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INDIANA & MICHIGAN ELECTRIC COMPANY

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<u>EMERGENCY PLAN PROCEDURES</u> Initial Core Damage Assessment	J. Ersland via Information Records Center	PMP 2081 EPP.029 Rev. 0, TP# 1 12-20-83 <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> DCR DEC 22 1983 </div>	63

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INDIANA AND MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT
INSTRUCTION AND PROCEDURE CHANGE SHEET

INSTRUCTION OR PROCEDURE NO.: PMP 2081.EPP.029 REVISION NO.: 0 CHANGE SHEET NO.: 1

TITLE: INITIAL CORE DAMAGE ASSESSMENT

PAGE 1 of 1

ORIGINATED BY: <u>John England</u>	DATE: <u>12/5/83</u>
MANAGEMENT STAFF: <u>[Signature]</u>	DATE: <u>12/5/83</u>
SENIOR REACTOR OPERATOR: <u>[Signature]</u>	DATE: <u>12-6-83</u>
Q.A. SUPERVISOR: <u>[Signature]</u>	DATE: <u>19 Dec 83</u>
PNSRC: <u>[Signature]</u>	DATE: <u>12/15/83</u>
PLANT MANAGER: <u>E F Townley</u>	DATE: <u>12-20-83</u>
PROPOSED SUBC: <u>P. Helms</u>	DATE: <u>15 Dec 83</u>

EXPIRATION DATE: Life of Revision

DESCRIPTION OF CHANGE

Correction of containment sump samples for dilutions during post accident conditions.

REASON(S) FOR CHANGE

Incorporate dilution factors involved in P.A.S.S. use.

DCR

DEC 22 1983

INSTRUCTIONS FOR INCORPORATING CHANGE

REPLACE: Page 1 of 2 (List of Effective Pages), Rev. 0 with page 1 of 2, Rev. 0, TP-1.

Page 2 of 2 (List of Effective Pages), Rev. 0 with page 2 of 2, Rev. 0, TP-1.

Page 6 of 10, Rev. 0 with page 6 of 10, Rev. 0, TP-1.

ADD: Page 6A of 10, Rev. 0, TP-1.

EXHIBIT E, Rev. 0, TP-1.

LIST OF EFFECTIVE PAGES

<u>PAGE NUMBER</u>	<u>REVISION NUMBER AND DATE</u>
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ATTACHMENT 1

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ATTACHMENT 2

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EXHIBIT A

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EXHIBIT C

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EXHIBIT D

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EXHIBIT E

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Revision 0, TP-1, 12-20-83

<u>FUEL PELLETT MELTING</u>	<u>MONITOR READING</u>	<u>SAMPLE DOSE RATE</u>
10%	10^6 R/hr	34 R/hr
50%	5×10^6 R/hr	170 R/hr
100%	10^7 R/hr	340 R/hr

4.3 Core damage assessment based on post accident samples results. Record data on attachments 1 and 2.

4.3.1 Obtain a sample of the reactor coolant in order to investigate the changes in radionuclides concentrations relating to the fuel condition.

Using appropriate 12 THP.FAS. procedures, analyze the reactor coolant sample to check for the presence and concentration of krypton, xenon, iodine, cesium and tellurium radionuclides. Use the maximum activities for different fuel failure scenarios to determine the formula to use in determining percentage of fuel failures as indicated in paragraphs 4.3.2 through 4.3.5.

Samples obtained via the post accident sampling panel are automatically diluted by a factor of 1000. In case further sample dilution is required, the measured radionuclide concentrations should be multiplied by a second dilution factor (DF_1).

$$DF_1 = \left(\frac{w}{w^1} + 1 \right)$$

where: w = total weight of diluent material (weight of stable material), i.e. distilled water.

w^1 = total weight of undiluted material (weight of radioactive material).

If the reactor coolant system is incapable of maintaining pressure during a LOCA, use of the PASS for coolant system and/or RHR samples may not be possible. In such an event, samples of the lower containment

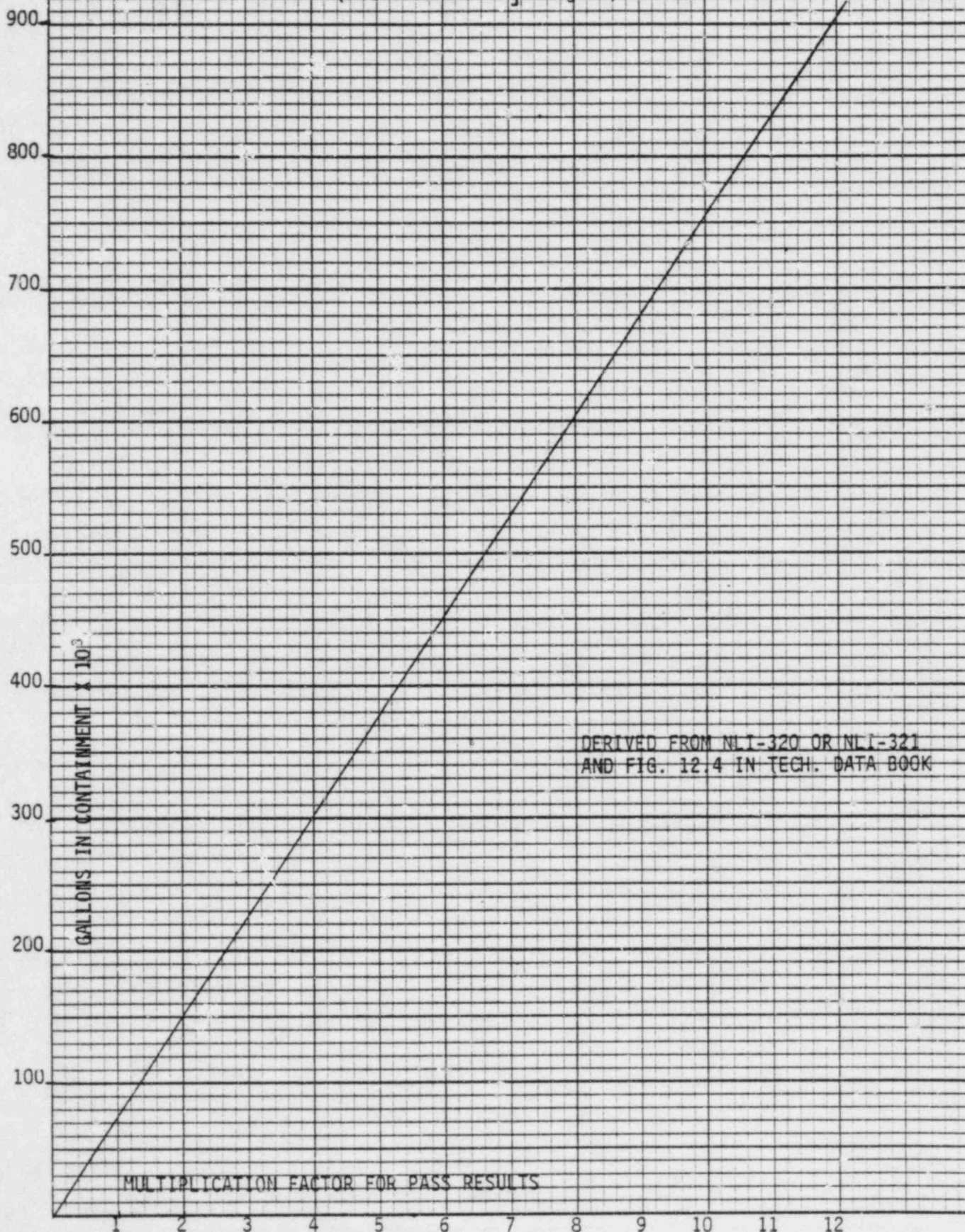
volume may be collected via the PASS, and sample activity results must be corrected for dilution by use of form 2081.EPP.029 Exhibit E.

- 4.3.2 Assume the maximum cladding failures by arbitrarily attributing all activity released in the reactor coolant for each radionuclide to fuel cladding failures as follows:

$$A_{CF} = \frac{\text{measured radionuclide concentration (Ci/g)} \cdot DF}{CF}$$

POST ACCIDENT SAMPLE DILUTION
CORRECTION CURVE

(RCS Volume = 75,520 gal.)

DERIVED FROM NLI-320 OR NLI-321
AND FIG. 12.4 IN TECH. DATA BOOK

MULTIPLICATION FACTOR FOR PASS RESULTS

INDIANA & MICHIGAN POWER COMPANY
DONALD C. COOK NUCLEAR PLANT

PLANT MANAGER PROCEDURES

INDEX

Identification Number	TITLE	Cover Sheet Rev. & Date	Procedure Rev. No.
PMP 2081 EPP.025	Activation and Operation of the Emergency News Source (ENS) (An Emergency Operations Facility)	Revision 1 6-24-82	
EPP.026	Use of Stable Iodine for Thyroid Blocking During a Radiation Emergency	Revision 1 9-8-82	TP-1, 5-24-83 EXP NA
EPP.027	Unit Vent Emergency Release Level Determination	Revision 0 3-1-83	TP-1, 4-29-83 EXP NA
EPP.029	Initial Core Damage Assessment	Revision 0 5-31-83	TP-1, 12-20-83 EXP-L/R