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TRANSMITTAL NUMBER: 221054

PROCEDURE NUMBER: EI-6.3

TITLE: RELEASE RATE DETERMINATION FROM HIGH  
RANGE EFFLUENT 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-6.3, R/6, ENTIRE PROCEDURE
REPLACE WITH	EI-6.3, R/6, 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-6.3  
Revision 6  
Issued Date 7/7/02

**PALISADES NUCLEAR PLANT**  
**EMERGENCY IMPLEMENTING PROCEDURE**

**TITLE: RELEASE RATE DETERMINATION FROM HIGH RANGE  
EFFLUENT MONITORS**

	/	3/18/02
Procedure Sponsor		Date
WWDoolittle	/	4/23/99
Technical Reviewer		Date
	/	
User Reviewer		Date

**TITLE: RELEASE RATE DETERMINATION FROM HIGH RANGE  
EFFLUENT MONITORS**

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**Table of Contents**

<b>1.0</b>	<b>PERSONNEL RESPONSIBILITY.....</b>	<b>1</b>
<b>2.0</b>	<b>PURPOSE .....</b>	<b>1</b>
<b>3.0</b>	<b>REFERENCES .....</b>	<b>1</b>
	<b>3.1 SOURCE DOCUMENTS.....</b>	<b>1</b>
	<b>3.2 REFERENCE DOCUMENTS.....</b>	<b>1</b>
<b>4.0</b>	<b>INITIAL CONDITIONS AND/OR REQUIREMENTS.....</b>	<b>2</b>
<b>5.0</b>	<b>RELEASE RATE DETERMINATION .....</b>	<b>2</b>
	<b>5.1 HIGH RANGE EFFLUENT MONITOR READING .....</b>	<b>2</b>
	<b>5.2 RELEASE RATE .....</b>	<b>4</b>
<b>6.0</b>	<b>ATTACHMENTS AND RECORDS.....</b>	<b>5</b>
	<b>6.1 ATTACHMENTS.....</b>	<b>5</b>
	<b>6.2 RECORDS .....</b>	<b>5</b>
<b>7.0</b>	<b>SPECIAL REVIEWS.....</b>	<b>5</b>

**ATTACHMENTS**

Attachment 1, "Stack Monitor Conversion Factors (0 to 24 hours)"  
Attachment 2, "Stack Monitor Conversion Factors (0 to 30 days)"  
Attachment 3, "Steam Dump Monitor Conversion Factors (0 to 24 hours)"  
Attachment 4, "Steam Dump Monitor Conversion Factors (0 to 30 days)"  
Attachment 5, "High Range Effluent Monitor Release Rate Work Sheet"

**TITLE: RELEASE RATE DETERMINATION FROM HIGH RANGE  
EFFLUENT MONITORS**

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**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 or the EOF Director shall delegate this responsibility.

**2.0 PURPOSE**

This procedure provides a release rate for radioactive effluents from the plant stack or steam dumps. This data is used as input to offsite dose calculations.

This procedure provides a manual backup to the high range effluent monitor release rate calculations performed in the automated dose assessment program, "Offsite."

**3.0 REFERENCES**

**3.1 SOURCE DOCUMENTS**

- 3.1.1 NUREG 0654 Section I, "Accident Assessment"
- 3.1.2 Site Emergency Plan Section 4, "Emergency Conditions"
- 3.1.3 Dose Assessment Basis Document DABD-03, "Palisades - Stack Release Rate Calculations"
- 3.1.4 Dose Assessment Basis Document DABD-04, "Palisades - Steam Dump Release Rate Calculations"

**3.2 REFERENCE DOCUMENTS**

- 3.2.1 Emergency Implementing Procedure EI-6.0, "Offsite Dose Calculation and Recommendations for Protective Actions"
- 3.2.2 Health Physics Work Instruction, "WI-RSD-R-006"
- 3.2.3 Palisades Administrative Procedure 10.46, "Plant Records"
- 3.2.4 Palisades Administrative Procedure 10.41, "Procedure Initiation and Revision"

e

**TITLE: RELEASE RATE DETERMINATION FROM HIGH RANGE  
EFFLUENT MONITORS**

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**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. Data and results from this procedure should be recorded on the High Range Effluent Monitor Release Rate Work Sheet, Attachment 5 of this procedure.
- c. High activity levels in the penetration fan room filter box (629' level) may cause unusually high readings on these instruments, which would indicate a higher release rate than is actually occurring.

**5.0 RELEASE RATE DETERMINATION**

**USER ALERT**  
**INFORMATION USE PROCEDURE**

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

**5.1 HIGH RANGE EFFLUENT MONITOR READING**

**5.1.1 Victoreen Model No 956A**

Perform an operational check.

- a. Check the calibration sticker to ensure calibration is valid.
- b. Press the check source button on the face of the meter in the viewing gallery and observe the reading. Compare the reading to the acceptance criteria posted on the readout.

**5.1.2**

- a. The High Range Victoreen Monitor Readout is installed in the viewing gallery across from the Control Room entrance.
- b. Determine (from the attached label on the Victoreen Monitor Readout) what effluent pathway is being monitored (Stack or Steam Dumps).
- c. If the desired effluent stream is being monitored, go to Step 5.1.2d. If the detector needs to be repositioned to monitor the desired effluent pathway, go to Step 5.1.2h.

**TITLE: RELEASE RATE DETERMINATION FROM HIGH RANGE  
EFFLUENT MONITORS**

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- d. Obtain a reading (mrem/hr) from the monitor readout. Record reading on High Range Effluent Monitor Release Rate Work Sheet, Attachment 5 of this procedure.
- e. Convert monitor reading from mrem/hr to rem/hr by multiplying original reading by  $1.0E-3$ . Record on Attachment 5.
- f. Obtain a response factor from the attached label on the Victoreen Monitor Readout. Record on Attachment 5.
- g. Multiply monitor reading (rem/hr) by response factor to obtain a corrected reading. Record on Attachment 5 and continue with Section 5.2.

**NOTE:** High ambient dose rates in this area may prevent the detector from being repositioned and/or determination of the Response Factor. In this event, use off-site teams to determine dose rates and protective action recommendations.

- h. Contact RETS/REMP representative and the I&C department to reposition the detector to monitor the desired effluent pathway.
- i. IF no response factor is listed for this effluent pathway on the attached label of the Victoreen Monitor Readout, and ambient dose rates allow, determine the Response Factor per Health Physics Work Instruction WI-RSD-R-006.
- j. Perform Steps 5.1.2d through 5.1.2g of this procedure.

**TITLE: RELEASE RATE DETERMINATION FROM HIGH RANGE  
EFFLUENT MONITORS**

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**5.2 RELEASE RATE**

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

- a. Determine elapsed time between reactor shutdown and monitor reading.  
If elapsed time is  $\leq 24$  hours, record elapsed time on Attachment 5 in hours.  
If elapsed time is  $> 24$  hours, record elapsed time on Attachment 5 in days.  
Circle appropriate units on Attachment 5.
- b. Use the table below to determine which attachment to use to obtain the Conversion Factor, rem/h to Ci/s.

Elapsed Time

$\leq 24$  hours     $> 24$  hours

Stack Monitor

Attachment 1    Attachment 2

Steam Dump Monitor

Attachment 3    Attachment 4

Record Conversion Factor on Attachment 5, and indicate which Conversion Factor attachment was used.

- c. Divide corrected monitor reading by Conversion Factor to obtain noble gas release rate, QN. Record on Attachment 5.
- d. Multiply noble gas release rate by  $1.0E-3$  to obtain Iodine-131 dose equivalent release rate, QI. Record on Attachment 5.
- e. As soon as the concentration of iodine has been quantified from either a RGEM or Primary Coolant sample, the corrected ratio of iodine to noble gas should be incorporated into the offsite dose calculation.

**TITLE: RELEASE RATE DETERMINATION FROM HIGH RANGE  
EFFLUENT MONITORS**

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**6.0 ATTACHMENTS AND RECORDS**

**6.1 ATTACHMENTS**

- 6.1.1 Attachment 1, "Stack Monitor Conversion Factors (0 to 24 hours)"
- 6.1.2 Attachment 2, "Stack Monitor Conversion Factors (0 to 30 days)"
- 6.1.3 Attachment 3, "Steam Dump Monitor Conversion Factors (0 to 24 hours)"
- 6.1.4 Attachment 4, "Steam Dump Monitor Conversion Factors (0 to 30 days)"
- 6.1.5 Attachment 5, "High Range Effluent Monitor Release Rate Work Sheet"

**6.2 RECORDS**

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

**7.0 SPECIAL REVIEWS**

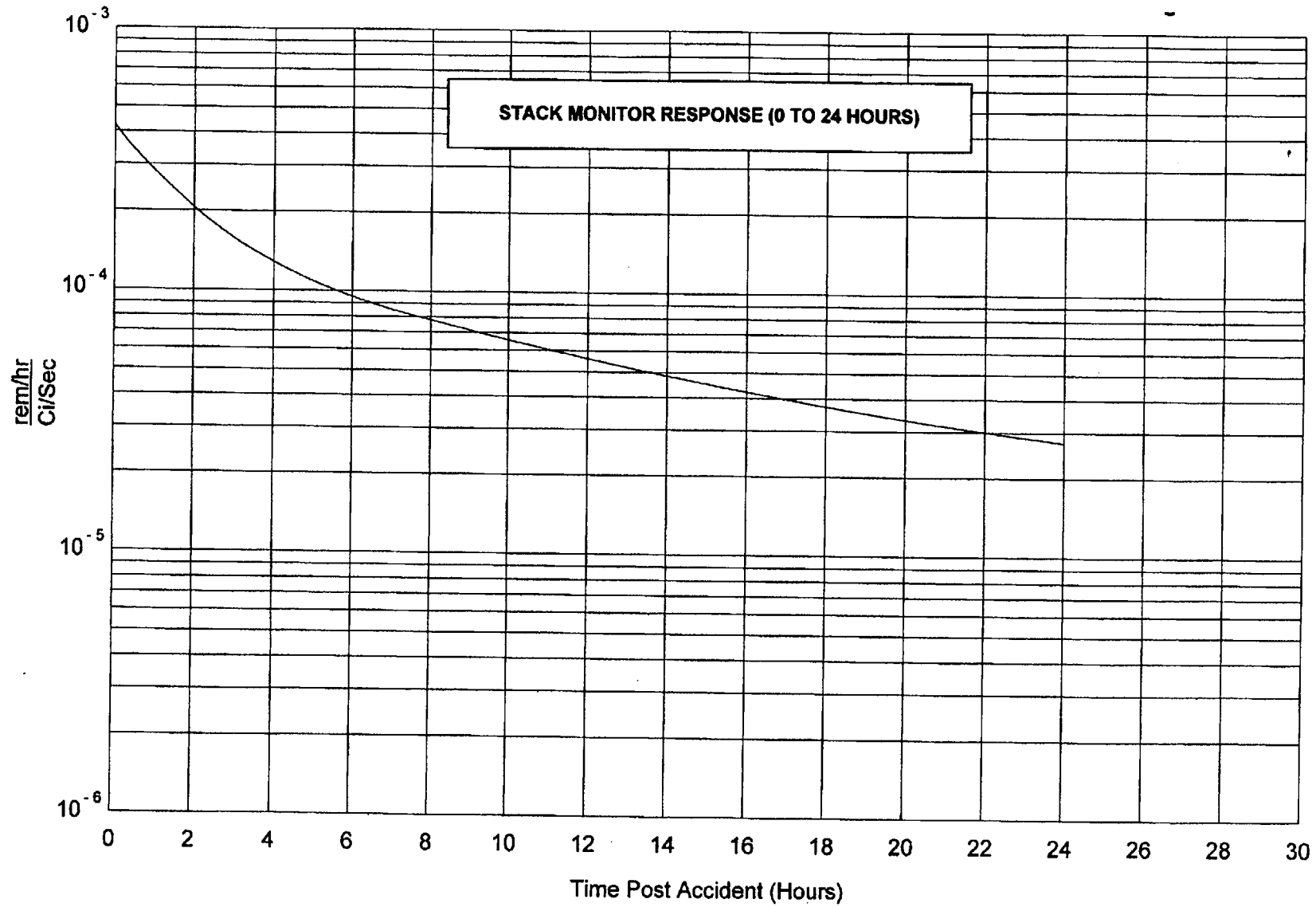
The scope of this procedure does not include activities that require a 50.59 review per Palisades Administrative Procedure 10.41, "Procedure Initiation and Revision." Therefore, changes to this procedure do not require a 50.59 review.

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.

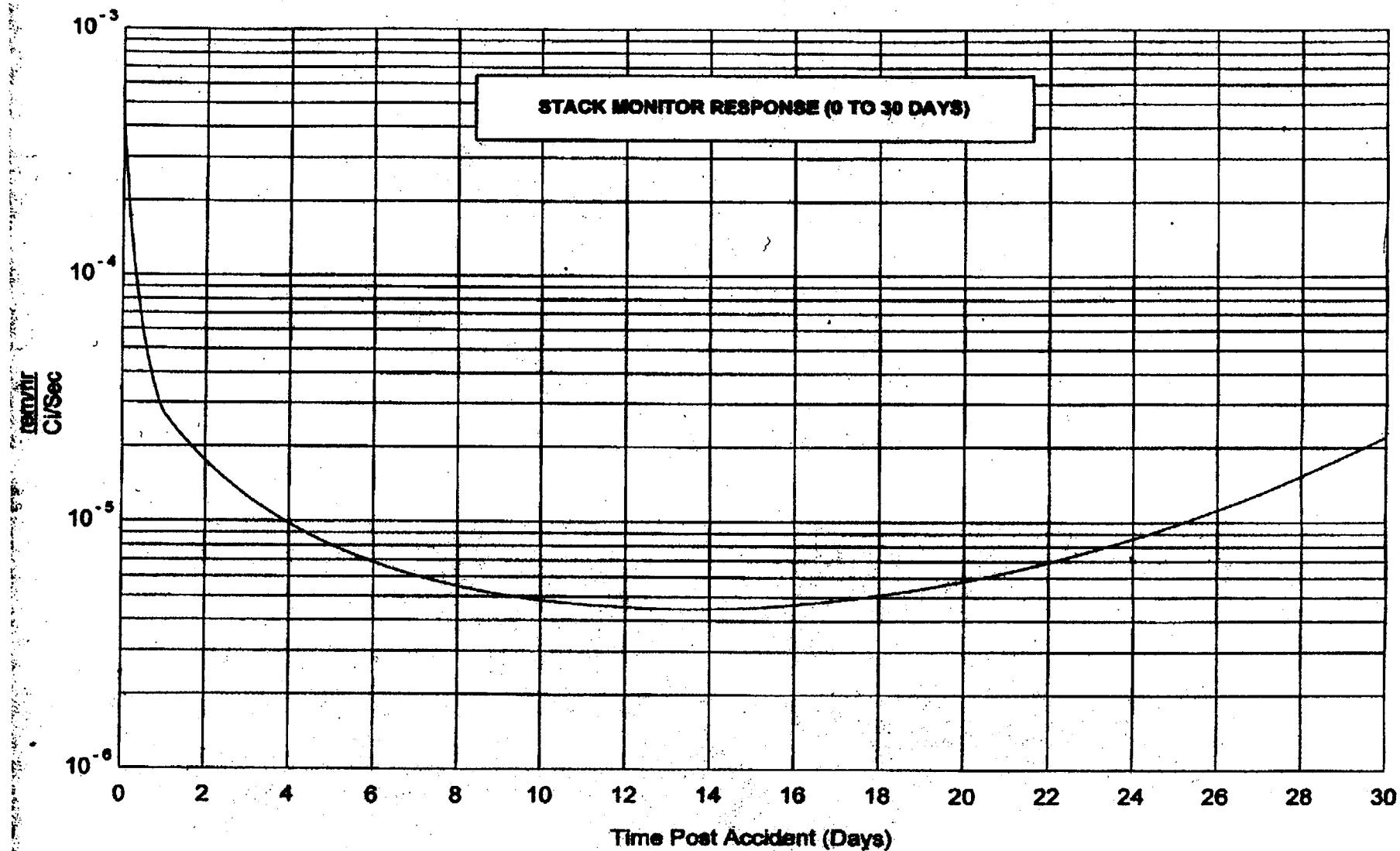
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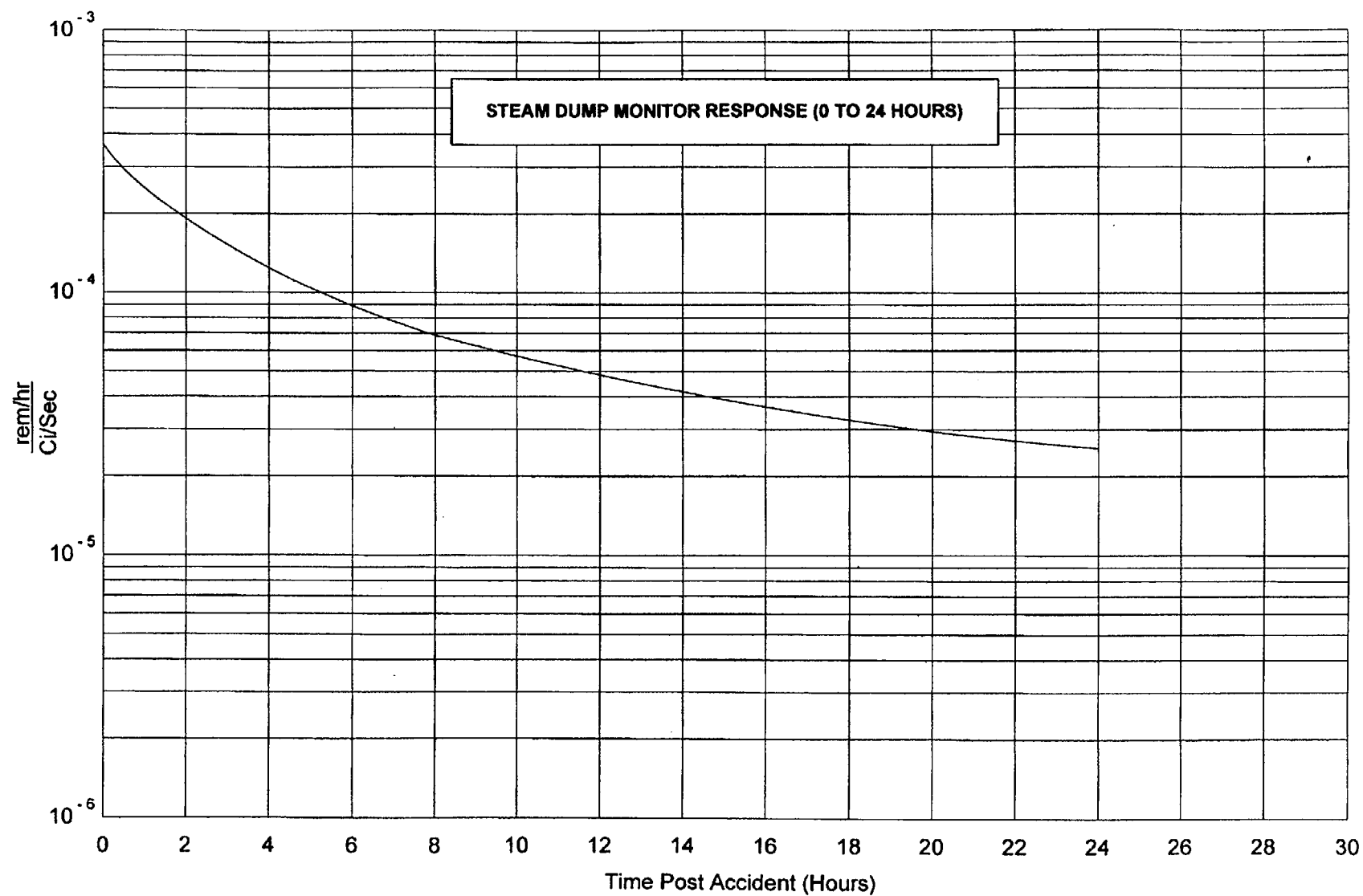
**STACK MONITOR CONVERSION FACTORS**  
**(0 TO 24 HOURS)**



**STACK MONITOR CONVERSION FACTORS**  
**(0 TO 30 DAYS)**

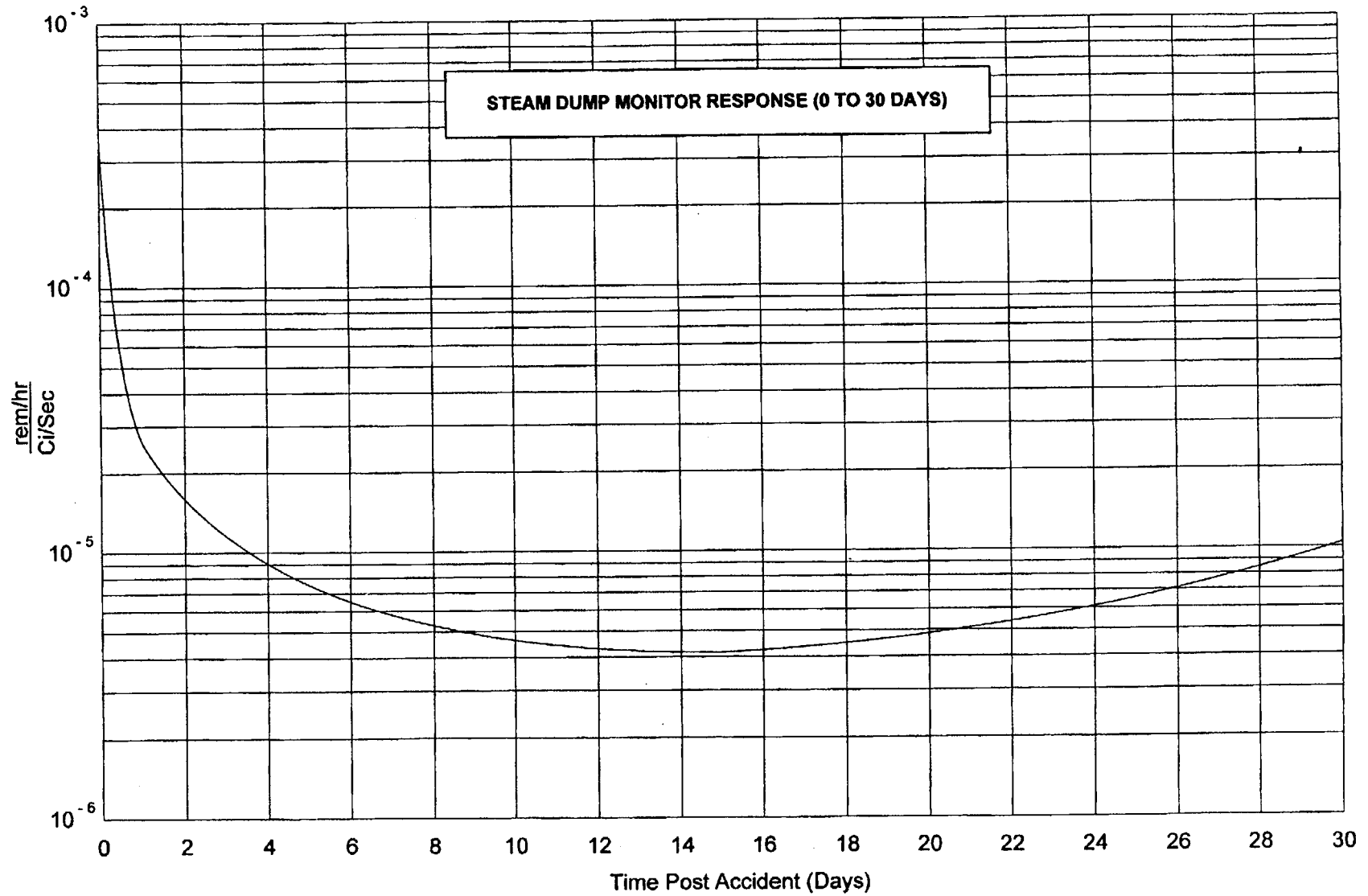


**STEAM DUMP MONITOR CONVERSION FACTORS**  
**(0 TO 24 HOURS)**



**STEAM DUMP MONITOR CONVERSION FACTORS**  
**(0 TO 30 DAYS)**

Proc No EI-6.3  
Attachment 4  
Revision 6  
Page 1 of 1



7. QN, noble gas release rate = #4 ÷ #6 = \_\_\_\_\_ Ci/s

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

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Completed By: \_\_\_\_\_