

MAY 20 1986

50-322

Mr. John D. Leonard, Jr.,
Vice President, Nuclear Operations
Long Island Lighting Company
Post Office Box 618, North Country Road
Wading River, New York 11792

Dear Mr. Leonard:

SUBJECT: ALTERNATE POST-ACCIDENT SAMPLING ANALYSIS METHOD

In your letter dated March 17, 1986 (SNRC-1232), you proposed a modification to the Post-Accident Sampling System (PASS) offsite backup analysis technique, as discussed in Revision 31 of the FSAR and in SSER, Supplement 1. We have reviewed the proposed alternative to the PASS analysis capability and conclude that it meets the criteria of Item II.B.3, "Post-Accident Sampling" in NUREG-0737. Therefore, we find the proposed method for post-accident sampling backup analysis to be acceptable. Our Safety Evaluation on this subject is enclosed.

Sincerely,

Original signed by

Walter R. Butler, Director
BWR Project Directorate #4
Division of BWR Licensing

Enclosure:
As stated

cc w/enclosure:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Sincerely,

A handwritten signature in cursive script that reads "Walter R. Butler".

Walter R. Butler, Director
BWR Project Directorate #4
Division of BWR Licensing

Enclosure:
As stated

cc w/enclosure:
See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATING TO POST ACCIDENT SAMPLING OFFSITE ANALYSIS OF A
REACTOR COOLANT GRAB SAMPLER LONG ISLAND LIGHTING COMPANY

SHOREHAM NUCLEAR POWER STATION

DOCKET NO. 50-322

1.0 INTRODUCTION

By letter dated March 17, 1986, the licensee requested approval of a modification to their Post-Accident Sampling System (PASS) offsite analysis capability. In Revision 31 of the FSAR and SSER, Supplement 1, backup analysis capability was planned for shipping a pressurized and undiluted grab sample from the PASS to an offsite laboratory. Upon further investigation into providing this capability, the licensee determined that no licensed shipping container is available for handling a pressurized PASS sample. In place of the pressurized undiluted grab sample, the licensee has identified an alternate in line method to provide the backup analysis capability.

2.0 EVALUATION

Criterion (4) of Item II.B.3 of NUREG-0737 indicates that pressurized coolant samples are not required if the licensee can quantify the amount of gases with unpressurized reactor coolant samples. The licensee has the capability to meet this requirement with unpressurized coolant samples in the PASS, as well as a backup method with unpressurized coolant samples, should the normal method malfunction. The normal method strips out the dissolved gas from an unpressurized coolant sample and expands it into a known volume flask where pressure and temperature are measured. From the known volume, pressure, and temperature the reactor coolant gas content can be calculated. As a backup, if the pressure or temperature instrumentation should malfunction, the dissolved gas can be stripped into the entire gas extraction loop rather than the known volume flask. The volume of the loop is known and pressure and temperature instrumentation are in this loop. Thus, the variables needed to calculate reactor coolant gas content are available.

3.0 CONCLUSION

The proposed modification to the PASS meets criterion (4) and (8) of Item II.B.3 in NUREG 0737 and is, therefore, acceptable. Criterion (4) indicates that pressurized coolant samples are not required. Criterion (8) states that backup sampling is needed if inline monitoring is used. Therefore, the licensee may use the method of expanding dissolved gas into the entire gas extraction loop as a backup means of determining reactor coolant dissolved gas levels.