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SALEM GENERATING STATION
EVENT CLASSIFICATION GUIDE TECHNICAL BASIS
February 28, 2002

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CHANGE PAGES FOR
REVISION #12

The Table of Contents forms a general guide to the current revision of each section and attachment of the Salem ECG Technical Basis. The changes that are made in this TOC Revision #12 are shown below.

1. Check that your revision packet is complete.
2. Add the revised documents.
3. Remove and recycle the outdated material listed below.

| ADD | | | REMOVE | | |
|--------------|--------------------|-------------|--------------|--------------------|-------------|
| <u>Pages</u> | <u>Description</u> | <u>Rev.</u> | <u>Pages</u> | <u>Description</u> | <u>Rev.</u> |
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| All | Section 11.3 | 03 | All | Section 11.3 | 02 |
| All | Section 11.6 | 02 | All | Section 11.6 | 01 |
| All | Section 11.7 | 03 | All | Section 11.7 | 02 |

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| 10.0 | Reserved for future use | | | |
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Licensing is responsible for the Reportable Action Level (Section 11)

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REVISION SUMMARY

Biennial Review Performed: Yes X No

- 11.3.1 Technical Basis - added statement that manual actuations as directed by abnormal or emergency operating procedures are reportable.
- 11.3.3 Technical Basis - added RPS trip functions to list of reportable actuation signals and added statement that manual actuations as directed by abnormal or emergency operating procedures are reportable.
- RAL 11.6.1 and Technical Basis - revised after-the-fact reporting to conform to the guidance in the ECG Introduction
- RAL 11.7.1.b and Technical Basis - revised to state that loss of all met data for a single parameter (temperature, wind speed or direction) is reportable.

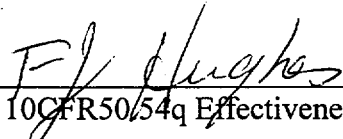
SIGNATURE PAGE

Prepared By: Paul Duke
(If Editorial Revisions Only, Last Approved Revision)

02/07/02
Date

Section/Attachments Revised: Section 11.3, 11.6 & 11.7
(List Non Editorial Only - Section/Attachments)


Date

Reviewed By: 
10CFR50/54q Effectiveness Reviewer

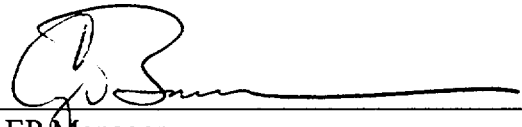
1/17/02
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Reviewed By: 
Department Manager

2/3/02
Date

Reviewed By: 
Manager - Licensing
(Reportable Action Level (Section 11))

1/28/02
Date

Reviewed By: 
EP Manager

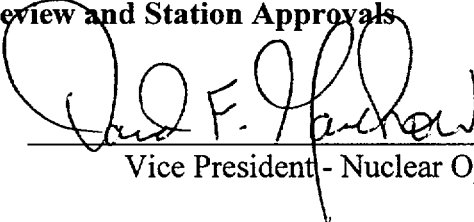
1/30/02
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Reviewed By: NA
Manager - Quality Assurance
(If Applicable)

Date

SORC Review and Station Approvals

NA
Mtg. No. Salem Chairman


Vice President - Nuclear Operations

NA
Date

2/12/02
Date

Effective Date of this Revision: 2-28-02
Date

11.0 Reportable Action Levels**11.3 System Actuations****PSE&G
CONTROL
COPY #**SECC-0101**REPORTABLE ACTION LEVEL - 11.3.1**

IC ANY EVENT THAT RESULTS OR SHOULD HAVE RESULTED IN ECCS DISCHARGE INTO THE RCS AS THE RESULT OF A VALID SIGNAL EXCEPT WHEN THE ACTUATION RESULTS FROM AND IS PART OF A PRE-PLANNED SEQUENCE DURING TESTING OR REACTOR OPERATION
[10CFR50.72(b)(2)(iv)(A)]

RAL

Valid SI Actuation signal received (or demanded)

AND

ANY ECCS Pump start or Accumulator depressurization that results in or should have resulted in, discharge to the RCS

AND

Actuation is NOT part of a pre-planned sequence during testing or reactor operation.

MODE - All**BASIS**

Those events that result in either automatic or manual SI actuation or would have resulted in SI actuation if some component had not failed or an operator action had not been taken are reportable.

For example, while performing a RCS cooldown following a controlled Reactor Shutdown, a Main Steam Line ΔP SI is inadvertently generated. However, the Charging Pumps fail to start and RCS pressure remains above the SI Pump shutoff head pressure. Although no ECCS discharge to the vessel occurred, the event is reportable.

A **valid** signal refers to actual plant conditions or parameters satisfying the requirements for SI initiation. Valid actuations also include intentional manual actuations unless the actuation is part of a preplanned test. Excluded from this reporting requirement would be those instances in which instrument drift, spurious signals, human error or other invalid signals caused SI actuation (e.g. jarring a cabinet, an error in the use of jumpers or lifted leads, error in actuation of controls switches, or equipment failures or radio frequency interference).

Preplanned actuations are those which are expected to actually occur due to preplanned activities covered by procedures. Such actuations are those for which a procedural step or other appropriate documentation indicates the specific actuation is actually expected to occur. Control room personnel are aware of the specific signal generation before its occurrence or indication in the control room. Manual actuations as directed by abnormal or emergency operating procedures (i.e., not part of a preplanned test or operational evolution) are reportable.

IF the SI Actuation discharges or should have discharged into the RCS as result of an INVALID signal, THEN a report under this RAL is not required.

REFERENCES

SGS UFSAR
10 CFR 50.72(b)(2)(iv)(A)
10 CFR 50.73
NUREG 1022, Rev. 2, section 3.2.6

11.0 Reportable Action Levels

11.3 System Actuations

REPORTABLE ACTION LEVEL - 11.3.2

IC ACTUATION OF THE REACTOR PROTECTION SYSTEM WHEN CRITICAL EXCEPT PREPLANNED [10CFR50.72(b)(2)(iv)(B)]

RAL

Any event or condition that results in actuation of the reactor protection system (RPS) when critical, except when the actuation results from and is part of a preplanned sequence during testing or reactor operation

MODE - 1, 2

BASIS

An event involving a critical scram is reportable under RAL 11.3.2 unless it resulted from and was part of a pre-planned sequence. Manual RPS actuation in anticipation of receiving an automatic RPS actuation is reportable.

Preplanned actuations are those which are expected to actually occur due to preplanned activities covered by procedures. Such actuations are those for which a procedural step or other appropriate documentation indicates the specific actuation is actually expected to occur. Control room personnel are aware of the specific signal generation before its occurrence or indication in the control room.

REFERENCES

10 CFR 50.72(b)(2)(iv)(B)

10 CFR 50.73

NUREG-1022, Rev. 2, section 3.2.6

11.0 Reportable Action Levels

11.3 System Actuations

REPORTABLE ACTION LEVEL - 11.3.3

IC VALID ACTUATION OF LISTED SYSTEM EXCEPT PREPLANNED
[10CFR50.72(b)(3)(iv)(A)]

RAL

Any event or condition that results in valid actuation of any system listed in Technical Basis 11.3.3 except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation

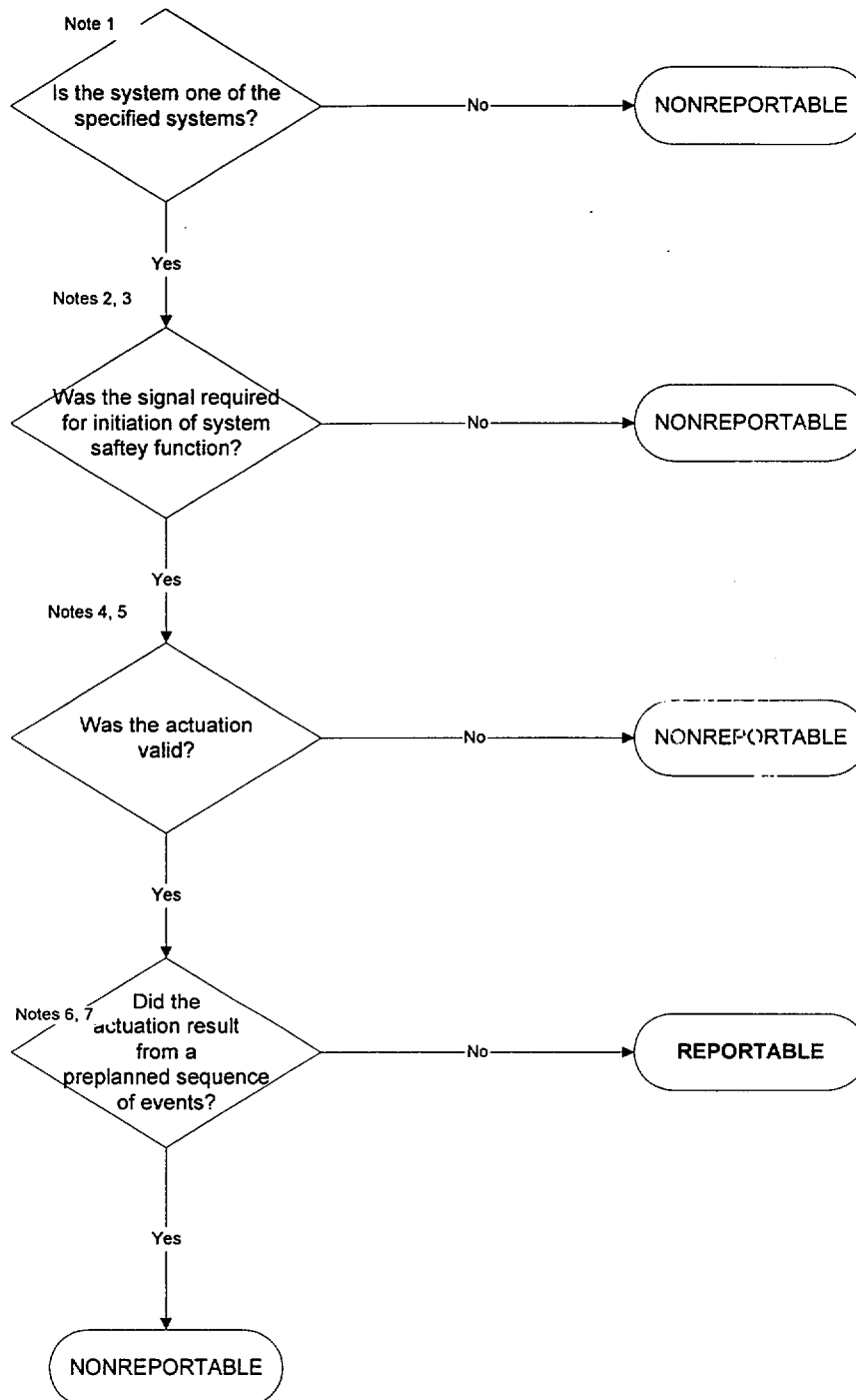
OPERATIONAL CONDITION - All

BASIS

An eight hour report is required for all valid actuation of any of the systems named in 10 CFR 50.72(b)(3)(iv)(B) unless the actuation resulted from and was part of a pre-planned sequence during testing or reactor operation. Except for critical scrams, invalid actuations are not reportable by telephone under 10 CFR 50.72.

The system actuation flow chart provides guidance to determine reportability.

SYSTEM ACTUATION FLOW CHART



NOTES

1. Systems for which this RAL applies are listed on page 4.
2. See Technical Specifications 3/4 3.1, Reactor Trip System Instrumentation and 3/4.3.2, ESF Actuation System Instrumentation (signals required for initiation of system safety function).
3. An ESF signal actuates equipment to mitigate the consequences of an accident, assure safe shutdown, minimize radioactive releases, etc. Process signals provided to protect equipment or as the result of good engineering judgment for system operating requirements (e.g., low flow starts, low suction pressure pump trips) are not ESF signals. If an actuation signal occurs, but distinction between "ESF" and "Process" cannot be determined immediately, the actuation is considered reportable. Retraction should be considered later, if necessary.
4. Valid actuations are those actuations that result from VALID SIGNALS or from intentional manual initiation, unless it is part of a preplanned test. Valid signals are those signals that are initiated in response to actual plant conditions or parameters satisfying the requirement for initiation of the safety function of the system.

An "actuation" is considered valid even if the resultant function (e.g., reactor trip) has already been accomplished as a result of a prior actuation or a plant evolution, such as a routine shutdown.

5. Invalid actuations are by definition those that do not meet the criteria for being valid. Invalid actuations include instrument drift, spurious signals, human error, jarring a cabinet, an error in the use of jumpers or lifted leads, an error in the actuation of switches or controls, equipment failure, or radio frequency interference.
6. Manual system actuation to mitigate the consequences of an accident, assuring safe shutdown of plant is reportable. Manual actuation as directed by normal operating or test procedures is not reportable. Manual actuations as directed by abnormal or emergency operating procedures (i.e., not part of a preplanned test or operational evolution) are reportable.
7. Preplanned actuations are those which are expected to actually occur due to preplanned activities covered by procedures. Such actuations are those for which a procedural step or other appropriate documentation indicates the specific actuation that is actually expected to occur. Control room personnel are aware of the specific signal generation before its occurrence or indication in the control room.

Applicable Systems and Components

NOTE: Numbers in parentheses indicate UFSAR Chapter

Reactor Protection System (unless reported under RAL 11.3.2)

Containment Systems (6.2)

Containment Heat Removal (6.2.2)

Containment Isolation System* (6.2.4)

ECCS (6.3)

Residual Heat Removal

Safety Injection System

Plant Systems

Auxiliary Feedwater

Emergency AC Electrical Power (8.3)

* Containment isolation valves in more than one system or multiple MSIVs

REFERENCES

SGS UFSAR

10 CFR 50.72(b)(3)(iv)(A)

10 CFR 50.73

NUREG 1022, Rev. 2, section 3.2.6

11.0 Reportable Action Levels**11.6 After The Fact**

REPORTABLE ACTION LEVEL - 11.6.1

IC EMERGENCY CONDITIONS DISCOVERED AFTER-THE-FACT

RAL

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Discovery of events or conditions that had previously occurred (event was NOT ongoing at the time of discovery) which EXCEEDED an Emergency Action Level (EAL) and was NOT declared as an emergency

AND

More than ONE HOUR has elapsed since the condition occurred

AND

There are currently NO adverse consequences in progress as a result of the event

MODE - All

BASIS

In the event a condition is discovered to have previously occurred or existed that exceeded an Emergency Action Level threshold, but no emergency was declared and the basis for the Emergency Classification no longer exists at the time of discovery, then a one hour report is required.

An 'After the Fact' event is defined as an event that exceeded an EAL threshold and was not recognized at the time of occurrence, but is identified greater than 1 hour after the condition has occurred (e.g., as a result of a routine log review, record review, post trip review, engineering evaluation) and the condition no longer exists. For an 'After the Fact' event, the Control Room Staff, at the time of occurrence, was either not aware of the event and/or did not realize that an EAL was exceeded.

The NRC does not consider actual declaration of the emergency classification to be necessary in these circumstances.

REFERENCES

Salem ECG Introduction Section
NUREG-1022, Rev. 2, Section 3.1.1

11.0 Reportable Action Levels

11.7 Security / Emergency Response Capability

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REPORTABLE ACTION LEVEL - 11.7.1.a

IC SAFEGUARDS EVENTS THAT ARE DETERMINED TO BE NON-EMERGENCIES,
BUT ARE REPORTABLE TO THE NRC WITHIN ONE HOUR [10CFR73.71(b)(1)]

RAL

Any Non-Emergency safeguards event that is reportable in accordance with 10CFR73.71 as determined by Security (SCP-15)

MODE - All

BASIS

This RAL addresses the conditions requiring a one hour report in accordance with 10CFR73.71(b)(1). These non-emergency events are outlined in Security Contingency Procedure #15. The on-duty PSEG Nuclear Security Supervisor should provide information concerning the specific event.

REFERENCES

10 CFR 73.71(b)(1)
NC.SP-AP.SC-0015 (SCP-15)

11.0 Reportable Action Levels

11.7 Security / Emergency Response Capability

REPORTABLE ACTION LEVEL - 11.7.1.b

IC MAJOR LOSS OF EMERGENCY ASSESSMENT CAPABILITY, OFFSITE RESPONSE CAPABILITY, OR OFFSITE COMMUNICATIONS CAPABILITY
[10CFR50.72(b)(3)(xiii)]

RAL

OS/EC determines that an event (excluding a scheduled test or preplanned maintenance activity) has occurred that would impair the ability to deal with an accident or emergency as indicated by the Loss of ANY one of the following:

- Nuclear Emergency Telecommunications System (NETS) for > **1 hr**
- ENS for > **1 hr** in the Control Room, TSC, and EOF (N/A if reported by the NRC)
- More than 17 Offsite Sirens for > **1 hr**
- Use of the EOF for > **8 hrs**
- All Meteorological data (Salem AND Hope Creek) for one parameter for > **8 hrs**
- Site access due to Acts of Nature (snow, flood, etc.)

MODE - All

BASIS

NOTE: IF losses are part of a scheduled test or preplanned maintenance activity AND
WHEN compensatory actions have been taken,
THEN NO report is required.

This RAL addresses conditions that are COMMON to both Salem and Hope Creek and may be reported to the NRC by EITHER station as a Common Site Event.

1. Loss of the NETS or all ENS for > 1 hour directly affects the ability to promptly notify and communicate with the NRC and/or Offsite officials.

IF a total loss of communications capabilities has occurred,
THEN REFER to ECG Section 8.3.

IF notified by the NRC Operations Officer of an inoperable ENS line,
THEN NO further notification is necessary.

2. Loss of Offsite Sirens (>25%) represents a loss of ability to promptly notify a large portion of the population, and warrants an immediate notification. There are 71 offsite sirens in the Plume EPZ and therefore a loss of ≥ 18 is a >25% loss which represents a loss of Offsite Response Capability.
3. Use of the EOF may be vital in responding to an emergency. Loss of use of this facility or its supporting equipment, or ability to staff represents a significant loss of emergency response capability. Equipment losses that occur but still allow the facility to be used SHOULD NOT constitute a loss of the EOF.
4. Loss of meteorological data for an extended period of time limits the ability to predict radiological conditions during an emergency situation. An extended loss of all data for a single parameter (temperature, wind speed or direction) warrants notification of the loss of this capability.
5. Limited site access may affect the ability to staff the site personnel and/or emergency response facilities, and the ability of off-site agencies to implement emergency plan requirements.

WHEN site reaction to anticipated conditions is commenced,
THEN notification should be made, if possible.

6. For a partial loss of ENS, the NRC Operations Center should be informed so that repairs can be ordered; but an eight hour report is not required.

REFERENCES

10 CFR 50.72(b)(3)(xiii)
 NUREG-1022, Rev. 2, section 3.2.13

11.0 Reportable Action Levels

11.7 Security / Emergency Response Capability

REPORTABLE ACTION LEVEL - 11.7.1.c

IC MAJOR LOSS OF EMERGENCY ASSESSMENT CAPABILITY, OFFSITE RESPONSE CAPABILITY, OR OFFSITE COMMUNICATIONS CAPABILITY
[10CFR50.72(b)(3)(xiii)]

RAL

OS/EC determines that an event (excluding a scheduled test or preplanned maintenance activity) has occurred that would impair the ability to deal with an accident or emergency as indicated by the Loss of ANY one of the following:

- P250 or Aux Annunciator System for > 24 hrs
- SPDS for > 8 hrs (> 2 CFSTs Inop, not due to plant conditions)
- Use of the TSC for > 8 hrs
- ALL Plant vent radiation effluent monitors with no alternate method of monitoring for > 72 hrs
- More than 75% of the OHAs
- Concurrent multiple accident or emergency condition indicators which in the judgment of the OS significantly impairs assessment capabilities

MODE - All

BASIS

NOTE: IF losses are part of a scheduled test or preplanned maintenance activity AND
WHEN compensatory actions have been taken,
THEN NO report is required.

1. Loss of the P250 or Aux Annunciator System for a prolonged time is considered a loss of emergency assessment capability.
2. Loss of SPDS for >8 hours (> 2 CFSTs Inop, not due to plant conditions) is considered an event that significantly impairs safety assessment capabilities.

3. Use of the TSC may be vital in responding to an emergency. Loss of use of this facility, or ability to staff represents a significant loss of emergency response capability. Equipment losses that occur but still allow the facility to be used SHOULD NOT constitute a Loss of the TSC.
4. Loss of ALL Plant Vent Effluent Radiation monitors (R41A, B, C and R45B & C) with no alternate method of monitoring for an extended period of time (72 hrs) limits the ability to predict radiological conditions during an emergency situation. An extended loss warrants notification of the loss of this capability.
5. Loss of OHAs for a short period of time (< 15 minutes) is considered a loss of emergency assessment capability in ALL Modes.

IF OHAs are lost or were lost for \geq 15 minutes when in Modes 1-4,
THEN REFER to ECG Section 8.2.
6. Concurrent multiple accident or emergency condition indicators which in the judgment of the OS significantly impairs assessment capabilities is specific to Salem in this RAL.

IF the loss of assessment capability is COMMON to both Salem and Hope Creek,
THEN REFER to RAL 11.7.1.b.
7. If the NRC phone line or modem used for ERDS data transmission is inoperable, the NRC operations center should be informed so that repairs can be ordered. However, an eight hour report is not required.

REFERENCES

10 CFR 50.72(b)(3)(xiii)
NUREG-1022, Rev. 2, section 3.2.13