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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY
LICENSING & SERVICE

before the
ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)

PUBLIC SERVICE COMPANY OF NEW)
HAMPSHIRE, et al.)

) Docket Nos. 50-443 OL
) 50-444 OL

(Seabrook Station, Units 1 & 2))
_____)

APPLICANTS' ANSWERS TO
"SAPL FIRST SET OF INTERROGATORIES
AND REQUEST FOR PRODUCTION OF DOCUMENTS
TO APPLICANT PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE"

Pursuant to 10 CFR § 2.740b, the Applicants hereby
respond to the "SAPL First Set of Interrogatories and
Request for Production of Documents to Applicant Public
Service Company of New Hampshire," served on them by
mail on October 28, 1982.

SPECIFIC INTERROGATORIES

Interrogatory No. 1

Question:

What criteria and standards were used to analyze the probability of occurrence of radiation and/or radioactive material releases and the probability of occurrence of the environmental consequences of those releases as required in the Interim Policy Statement of the NRC dated June 13, 1980?

Answer:

The basis for determining the probability of occurrence and the environmental consequences of accidents is discussed in Section 7.2 of the Seabrook Environmental Report.

Interrogatory No. 2

Question:

What weight was given to those probabilities?

Answer:

The probabilities of events or consequences were not weighted.

Interrogatory No. 3

Question:

What computer code or methodology was used?

Answer:

The risk calculations were performed using the CRAC computer code as discussed in Section 7.4.1 of the Seabrook Environmental Report.

Interrogatory No. 4

Question:

What events or accident sequences were identified and included in the analysis?

Answer:

See Seabrook Environmental Report, Operating License Stage, Section 7.3.3.

Interrogatory No. 5

Question:

What was the weight given to such events or accident sequences in the analysis?

Answer:

See Seabrook Environmental Report, Operating License Stage, Section 7.3.3.

Interrogatory No. 6

Question:

Identify the inplant accident sequences leading to releases that were included in the analysis. Identify those inplant sequences which can result in inadequate cooling of reactor fuel and to melting of reactor core.

Answer:

See Seabrook Environmental Report, Operating License Stage, Section 7.3.7.

Interrogatory No. 7

Question:

Identify those inplant sequences which were not included in the analysis.

Answer:

See Seabrook Environmental Report, Operating License Stage, Section 7.3.4.

Interrogatory No. 8

Question:

Identify those events which arise from causes external to the plant which are considered possible contributors to risk associated with the Seabrook plant.

Answer:

See Seabrook Environmental Report, Operating License Stage, Section 7.3.6.

Interrogatory No. 9

Question:

What was the weight accorded to events arising external to the plant?

Answer:

See Seabrook Environmental Report, Operating License Stage, Section 7.3.6.

Interrogatory No. 10

Question:

What events arising external from the plant were not considered possible contributors to risk associated with the Seabrook plant?

Answer:

See Seabrook Environmental Report, Operating License Stage, Section 7.3.6.

Interrogatory No. 11

Question:

What is the overall methodology used in the probabilistic analysis estimate as required in the Interim Policy Statement of June 13, 1980?

Answer:

See Seabrook Environmental Report, Operating License Stage, Section 7.2.

Interrogatory No. 12

Question:

What is the weight or basis given to environmental consequences of releases whose probability of occurrence was estimated and included in the analysis? Specifically what weight was given to potential radiological exposures to individuals, to population groups and to the biota?

Answer:

The CRAC computer code considers radiation exposure to population groups and to individuals. These exposures were not weighted.

First Interrogatory No. 13

Question:

Identify those health and safety risks that were analyzed and give the basis or weight which those consequences had in the overall analysis. Also identify the socio-economic impacts that were included in the analysis and identify those socio-economic impacts that might be associated with emergency measures during or following an accident.

Answer:

The health and safety risks that were analyzed included early fatalities, latent fatalities, population exposure and mean individual exposure. These risks were not weighted. The socio-economic impacts analyzed included the costs of evacuation or relocation of the population, and the costs of decontamination or interdiction of land and agricultural products. These would be the chief socio-economic impacts following an accident.

Second Interrogatory No. 13

Question:

On what basis and what weight was given to the environmental risk of accidents which was compared to and contrasted with radiological risks associated with normal and anticipated operational releases?

Answer:

The environmental risks of accidents were not weighted when compared with normal operating doses. The comparison is shown in Table 7.4-8 of the Seabrook Environmental Report.

Interrogatory No. 14

Question:

In accordance with the interim Policy Statement of June 13, 1980, in which the Commission stated that the state-of-the-art of probabilistic risk assessments is sufficiently advanced so that a beginning should now be made in the use of these methodologies in the regulatory process, what is the current state-of-the-art methodology which the Applicant utilized in discussing environmental risks associated with accidents?

Answer:

The methodologies developed in the Reactor Safety Study (WASH-1400) were utilized in Chapter 7 of the Environmental Report.

Interrogatory No. 15

Question:

Identify specifically the significant site features and significant plant specific features of the Seabrook nuclear power plant which were studied in the Applicant's Environmental Risk Assessment as required in the NRC's Interim Policy Statement, June 13, 1980.

Answer:

The significant site features are discussed in Section 7.4.2 of the Environmental Report. The significant plant features are discussed in Sections 7.3.1 and 7.3.2 of the Environmental Report.

Interrogatory No. 16

Question:

Please state whether PSCO has performed or contracted for the performance of any studies assessing the probability of occurrences for any or all of the following American Nuclear Society Conditions IV events:

- A. "Steam System Piping Failures" under the classification of "Increase in Heat Removal by the Secondary System" in the Final Safety Analysis Report, Vol. 12, page 15.1-13.
- B. "Feedwater System Pipe Break" under the classification "Decrease in Heat Removal by the Secondary System" in the Final Safety Analysis Report, Vol. 12, page 15.1-16.
- C. "Reactor Coolant Pump Shafts Seizure (Cracked Rotor)" under the classification "Decrease in Reactor Coolant System Flow Rate" in the Final Safety Analysis Report, Vol. 13, Page 15.3-5.

- D. "Reactor Coolant Pump Shaft Break" under the classification "Decrease in Reactor Coolant System Flow Rate" in the Final Safety Analysis Report. Vol. 13, page 15.3-11.
- E. "Spectrum of Rod Cluster Control Assembly Ejection Accidents" under the classification "Reactivity and Power Distribution Anomalies" in the Final Safety Analysis Report, Vol. 13, page 15.4-27.
- F. "Steam Generator Tube Rupture" under the classification of "Decrease in Reactor Coolant Inventory" in the Final Safety Analysis Report," Vol. 13, page 15.6-5.
- G. "Loss of Coolant Accidents Resulting from a Spectrum of Postulated Piping Breaks within the Reactor Coolant Pressure Boundary" under the classification "Decrease in Reactor Coolant Inventory" in the Final Safety Analysis Report, Vol. 13, page 15.6-12.
- H. "Fuel Handling Accident" under the classification "Radioactive Release from a system or Component" in the Final Safety Analysis Report, Vol. 13, page 15.7-10.

Answer:

PSCO has contracted Pickard, Lowe and Garrick, Inc., (PLG) for a full scope Seabrook Station Probabilistic Safety Assessment (SPSA). The following data sources will be used to develop probability of occurrence of the initiating events:

1. NRC Operating Unit Status Reports and Summaries ("Grey Books" and "Green Books").
2. EPRI Transient Report (EPRI NP-821).

3. Westinghouse Reports.

4. Reactor Safety Study Report (WASH-1400).

In addition to the above-mentioned sources, FLG recently introduced a methodology considering leakage and rupture probabilities for pipes and vessels which may be used to determine probability of occurrence of Loss-of-Coolant Accidents from a Spectrum of Postulated Piping Breaks within the Reactor Coolant Pressure Boundary.

Interrogatory No. 17

Question:

If any studies have been done with respect to any or all of the items in question 16 above who performed the studies?

Answer:

See response to Interrogatory No. 16.

Interrogatory No. 18

Question:

If any studies have been done with respect to any or all of the items in question 16 above, what were the sources of data used in the studies?

Answer:

See response to Interrogatory No. 16.

Interrogatory No. 19

Question:

If any studies have been done with respect to any or all of the items in question 16 above, were they based on data obtained before or after the Three Mile Island accident?

Answer:

The study outlined in the response to Interrogatory No. 17 will be based on data obtained both before and after the Three Mile Island accident.

Interrogatory No. 20

Question:

If any studies have been done with respect to any or all of the items in question 16 above, what were the costs of the studies?

Answer:

The present budget to PLG is 1.7 million dollars for the complete SPSA study.

Interrogatory No. 21

Question:

If any studies have been performed with respect to any or all of the items in question 16 above, have they been updated since the Three Mile Island accident?

Answer:

The data for the SPSA will reflect events up to the present.

Interrogatory No. 22

Question:

Please provide copies of any and all studies referred to in question 16.

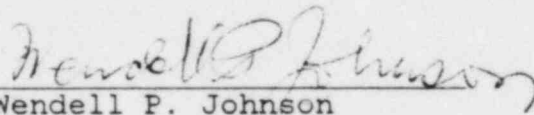
Answer:

The SPSA study has not been completed at the present time.

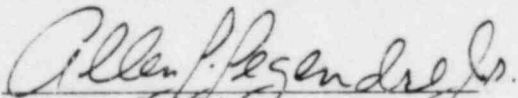
Signatures

As to Answers:


I, Wendell P. Johnson, being first duly sworn, do depose and say that the foregoing answers are true, exact insofar as they are based on information that is available to the Applicants but not within my personal knowledge, as to which I, based on such information, believe them to be true.


Wendell P. Johnson

Sworn to before me this
12th day of November, 1982:


Notary Public
My Commission expires: August 5, 1988

As to Objections:


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CERTIFICATE OF SERVICE

I, Thomas G. Dignan, one of the attorneys for the Applicants herein, hereby certify that on November 12, 1982 I made service of the within "Applicants' Answers to 'SAPL First Set of Interrogatories and Request for Production of Documents to Applicant Public Service Company of New Hampshire'" by mailing copies thereof, postage prepaid, to:

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