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August 14, 1989

Re: Indian Point Unit No. 2
Docket No. 50-247

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555

SUBJECT: Emergency Action Levels

Enclosed please find revised Emergency Action Levels (EALs) and the associated implementing procedure. This fulfills our commitment made in a letter dated June 15, 1989. Training related to this revision has been completed with the exception of one Senior Watch Supervisor who will be trained upon his return from vacation next week.

We have also prepared a safety evaluation for the enclosed procedure and a cross-reference to NUREG-0654 example initiating conditions. These documents are available for review at the site.

If you have any questions, please call Bowin M. Lindgren, Manager, Emergency Planning at (914) 526-5122.

Very truly yours,



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EMERGENCY CLASSIFICATION

Prepared by: A.H. Liebler Technical Reviewer: J.H. Seay
Reviewer: Tony Gough Reviewer: _____
Reviewer: B.M. Linder Reviewer: _____
Reviewer: _____ Reviewer: _____
SNSC Review: Unapproved 1341 5/30/89 Reviewer: _____
Meeting No./Date

Technical Services General Manager's Approval: M.L. Giele 6-1-89
Effective Date

Biennial Review:

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

57-246
#8908180000
w/10/89 dtd 8/14/89
emergency action levels 1 and 2 to 10/89

1.0 INTENT

- 1.1 This procedure describes the method for classification of emergencies as a Notification of Unusual Event (NUE), ALERT, Site Area Emergency (SAE) or General Emergency (GE).

2.0 DISCUSSION

- 2.1 Event based classification may be made for NUE (Addendum 6.1) or ALERT (Addendum 6.2).
- 2.2 Barrier based classifications for ALERT, SAE or GE (Addendum 6.3) will be made only if the RCS temperature is above 200 °F.
- 2.3 If an event based ALERT has been declared (2.1 above), followed by the loss of just one barrier (2.2 above), an ALERT classification continues to apply but an update should be made to offsite authorities in accordance with Reference 4.2.
- 2.4 Barrier status is indicated through two analytical processes.
- 2.4.1 Event Specific - where the operator verifies the event fits into one of a few self-evident, pre-evaluated conditions. The Emergency Operating Procedures (EOPs) provide the analytical frame work during this process.
- 2.4.2 Event Symptoms - where the Critical Safety Function Status Trees (CSFSTs) provide the analytical frame work during this process.
- 2.5 Minor threats to barrier integrity are classified as NUEs. Refer to Addendum 6.1.
- 2.6 Barrier leakage > 10 times TS limits is considered a barrier breach. Any one of the following would be classified as an ALERT.
- 2.6.1 CLAD > 5% GAP activity released to the RCS.
- 2.6.2 RCS > 10 times TS 3.1.F.2.c (1) (c) leakage (> 100 gpm) except for SG (see 2.7.3 below).
- 2.6.3 VC > 10 times TS 3.6.A.3 (> 152 SCFM).
- 2.7 Barrier loss of the RCS may occur by one of the following three distinct cases.
- 2.7.1 RCS Leakage to VC

2.7.2 RCS Leakage Via Lines Outside VC

2.7.3 RCS Leakage Via SG with actual SI & SG control not obtained.

NOTE:

"Control Not Obtained" as used in the confirmation of a barrier breach of the RCS due to RCS leakage via SG (see Addendum 6.3) is defined as follows - Exit from procedure E-3, ES-3.1, ES-3.2 or ES-3.3 to an ECA procedure.

2.8 Addendum 6.3 lists the values (ex: RCS leakage > 100 gpm, actual SI & SG control not obtained) to be confirmed before a barrier is considered breached. The bullets following the confirmation value are indicators of barrier challenge. Not all of these indicators will necessarily be apparent at the same time. Classification is based on the status of the 3 fission product barriers, such that their loss equates as follows.

2.8.1 ALERT - 1 barrier breached

2.8.2 SAE - 2 barriers breached

2.8.3 GE - All barriers breached, or > 20% of core noble gas inventory and 5% of core iodine inventory is in the VC atmosphere.

NOTE:

Plant conditions which cause a release of 20% of the core noble gas and 5% of the core iodine to the VC atmosphere will present a substantial challenge to the VC integrity.

2.9 Addendum 6.4 presents the flow chart which is the basis for the procedure section.

3.0 PROCEDURE

NOTE:

The following procedure is depicted on Addendum 6.4 flow chart.

3.1 The operator is alerted by initial event recognition or control room alarms.

3.2 The operator notifies the Senior Watch Supervisor (SWS) and Shift Technical Advisor (STA).

3.3 The operator may enter the E and/or A procedures while the STA, if appropriate, monitors the F Set Status Trees.

- 3.4 The SWS determines whether there has been a challenge to a barrier or entry is required to Abnormal Operating Instructions or E-0 and ECA-0.0 procedures. If yes, the SWS continues with 3.5 below. If no, the SWS goes to section 3.8.
- 3.5 If evaluation of A, E and F Set procedures or CSFSTs indicate a potential barrier breach continue on with section 3.6. If the potential does not exist, go to section 3.8.
- 3.6 Utilizing Addendum 6.3, evaluate whether any of the fission product barriers (CLAD, RCS, VC) have been breached. If one or more barriers have been breached continue on with section 3.7. If no barriers have been breached go to section 3.8.
- 3.7 Declare appropriate emergency classification and continue with section 3.10.
 - 3.7.1 ALERT - 1 barrier breached
 - 3.7.2 SAE - 2 barriers breached
 - 3.7.3 GE - All barriers breached, or > 20% of the core noble gas and 5% of the core iodine inventory is in the VC atmosphere
- 3.8 The SWS evaluates Addendum 6.2 to determine if an ALERT classification applies because of event based initiating conditions. If an ALERT applies, declare it and refer to section 3.10 below. If it does not, the SWS refers to section 3.9 below.
- 3.9 The SWS evaluates Addendum 6.1 to determine if a NUE classification applies. If a NUE applies declare it and refer to section 3.10 below. If it does not, the SWS evaluates whether a TS limit or LCO reportable under Reference 4.1 applies and performs the appropriate notifications as per Reference 4.1. Do not proceed to section 3.10 if NUE does not apply.
- 3.10 Initiate County, State and NRC notification in accordance with Reference 4.2.
- 3.11 The SWS continues, if appropriate, to evaluate potential challenges to the barriers from information supplied by the operator and STA. The SWS will re-enter step 3.6 to determine whether further barrier breaches have occurred.
- 3.12 If necessary, the SWS will upgrade the emergency classification.

4.0 REFERENCES

- 4.1 Station Administrative Order (SAO-124)
- 4.2 Implementation Procedure IP-1002

5.0 ATTACHMENTS

None

6.0 ADDENDUMS

- 6.1 Indian Point 2 NUE Classification Table
- 6.2 Indian Point 2 Event Based ALERT Table
- 6.3 Indian Point 2 Fission Product Barrier Breach Table
- 6.4 Indian Point 2 Event Classification Flow Chart