



OHIO EDISON COMPANY

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ROBERT J. McWHORTER
VICE PRESIDENT

December 1, 1978

Mr. Robert Baer
Chief, Light Water Reactors
Branch No. 2
Division Project Management
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Ohio Edison Company, et al
Erie Nuclear Plant, Units 1 & 2
Docket Nos. STN50-580 & STN50-581
Company Reorganization and Leak Rate Analysis

Dear Mr. Baer:

In a recent telephone conversation between Mr. D. Tibbitts of the NRC and Mr. R. Walter of OEC, a question arose regarding the responsibilities of the Manager, Quality Assurance Department. The following is an explanation of those responsibilities. The Manager, Quality Assurance Department has assumed all the duties of the previous Chief Nuclear Quality Assurance Engineer. In addition, the Manager, Quality Assurance Department has responsibility for all non-nuclear quality assurance. These changes regarding the Ohio Edison Company reorganization will be incorporated into a future amendment to the PSAR.

In another telephone conversation between the same parties, the NRC informed Ohio Edison that further clarification of the leak rate analysis for the main steam isolation valve is required in order for them to complete their review. The following information is being submitted to provide that clarification:

1. The homogenous model from RELAP 4 was used to size the 1 GPM hole at $1.582 \times (10^{-5}) \text{ ft}^2$. Sonic flow was assumed.
2. The post accident flow was calculated using the following equation from Dynamics and Thermodynamics of Compressible Fluid Flow, A. H. Shapiro, 1933:

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$$\frac{W}{A} = \sqrt{\frac{K}{R} \left(\frac{2}{K+1}\right)^{\frac{K+1}{K-1}} \frac{P}{g \sqrt{T}}}$$

$$\frac{W}{A} = .411 \frac{P}{\sqrt{T}}$$

The equation assumes sonic flow.

3. The percent leak rate per day was obtained by making a plot of the post LOCA leak rates from a CONTEMPT run. This plot leveled out at just below a peak of .14%/day, which the plot appeared to approach asymptotically.

If you have any questions or comments on the above, please advise.

Very truly yours,

R. J. McWhorter
by
B. M. Miller

BMM/ROW:cvc

cc: DWHayes (USNRC OIE:III)
RThoma (Oak Ridge National Lab)
HKohn (OPSC)
Jackerman (Ohio Dept. of Health)
PGasteier (Erie County Commissioner)
RIMustard (USEPA, Chicago)
Librarian/Thermal Reactors Group
(Brookhaven National Lab)
Atomic Industrial Forum
GCharnoff (SPPT)
ESTebbins
RTufts

A F F I D A V I T

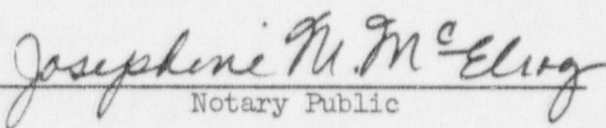
STATE OF OHIO)
) SS.
SUMMIT COUNTY)

On December 1, 1978, before me, a Notary Public in and for the State and County aforesaid, personally appeared Barry M. Miller, who after being duly sworn according to law, deposed and said that he is Manager, Erie Nuclear Plant Project of Ohio Edison Company, an Ohio Corporation, that in such capacities he is authorized to sign official correspondence on behalf of Robert J. McWhorter, Vice President, in relation to licensing for the Erie Nuclear Plant and therefore authorized to make this Affidavit; and that the foregoing is true and correct to the best of his knowledge, information, and belief.



Barry M. Miller

Sworn to and subscribed before me the day and year aforesaid.



Notary Public

JOSEPHINE M. McELROY
NOTARY PUBLIC — STATE OF OHIO
RESIDENT OF SUMMIT COUNTY
My Commission Expires Aug. 17, 1982