

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 7912270337 DOC. DATE: 79/12/20 NOTARIZED: NO DOCKET #
 FACIL: 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316
 AUTH. NAME: AUTHOR AFFILIATION
 SHALLER, D.V. Indiana & Michigan Power Co.
 RECIP. NAME: RECIPIENT AFFILIATION
 KEPPLER, J.G. Region 3, Chicago, Office of the Director

SUBJECT: Confirms 791219 verbal rept to RE Masse re nonconformance in small piping sys. Analysis indicated that 1-inch pipe between primary piping & excess let-down heat exchanger would be stressed above yield limit in event of earthquake.

DISTRIBUTION CODE: A002S COPIES RECEIVED: LTR 1 ENCL 0 SIZE: 1
 TITLE: Incident Reports

NOTES: ~~SEND 3 COPIES OF ALL MATERIAL TO I&E~~

ACTION:	RECIPIENT	COPIES		RECIPIENT	COPIES	
	ID CODE/NAME	LTTR	ENCL	ID CODE/NAME	LTTR	ENCL
INTERNAL:	05 BC ORB# 1	4				
	01 REG FILE	1		02 NRC PDR	1	
	09 I&E	2		11 MP&A	3	
	14 TA/EDO	1		15 NOVAK/KNIEL	1	
	16 EEB	1		17 AD FOR ENGR	1	
	18 PLANT SYS BR	1		19 I&C SYS BR	1	
	20 AD PLANT SYS	1		22 REAC SAFT BR	1	
	23 ENGR BR	1		24 KREGER	1	
	25 PWR SYS BR	1		26 AD/SITE ANAL	1	
	27 OPERA LIC BR	1		28 ACIDENT ANALYS	1	
	29 AUX SYS BR	1		E JORDAN/IE	1	
	HANAUER, S.	1		R IRELAND	3	
	STS GROUP LEADR	1		TMI-H STREET	1	
EXTERNAL:	03 LPDR	1		04 NSIC	1	
	29 ACRS	16	16			

JAN 2 1980

TOTAL NUMBER OF COPIES REQUIRED: LTTR

54 51 ENCL 0 51

60 404

1. The first part of the report is a general description of the project. It includes the title, the objectives, the scope, and the methodology. The title is "A Study of the Effect of Temperature on the Rate of Reaction of Hydrogen Peroxide with Potassium Iodide". The objectives are to determine the effect of temperature on the rate of reaction and to determine the activation energy of the reaction. The scope is to study the reaction at temperatures between 10°C and 30°C. The methodology is to use the method of initial rates.

2. The second part of the report is a description of the experimental procedure. It includes the list of materials, the apparatus, and the steps of the experiment. The materials are hydrogen peroxide, potassium iodide, and sulfuric acid. The apparatus is a reaction flask, a thermometer, and a stopwatch. The steps of the experiment are to prepare the reaction mixture, to measure the time for the reaction to occur, and to calculate the rate of reaction.

3. The third part of the report is a description of the results of the experiment. It includes the data table, the graph, and the calculations. The data table shows the rate of reaction at different temperatures. The graph shows the rate of reaction versus temperature. The calculations show the activation energy of the reaction.

4. The fourth part of the report is a discussion of the results. It includes the interpretation of the data, the comparison with the theoretical results, and the conclusion. The interpretation of the data shows that the rate of reaction increases with temperature. The comparison with the theoretical results shows that the experimental results are in good agreement with the theoretical results. The conclusion is that the rate of reaction of hydrogen peroxide with potassium iodide increases with temperature and that the activation energy of the reaction is 50 kJ/mol.



INDIANA & MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT
P.O. Box 458, Bridgman, Michigan 49106

December 20, 1979

Mr. J.G. Keppler, Regional Director
Office of Inspection and Enforcement
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Operating License DPR-74
Docket No. 50-316

Dear Mr. Keppler:

This is to confirm our verbal report to NRC Region III Inspector,
Mr. R.E. Masse, at 1620 hours on December 19, 1979.

At that time we reported that as part of the inspection and analysis process mandated by IE Bulletin 79-14, a significant non-conformance was identified in a small piping system of Unit 2 of the Cook Plant. This significant non-conformance arose because of a discrepancy between the piping design analysis and the "as-built" condition. The piping involved is a 1.0" diameter line, connected between the primary piping and the excess let-down heat exchanger. Reanalysis indicated that the 1.0" diameter pipe would be stressed above the yield limit in the unlikely event that the Design Basis Earthquake occurs. The piping system was reanalyzed with two additional restraints and all the stresses were found to be within the code allowable limit. The modification is being implemented in the Unit.

A followup report will be submitted by January 2, 1980, as required by Technical Specification Section 6.9.1.8.

Sincerely,

D.V. Shaller
Plant Manager

/bab

cc: J.E. Dolan
R.S. Hunter
R.W. Jurgensen
R.F. Kroeger
R. Kilburn
R.E. Masse RO:III
R.C. Callen MPSC
G. Charnoff, Esq.

G. Olson
J.M. Hennigan
PNSRC
J.F. Stietzel
E.L. Townley
Dir., IE (40 copies)
Dir., MIPC (4 copies)

Handwritten: A002 3/6

Handwritten: 7912270337