyzed)

Decision Documentation for Reactive Inspection	
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REACTOR SAFETY	
Y/N	IIT Deterministic Criteria
N	Led to a Site Area Emergency
	Remarks: N/A
N	Exceeded a safety limit of the licensee's technical specifications
	Remarks: N/A
N	Involved circumstances sufficiently complex, unique, or not well enough understood, or involved safeguards concerns, or involved characteristics the investigation of which would best serve the needs and interests of the Commission
	Remarks: N/A
Y/N	SI Deterministic Criteria
N	Significant failure to implement the emergency preparedness program during an actual event, including the failure to classify, notify, or augment onsite personnel

	Remarks: N/A
N	Involved significant deficiencies in operational performance which resulted in degrading, challenging, or disabling a safety system function or resulted in placing the plant in an unanalyzed condition for which available risk assessment methods do not provide an adequate or reasonable estimate of risk.
	Remarks: N/A

RADIATION SAFETY	
Y/N	IIT Deterministic Criteria
N	Led to a significant radiological release (levels of radiation or concentrations of radioactive material in excess of 10 times any applicable limit in the license or 10 times the concentrations specified in 10 CFR Part 20, Appendix B, Table 2, when averaged over a year) of byproduct, source, or special nuclear material to unrestricted areas
	Remarks: N/A
N	Led to a significant occupational exposure or significant exposure to a member of the public. In both cases, "significant" is defined as five times the applicable regulatory limit (except for shallow-dose equivalent to the skin or extremities from discrete radioactive particles)
	Remarks: N/A
N	Involved the deliberate misuse of byproduct, source, or special nuclear material from its intended or authorized use, which resulted in the exposure of a significant number of individuals
	Remarks: N/A
N	Involved byproduct, source, or special nuclear material, which may have resulted in a fatality
	Remarks: N/A
N	Involved circumstances sufficiently complex, unique, or not well enough understood, or involved safeguards concerns, or involved characteristics the investigation of which would best serve the needs and interests of the Commission
	Remarks: N/A
Y/N	AIT Deterministic Criteria
N	Led to a radiological release of byproduct, source, or special nuclear material to unrestricted areas that resulted in occupational exposure or exposure to a member of the public in excess of the applicable regulatory limit (except for shallow-dose equivalent to the skin or extremities from discrete radioactive particles)
	Remarks: N/A

N	Involved the deliberate misuse of byproduct, source, or special nuclear material from its intended or authorized use and had the potential to cause an exposure of greater than 5 rem to an individual or 500 mrem to an embryo or fetus
	Remarks: N/A
N	Involved the failure of radioactive material packaging that resulted in external radiation levels exceeding 10 rads/hr or contamination of the packaging exceeding 1000 times the applicable limits specified in 10 CFR 71.87
	Remarks: N/A
N	Involved the failure of the dam for mill tailings with substantial release of tailings material and solution off site
	Remarks: N/A
Y/N	SI Deterministic Criteria
N	May have led to an exposure in excess of the applicable regulatory limits, other than via the radiological release of byproduct, source, or special nuclear material to the unrestricted area; specifically <ul style="list-style-type: none"> • occupational exposure in excess of the regulatory limits in 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
	Remarks: N/A
N	May have led to an unplanned occupational exposure in excess of 40 percent of the applicable regulatory limit (excluding shallow-dose equivalent to the skin or extremities from discrete radioactive particles)
	Remarks: N/A
N	Led to unplanned changes in restricted area dose rates in excess of 20 rem per hour in an area where personnel were present or which is accessible to personnel
	Remarks: N/A
N	Led to unplanned changes in restricted area airborne radioactivity levels in excess of 500 DAC in an area where personnel were present or which is accessible to personnel and where the airborne radioactivity level was not promptly recognized and/or appropriate actions were not taken in a timely manner
	Remarks: N/A

N	<p>Led to an uncontrolled, unplanned, or abnormal release of radioactive material to the unrestricted area</p> <ul style="list-style-type: none"> • for which the extent of the offsite contamination is unknown; or, • that may have resulted in a dose to a member of the public from loss of radioactive material control in excess of 25 mrem (10 CFR 20.1301(e)); or, • that may have resulted in an exposure to a member of the public from effluents in excess of the ALARA guidelines contained in Appendix I to 10 CFR Part 50
	Remarks: N/A
N	<p>Led to a large (typically greater than 100,000 gallons), unplanned release of radioactive liquid inside the restricted area that has the potential for ground-water, or offsite, contamination</p>
	Remarks: N/A
N	<p>Involved the 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</p>
	Remarks: N/A
N	<p>Involved an emergency or non-emergency event or situation, related to the health and safety of the public or on-site personnel or protection of the environment, for which a 10 CFR 50.72 report has been submitted that is expected to cause significant, heightened public or government concern</p>
	Remarks: N/A

SAFEGUARDS/SECURITY	
Y/N	IIT Deterministic Criteria
N	Involved circumstances sufficiently complex, unique, or not well enough understood, or involved safeguards concerns, or involved characteristics the investigation of which would best serve the needs and interests of the Commission
	Remarks: N/A
N	Failure of licensee significant safety equipment or adverse impact on licensee operations as a result of a safeguards initiated event (e.g., tampering).
	Remarks: N/A
N	Actual intrusion into the protected area
	Remarks: N/A
Y/N	AIT Deterministic Criteria
N	Involved a significant infraction or repeated instances of safeguards infractions that demonstrate the ineffectiveness of facility security provisions
	Remarks: N/A
N	Involved repeated instances of inadequate nuclear material control and accounting provisions to protect against theft or diversions of nuclear material
	Remarks: N/A
N	Confirmed tampering event involving significant safety or security equipment
	Remarks: N/A
N	Substantial failure in the licensee's intrusion detection or package/personnel search procedures which results in a significant vulnerability or compromise of plant safety or security
	Remarks: N/A

Y/N	SI Deterministic Criteria
N	Involved 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 an irradiated rod, rod piece, pellet, or instrument) Remarks: N/A
N	Involved a significant safeguards infraction that demonstrates the ineffectiveness of facility security provisions Remarks: N/A
N	Confirmation of lost or stolen weapon Remarks: N/A
N	Unauthorized, actual non-accidental discharge of a weapon within the protected area Remarks: N/A
N	Substantial failure of the intrusion detection system (not weather related) Remarks: N/A
N	Failure to the licensee's package/personnel search procedures which results in contraband or an unauthorized individual being introduced into the protected area Remarks: N/A
N	Potential tampering or vandalism event involving significant safety or security equipment where questions remain regarding licensee performance/response or a need exists to independently assess the licensee's conclusion that tampering or vandalism was not a factor in the condition(s) identified Remarks: N/A

RESPONSE DECISION

USING THE ABOVE INFORMATION AND OTHER KEY ELEMENTS OF CONSIDERATION AS APPROPRIATE, DOCUMENT THE RESPONSE DECISION TO THE EVENT OR CONDITION, AND THE BASIS FOR THAT DECISION

DECISION AND DETAILS OF THE BASIS FOR THE DECISION:

No reactive inspection is recommended. No deterministic criteria were met. It is recommended that this issue be reviewed by the resident inspectors during routine baseline inspection.

BRANCH CHIEF REVIEW: Steven Smith



Signed by Smith, Steven
on 08/27/25

DIVISION DIRECTOR REVIEW: Mark Franke



Signed by Franke, Mark
on 09/10/25

ADAMS ACCESSION NUMBER: ML25237A179

EVENT NOTIFICATION REPORT NUMBER (as applicable):

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