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PROCEDURE NUMBER: EI-6.4

TITLE: RELEASE/POTENTIAL RELEASE DETERMINATION FROM CONTAINMENT HIGH-RANGE MONITORS

TRANSMITTAL: LISTED BELOW ARE NEW/REVISED PROCEDURES WHICH MUST BE IMMEDIATELY INSERTED INTO OR DISCARDED FROM YOUR PROCEDURE MANUAL.

Action Required	Section or Description
REMOVE AND DESTROY	EI-6.4, R/3, ENTIRE PROCEDURE
REPLACE WITH	EI-6.4, R/3, ENTIRE PROCEDURE
	EDITORIAL AND APPLICABILITY
	WORD 2000 CONVERSION

SIGN, DATE, AND RETURN THE ACKNOWLEDGEMENT FORM WITHIN 10 DAYS TO THE PALISADES PLANT DOCUMENT CONTROL.

SIGNATURE OR INITIALS _____ DATE _____

A045

Procedure No EI-6.4
Revision 3
Issued Date 6/25/02

PALISADES NUCLEAR PLANT
EMERGENCY IMPLEMENTING PROCEDURE

TITLE: RELEASE/POTENTIAL RELEASE DETERMINATION FROM CONTAINMENT HIGH-RANGE MONITORS

JT Fontaine / 3/18/02
Procedure Sponsor **Date**

NKBrott / 3/29/95
Technical Reviewer **Date**

MLGrogan / 4/1/95
User Reviewer **Date**

TITLE: RELEASE/POTENTIAL RELEASE DETERMINATION FROM CONTAINMENT HIGH-RANGE MONITORS

Table of Contents

ATTACHMENTS

Attachment 1, "Containment High-Range Monitor Conversion Factor"
Attachment 2, "Containment High-Range Monitor Release Rate Worksheet"

TITLE: RELEASE/POTENTIAL RELEASE DETERMINATION FROM CONTAINMENT HIGH-RANGE MONITORS

USER ALERT
INFORMATION USE PROCEDURE

The activities covered by this procedure may be performed from memory.

1.0 PERSONNEL RESPONSIBILITY

The Health Physics Support Group Leader shall implement this procedure. In the absence of a Health Physics Support Group Leader, the Site Emergency Director (SED) or EOF Director shall delegate this responsibility.

2.0 PURPOSE

This procedure provides a method to determine release rate/potential release rate from radioactive material released from containment. This data is used as input to offsite dose calculations.

This procedure provides a manual backup method to the containment high-range monitor release rate calculations performed in the Automated Dose Assessment Program, "Offsite."

3.0 REFERENCES

3.1 SOURCE DOCUMENTS

3.1.1 Site Emergency Plan Section 4, "Emergency Conditions"

3.1.2 NUREG 0654 Section I, "Accident Assessment"

3.1.3 Dose Assessment Basis Document DABD-05, "Palisades - Containment High Range Release Rate Calculation"

3.2 REFERENCE DOCUMENTS

3.2.1 Emergency Implementing Procedure EI-6.0, "Offsite Dose Calculation and Recommendations For Protective Actions"

3.2.2 Palisades Administrative Procedure 10.46, "Plant Records"

3.2.3 Palisades Administrative Procedure 10.41, "Procedure Initiation and Revision"

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TITLE: RELEASE/POTENTIAL RELEASE DETERMINATION FROM CONTAINMENT HIGH-RANGE MONITORS

4.0 INITIAL CONDITIONS AND/OR REQUIREMENTS

a. This procedure shall be implemented as required per Emergency Implementing Procedure EI-6.0, "Offsite Dose Calculation and Recommendations for Protective Actions."

b. This procedure assumes a release from the primary coolant system into the containment atmosphere.

c. If there is a breach in containment, the leak rate should be determined by the best method available.

5.0 PROCEDURE

USER ALERT
INFORMATION USE PROCEDURE

The activities covered by this procedure may be performed from memory.

5.1 RELEASE RATE

5.2 HIGH-RANGE MONITOR READING

a. Determine if there has been or is a release from the primary coolant system to the containment atmosphere.

NOTE: Time of shutdown can be obtained from the TSC Operations Support Group.

b. Determine the time since reactor shutdown (hours) and record on worksheet, Attachment 2, Step 1.

c. Mark the monitor from which the reading is taken on Attachment 2, Step 2 - RIA-2321 or RIA-2322.

d. Record the monitor reading on Attachment 2, Step 3 in rem/hr. The readout for both monitors is on Control Room Panel C-11A and the Palisades Plant Computer (PPC) page 352.

e. Obtain from Attachment 1 the $\frac{\mu Ci/cc}{rem/h}$ conversion factor for the specified time since reactor shutdown for noble gas. Record on Attachment 2, Step 4.

TITLE: RELEASE/POTENTIAL RELEASE DETERMINATION FROM CONTAINMENT HIGH-RANGE MONITORS

f. Determine the containment leak rate in cc/s. If no breach of containment has occurred, then the design leak rate should be used (0.1%/day = 537.0 cc/s). If there is a breach in containment, then the leak rate must be determined by the best available method. Record on Attachment 2, Step 5.

g. Calculate noble gas release rate (QN) as follows:

$$QN = \left[\begin{array}{c} \text{Monitor} \\ \text{reading} \end{array} \frac{\text{rem/h}}{} \right] \times \left[\begin{array}{c} \text{Noble gas} \\ \text{conversion} \\ \text{factor} \end{array} \frac{\mu\text{Ci/cc}}{\text{rem/h}} \right] \times$$

(leak rate cc/s) x (1.0 E-6 Ci/μCi)

Record on Attachment 2, Step 6.

NOTE: As soon as the concentration of iodine has been quantified from either a RGEM, Primary Coolant, or offsite air sample, the corrected ratio of iodine to noble gas should be incorporated into the offsite dose calculation.

h. Calculate the dose equivalent I-131 release rate (QI) as follows:

QN x 1.0 E-3

Record on Attachment 2, Step 7.

6.0 ATTACHMENTS AND RECORDS

6.1 ATTACHMENTS

6.1.1 Attachment 1, "Containment High-Range Monitor Conversion Factor"

6.1.2 Attachment 2, "Containment High-Range Monitor Release Rate Worksheet"

6.2 RECORDS

Records generated by this procedure shall be filed in accordance with Palisades Administrative Procedure 10.46, "Plant Records."

TITLE: RELEASE/POTENTIAL RELEASE DETERMINATION FROM CONTAINMENT HIGH-RANGE MONITORS

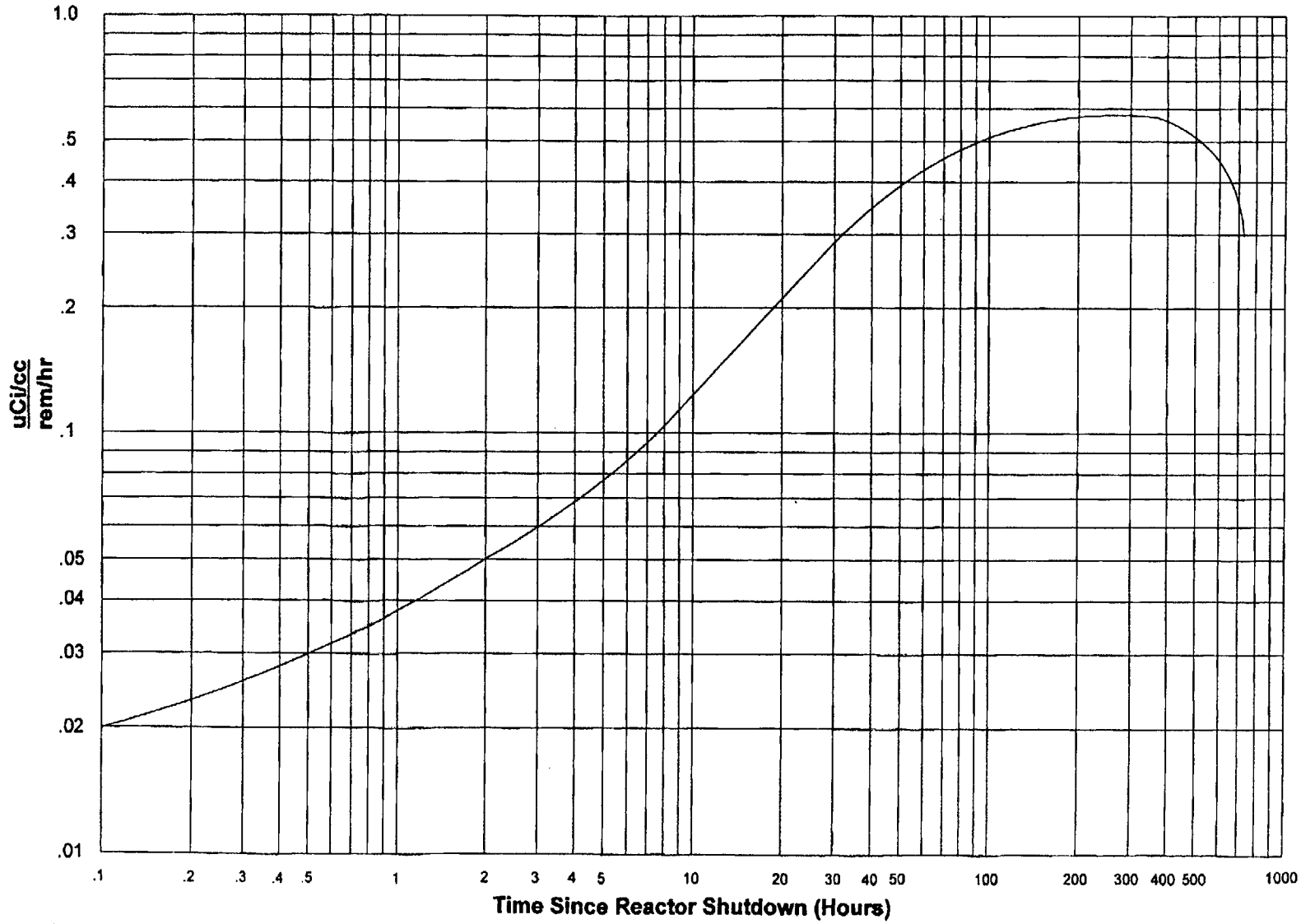
7.0 SPECIAL REVIEWS

The scope of this procedure does not include activities that require a 50.59 review per Palisades Administrative Procedure 10.41, "Procedure Initiation and Revision." Therefore, changes to this procedure do not require a 50.59 review.

The scope of this procedure includes activities that require a PRC review per Palisades Administrative Procedure 10.41, "Procedure Initiation and Revision." Therefore, changes to this procedure require a PRC review.

CONTAINMENT HIGH-RANGE MONITOR CONVERSION FACTOR

(RIA-2321 AND RIA-2322)



CONTAINMENT HIGH-RANGE MONITOR RELEASE RATE WORKSHEET

1. Time since reactor shutdown = _____ hours

2. Monitor number ( ) RIA-2321
   ( ) RIA-2322

3. Monitor reading = _____ rem/h

4. Noble gas conversion factor = _____ $\frac{\mu Ci/cc}{rem/h}$

5. Leak rate = _____ cc/s

6. QN, noble gas release rate =
   (#3) x (#4) x (#5) x (1.0 E-6) = _____ Ci/s

7. QI, I-131 dose equivalent release rate =
   (#6) x (1.0 E-3) = _____ Ci/s

Date: _____ Time: _____ Completed By: _____