Jersey Central Power & Light Company

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MADISON AVENUE AT PUNCH BOWL ROAD • M DRRISTOWN, N. J. 07960 • 201-539-6111

General October Public Utilities Corporation

June 19, 1974



Mr. L. Manning Muntzing Director of Regulation Directorate of Licensing Office of Regulation U. S. Atomic Energy Commission Washington, D. C. 20545

Dear Mr. Muntzing:

Subject: Oyster Creek Nuclear Generating Station

Docket No. 50-219

ECCS, Application for Extension

Enclosed are 39 copies and one original of an application for extension of time for submittal of an ECCS evaluation for the Oyster Creek Station pursuant to the provisions of 10 CFR 50.46.

Very truly yours,

Ivan R. Finfrock, Jr.

Vice President

Enclosures

5609

3500

REQUEST FOR EXTENSION OF TIME TO SUBMIT EMERGENCY CORE COOLING SYSTEM EVALUATION

Pursuant to Section 50.46 (a) (2) (iii) to 10 CFR Part 50, Jersey Central Power and Light Company (JCP&L) requests for good cause as shown hereinafter a twenty week extension of the six month period specified for submission of an emergency core cooling system (ECCS) evaluation. In the absence of approval of the extension sought by this request, JCP&L would be required to submit the evaluation for the Oyster Creek Nuclear Generating Station by August 5, 1974. The reasons for this request are the difficulties experienced in developing and implementing the appropriate evaluation models in general and the peculiar circumstances of the Oyster Creek evaluation, in particular.

The Oyster Creek Nuclear Generating Station is powered by a General Electric nuclear steam supply system (NSSS) which contains two types of fuel supplied by the General Electric Company and three types supplied by the Exxon Nuclear Company. The NSSS and the five individual fuel types must be evaluated in order to determine pursuant to the Commission's criteria whether Oyster Creek's ECCS is satisfactory. Individual utilities like JCP&L do not have the capability for ECCS model development and are dependent, therefore, for schedule purposes on the performance of the particular vendors and fuel suppliers.

As recognized by the Commission in its opinion which accompanied issuance of the Acceptance Criteria, there are considerable differences between the ECCS evaluation models approved under the Interim Acceptance Criteria (IAC) and the required and acceptable features of evaluation models described in Appendix K to 10 CFR 50. In many cases the differences result from the requirement to model physical phenomena in more detail. This requirement for increased detail results in numerical analysis problems which make model development technically difficult and time consuming. Further, Appendix K does not define, approve or make available any acceptable evaluation models. The extensive effort involved and the nature of

Appendix K has caused the various vendor technical organizations to seek further definitions of model suitability and conformity to Appendix K from the AEC staff.

The problems of developing an approved LOCA evaluation model for Oyster Creek are further compounded by the fact that Appendix K is silent about characteristics of acceptable evaluation models for non-jet pump BWR's. Thus, Oyster Creek along with other non-jet pump BWR's should be entitled to special consideration in the determination of a reasonable time period for full compliance with 50.46 of 10 CFR 50.

These circumstances have resulted in a situation where, in spite of the best efforts of all concerned parties, model development is not yet complete and concurrence has not been reached on the suitability of all models to be used. Thus, of the six month period allowed by the new rule for implementation of Appendix K, there remains less than two months for the completion and check out of models, and the analysis, review, and evaluation of ECCS performance in Oyster Creek including definition of appropriate operating restrictions and/or plant modifications.

The ECCS evaluation requires the sequential analysis of the reactor coolant system blowdown, the reactor fuel heat up, and the performance of the engineered safeguards systems. The blowdown of the reactor coolant system is characterized by the performance features of that system and overall core parameters and is not affected by small differences introduced by reload fuel. Thus, it is appropriate for the NSSS vendor to perform the NSSS blowdown analysis and for each fuel manufacturer to then perform the fuel-type-dependent heat up analysis. On previous occasions where a LOCA evaluation of Oyster Creek reload fuel supplied by the Exxon Nuclear Company was required, an analysis of the blowdown portion of the accident was available from the NSSS supplier. In addition, heat transfer coefficients

applicable throughout the entire accident were also available since these coefficients were derived from AEC funded test programs on representative simulated fuel bundles. Thus, Exxon Nuclear was able to analyze the heat-up and subsequent peak clad temperatures of their fuel bundles during a LOCA by making use of these blowdown performance characteristics and heat transfer coefficients. Under the present circumstances, the Appendix K blowdown analysis of the Oyster Creek primary coolant system will not be available until the NSSS supplier has completed development of a non-jet pump EWR blowdown model and, in fact, not until it has completed analysis of fuel of its manufacture. This is not expected until after the expiration of the six month period. Thus, the LOCA performance analyses of both the General Electric and Exxon supplied reload fuels for Oyster Creek will necessarily be delayed.

JCP&L as the licensee and operator of the Oyster Creek Nuclear Generating Station, through its sister subsidiary company, GPU Service Corporation (GPUSC), has requested that the General Electric Company (GE) perform the blowdown analysis for the Oyster Creek reactor coolant system and the complete LOCA analysis of the 336 GE fuel assemblies presently in the Oyster Creek reactor. Exhibit (1) attached to this request specifies that the blowdown analysis and the complete LOCA analysis for the GE fuel assemblies now in the Oyster Creek reactor will not be available prior to September 30, 1974. Thus, GE's development schedule precludes detailed technical review of the LOCA analysis model by GPUSC/JCP&L until after the expiration of the six month period. Such a review is to continue until model development is complete and compliance with Appendix K is assured. As specified in Exhibit (2), GPUSC requires three weeks, from receipt of GE's completed LOCA analysis, for an

appropriate technical review on behalf of JCP&L. Finally, as specified in Exhibit (3), JCP&L as the licensee requires three weeks for the operations and safety committee reviews (pursuant to the Oyster Creek operating license and Appendix B of 10 CFR Part 50) and final approval. Thus, the projected date for submittal of the analysis of the now mostly depleted GE initial core and reload fuel is November 11, 1974.

Similarly, JCP&L has requested that the Exxon Nuclear Company provide the complete LOCA analysis of 224 Exxon Nuclear fuel assemblies now in the system. As specified in Exhibit (4), the Exxon Nuclear Company requires six weeks from receipt of the blowdown analysis results to evaluate the performance of the Exxon Nuclear fuel assemblies (three types: lead assemblies, Reload 2 and Reload 3) in the Oyster Creek reactor. Technical, operations, and safety review of this material is expected, as in the case of the GE product, to consume six weeks as specified in Exhibits (2) and (3). Thus, the projected date for submittal for your review of the analysis of Exxon fuel in the Oyster Creek Plant is December 23, 1974.

As stated previously, JCP&L cannot, until completion of the reviews of both the GE and Exxon analyses, provide the Director with a comprehensive evaluation for the Oyster Creek facility. Accordingly, it is requested that JCP&L be granted a twenty week extension from August 5, 1974, to December 23, 1974, to provide a complete ECCS analysis in conformance with Appendix K to 10 CFR Part 50.

During the requested extension period (August 5, 1974 - December 23, 1974),

JCP&L proposes to operate Oyster Creek Nuclear Generating Station as follows.

On August 5, 1974, absent Commission approval of a separate exemption application,

we will institute voluntary restrictions on the operating conditions of the Oyster Creek unit. The restrictions will be based initially on the best information available at that time -- the interim results of the General Electric LOCA analysis and the results of preliminary Exxon LOCA analyses (calculated using General Electric's IAC blowdown results). These voluntary restrictions may be varied thereafter (but only until the analyses are finalized and proposed technical specification modifications are submitted) to reflect updated calculations as they become available. JCP&L will advise the Commission as new information becomes available and will review this information with the Commission on a timely basis. By November 11, 1974, the LOCA fuel analyses for the two General Electric fuel types will have been finalized and will be submitted to you along with proposed changes in the technical specifications dictated by the results of the LOCA fuel analyses for the GE fuel. Plant operation from that date until December 23, 1974, will be governed by the voluntary restrictions relevant to the Exxon fuel types and the proposed technical specifications relevant to the GE fuel. Finally, by December 23, 1974, the LOCA fuel analyses for the three Exxon fuel types will have been finalized and will be submitted to you. At that time proposed technical specification changes which incorporate consideration of the LOCA analyses for all five types of fuel will be submitted to you and in accordance with 50.46 the plant will thereafter be operated in conformance with those proposed technical specifications.

Ivan R. Finfrock, Jr. Vice President

Exhibit (1) consists of:

- 1. The attached affidavit of Aaron J. Levine
- 2. Letter dated June 18, 1974, J. F. Kilty to B. H. Cherry

AFFIDAVIT OF AARON J. LEVINE

- I, Aaron J. Levine, being duly sworn, depose and state as follows:
- 1. My name is Aaron J. Levine. I am the manager of Project Licensing Unit-I for General Electric Company's Nuclear Energy Products Division. In this position, I have been involved in the AEC review of the General Electric emergency core cooling system (ECCS) evaluation models, on development of the schedules for completing calculation and in coordination with the operators of plants subject to new ECCS evaluation.
- 2. General Electric has been requested by the operators of the following plants to provide emergency core cooling system (ECCS) calculations for filing on August 5, 1974, pursuant to 10 CFR § 50.46:

							EXCRET NO.
Vermont Yankee							50-271
Brunswick-2							50-325
Millstone							50-245
Dresden-2 & -3							50-237 & 50-249
Quad Cities-1 & -2 .							50-254 & 50-265
Monticello							
Oyster Creek							
Nine Mile Point							
Pilgrim							50-293
TVA-1, -2 & -3							50-259, 50-260 & 50-296
Peach Bottom-2 & -3							50-277 & 50-278
Cooper							
Duane Arnold							50-331
Fitzpatrick							50-333
Hatch-l					*		50-321

3. In order to perform such calculations, it has been necessary for General Electric to develop a new evaluation model to conform to the requirements of Commission regulations and to secure Atomic energy Commission (AEC) Staff concurrence in use of the new model. The calculations utilize new evaluation models in conjunction with the specific parameters for each of the 20 plants and are performed for a number of loss-of-coolant accidents for each plant of different sizes, locations and other properties sufficient to provide assurance that the entire spectrum of

Affidavit of Aaron J. Levine, Continued

postulated loss-of-coolant accidents (LOCA) is covered.

- 4. General Electric's new evaluation model consists of the following parts:
 - a. Short-Term Thermal-Hydraulic Model;
 - b. Transient Critical Power Model;
 - c. Long-Term Thermal-Hydraulic Model;
 - d. Core Heat-up Model.
- These models have been under intensive review by the Staff since that time and have been discussed with the Advisory Committee on Reactor Safeguards. Upon concurrence from the Staff with the first two parts of the model in April, specific plant calculations were commenced. The calculations for the last parts of the model will commence promptly at the time at which the necessary outputs from the first parts of the model are available.
- 6. The current schedule for completion of calculations for these 20 plants is July 15, 1974. The results of the calculations will be promptly compiled and distributed for use by the plant operators in their filings.

 Because of the sequential procedure of the calculational operation, the results of all 20-plant calculations will become available essentially simultaneously.
- 7. Each plant was furnished with preliminary estimates of the maximum average planar linear heat generation rate expected for it as a result of the application of the Appendix K criteria. These remain, the best estimates of the calculated results at this time. It is General Electric's opinion that for most plants these estimates are accurate to about 10%.

 Because of the volume of calculational work and the sequential nature

Affidavit of Paron J. L 'ina, Continued

of the dilutional operation, no better estimates will be available prior to the completion of the calculations.

Caron Levine

Subscribed and sworm to before me this 17 tay of June, 1974.

-Kotary Public

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lib Conner Avence, San Jose, Ca. 101.4



NUCLEAR ENERGY DIVISION

GENERAL ELECTRIC COMPANY, 175 CURTNER AVENUE, SAN JOSE, CALIFORNIA 95125
Mail Code Phone (408) 297-3000, TWX NO. 910-338-0116

June 18, 1974

Mr. B. H. Cherry
Manager, Nuclear Fuels
General Public Utilities
260 Cherry Hill Road
Parsippany, New Jersey 07054

SUBJECT: ECCS CALCULATIONS

Dear Bud:

As per recent telephone and telex communications, an error has been discovered in the basic RELAP 4 code that GE had planned to use to evaluate the blowdown of the Oyster Creek primary coolant system. It is GE's opinion that the RELAP 4 model is the most appropriate one to use to evaluate the hypothesized Oyster Creek LOCA. The error will require an estimated two weeks to correct. GE personnel are now working directly with the authors of RELAP to resolve the error. An additional two weeks are estimated as required to make the corrected version of RELAP operational on the GE computational system. Finally, it is estimated that the full blowdown and LOCA analyses requested by GPUSC/JCP&L will be forwarded on September 30, 1974. This ten-week delay from the previously scheduled July 22 to September 30, 1974 is required by GE to achieve operational status of the code, and to perform the blowdown and subsequent heatup analysis of the two GE fuel types.

As previously indicated, GE will forward results for the Appendix K analyses for the Oyster Creek plant using GE models developed for jet-pump BWR's on July 22, 1974. These analyses will meet all the requirements of Appendix K but are expected to yield more conservative results than the RELAP-based analyses. These interim results can be used for operational guidance until less restrictive results from RELAP 4 are available.

Sincerely,

Product Service, Group II Mail Code 168, Ext. 6544

sse

AFFIDAVIT

STATE OF NEW JERSEY

SS.

COUNTY OF MORRIS

The undersigned, Bernard H. Cherry, being duly sworn according to law, deposes and says that:

- 1. I am the Nuclear Fuels Manager for General Public Utilities Service Corporation (GPUSC), 260 Cherry Hill Road, Parsippany, New Jersey 07054. GPUSC is a wholly owned subsidiary of General Public Utilities (GPU) as is Jersey Central Power and Light Company (JCP&L), the licensee and operator of the Oyster Creek Nuclear Generating Station.
- 2. I have been employed by GPUSC since March, 1969. My duties include the procurement and technical evaluation of fuel for the GPU system nuclear plants. I have been responsible for the evaluation of the hypothesized Loss of Coolant Accident for Oyster Creek and the evaluation of the mode of compliance with the criteria of 10CFR50.
- 3. This statement is submitted in response to the requirements of Section 50.46 of ICCFR50, and reflects my opinion as to the time and effort required to properly prepare an ECCS technical evaluation for the Oyster Creek Nuclear Generating Station.
- 4. Preparation of the ECCS performance evaluation following a hypothesized Loss of Coolant Accident (LOCA) as specified by Appendix K to 10CFR50 for the Oyster Creek Nuclear Generating Station requires the integration of five complicated analyses. These are: (1) primary system blowdown; (2) time-dependent fuel heat transfer coefficied determination; (3) pellet to clad gap conductance; (4) fuel clad mechanical performance; and (5) the integrated BWR fuel assembly heat up evaluation. These interdependent

analyses are performed on the basis of: (1) reactor plant and system data; (2) required assumptions and initial conditions; (3) fuel design data; and (4) fuel and plant performance data. An appropriate ECCS evaluation requires the assessment of all data and assumptions; the review and confirmation of the suitability of each model calculation; and the integration of each model output to yield the final evaluation result. The effort required to independently develop evaluation models judged suitable against the standard of Appendix K to 10CFR50 is beyond the existing capability of GPU Service Components. It should be noted, however, that GPUSC having participated in the development effort of two components of a fuel LOCA analysis model and having ngaged in technical discussions of the remaining model components, possesses the technical capability to review existing models and their results.

- 5. It is clearly required by Appendix B to 10CFR50, that Jersey Central Power and Light Company technically review and judge the appropriateness of the ECCS evaluation for Oyster Creek. GPUSC, acting for JCP&L, will evaluate the suitability of: the plant and fuel design dependent input data; the characteristics of the calculational model used; the results of that model; and the operating requirements proposed to satisfy the criteria of 10CFR50.
- evaluation is that the Oyster Creek Nuclear Generating Station includes a General Electric nuclear steam supply system (NSSS) which contains 224 Exxon Nuclear fuel assemblies (lead assemblies and Reloads 2 and 3) and 336 General Electric fuel assemblies (the remainder of the initial core and Reload 1). General Electric has been asked to provide the blowdown analysis of the NSSS and the LOCA analysis of the 336 GE fuel assemblies. In response General Electric has stated that the blowdown

analysis of the Oyster Creek primary coolant system and the LOCA analyses of the GE fuel types will both be forwarded to JCP&L/GPUSC on September 30, 1974. Joint efforts by GPUSC and GE to expedite this schedule have not yielded any significant benefits.

- 7. Exxon Nuclear has been directed to perform the LOCA analysis of 224 Exxon fuel assemblies. The fuel LOCA analysis requires, as input, data derived from the GE blowdown analysis. GPUSC will provide the necessary interface to allow Exxon Nuclear to complete its analysis by obtaining, reviewing and forwarding the required GE t. *down analysis results. Exxon Nuclear Company has indicated that the LOCA analysis of the three Exxon fuel types in the Oyster Creek core will require six weeks from receipt of blowdown data.
- 8. Upon receipt of the Exxon LOCA analysis, GPUSC will complete the Oyster Creek ECCS technical evaluation, including consideration of the blowdown analysis, the performance analysis of the GE fuel, the performance analysis of the Exxon fuel, and the recommended plant operational requirements to comply with 10CFR50.
- 9. It is presently estimated that the above cited interface and technical review functions can be completed by GPUSC and its consultants in three weeks from receipt of all required information. This time will be tilized approximately as follows: (1) two weeks to review results of blowdown and LOCA analyses, the suitability of models, plant data, and assumptions; and (2) one week to compile the overall evaluation, evaluate operational alternatives, propose solutions and forward the results to JCP&L. It is my judgment that this three week period and the individual estimated times for each technical function are the minimum time periods possible for the action required.

10. The foregoing is true and correct to the best of my information, knowledge and belief.

Be-nel H. Ching

SUBSCRIBED AND SWORN TO

BEFORE ME THIS 14 TA DAY

OF JUNE, 1974

MARION P. BAWIEC
NOTARY PUBLIC OF NEW JERSEY

My Commission Expires Jan. 21, 1979

AFFIDAVIT

STATE OF NEW JERSEY)
SS.
COUNTY OF MORRIS)

The undersigned, Donald A. Ross, being duly sworn according to law, deposes and says that:

- 1. I am the Manager of Nuclear Generating Stations for Jersey Central
 Power & Light Company (JCP&L), Madison Avenue at Punch Bowl Road, Morristown,
 New Jersey 07960. JCP&L is an operating subsidiary of General Public Utilities
 Corporation and is the licensee and operator of the Oyster Creek Nuclear Generating
 Station.
- 2. I have been employed by JCP&L since November 1968. My position is accountable for administering, coordinating and managing the electric energy generation program for nuclear production facilities and for safe, economic and reliable operations of units to insure optimum utilization of generating equipment and for evaluation of new plant improvements.
- 3. This statement is submitted in response to the requirements of Section 50.46 of 10CFR50, and reflects my opinion with regard to the time required to properly review the forthcoming Emergency Core Cooling System (ECCS) evaluation and anticipated changes to the Oyster Creek Nuclear Generating Station technical specifications.
- 4. Review of any safety evaluation and/or proposed changes to the Oyster Creek technical specifications is required by the conditions of the Oyster Creek license. Such review consists of consideration of the operational and plant related effects of the change by the Plant Operations Review Committee (PORC) and the overall evaluation of safety hazards by the General Office Review

Board (GORB) as well as an overall determination of suitability by the management of Jersey Central Power & Light Company.

- 5. It is my best judgment that such review and final preparation of the Oyster Creek ECCS evaluation required by 10CFR50.46 will require three weeks' time.
- 6. It is estimated that one week each will be required for PORC consideration and approval; GORB consideration and approval; and management consideration, approval and final submittal preparation. It is felt that this three week period and the individual estimated times for each required step are the minimum time periods possible in which to accomplish the appropriate actions.
- 7. The foregoing is true and correct to the best of my knowledge and belief.

A. Ross

SUBSCRIBED AND SWORN TO

BEFORE ME THIS 19 TO DAY

OF JUNE, 1974

MARION P. BAWIEC

NOTARY PUBLIC OF NEW JERSEY.

AFFIDAVIT

STATE OF WASHINGTON : : ss.

COUNTY OF BENTON

The undersigned, WARREN S. NECHODOM, being first duly sworn according to law, deposes and says that:

- I am an engineer in the Quality Assurance and Licensing Department of Exxon Nuclear Company, Inc., 2101 Horn Rapids Road, Richland, Washington 99352.
- 2. I have been employed by Exxon Nuclear Company, Inc., since January, 1971. My assignments with Exxon Nuclear Company, Inc., include, among other things, responsibility for directing and compiling safety analyses for nuclear reloads.
- 3. In response to an inquiry from GPU Service Corporation, it is my opinion that Exxon Nuclear Company, Inc., will undertake to evaluate the fuel cladding temperature transient response following a postulated loss of coolant accident of Exxon Nuclear-supplied fuel for the Oyster Creek reactor.
- 4. For the purposes of this calculation, Exxon Nuclear requires as input those reactor-related parameters which are a function of the nuclear steam supply system design rather than the nuclear fuel design. These parameters are normally obtained from the results of blowdown calculations for which various pipe break sizes and other variable assumptions are made in accordance with Appendix K to 10 CFR 50.
- 5. The input parameters required for each break size calculation by Exxon Nuclear in order to evaluate the fuel temperature transient are:

Fluid pressure as a function of time and position in the core;
Fluid enthalpy as a function of time and position in the core;
Fluid flow rate as a function of time and position in the core;
Break flow rate vs. time;
Core spray flow rate and distribution vs. time;
Containment pressure vs. time;
Reactor power vs. time after pipe break.

- 6. Exxon Nuclear intends: 1) to perform these calculations for a range of pipe break sizes and other blowdown parameters as required by 10 CFR 50, Appendix K; 2) to establish the limiting fuel power density (or MAPLHGR) as a function of Exxon Nuclear fuel type and fuel irradiation history; and 3) to document these results in a format suitable for review and comparison to the requirements of 10 CFR 50, Appendix K.
- 7. Exxon Nuclear is preparing analytical models which will be used in performing the above calculations. Preliminary discussions between Exxon Nuclear and the AEC regarding the scope and content of these models were held on February 11, 1974. These models are being incorporated in two computer codes; BULGEX, which is used to compute the degree of deformation and bulging of zircaloy fuel rod cladding following a loss of coolant accident, and HUXY, which is used to compute the fuel thermal transient following a loss of coolant accident. Draft reports describing these analytical models have been prepared, and will be submitted to the AEC about June 10, 1974, to form a basis for further discussions. It is planned that these reports will be issued in final form for AEC-DOL review before August 1, 1974.
- 8. Exxon Nuclear will be prepared to undertake this evaluation on or after June 15, 1974, and, based upon timely receipt of the foregoing inputs, it estimates that these tasks will require a total of thirty (30) working days, during an elapsed time of six (6) calendar weeks. The time required for the

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various sub-tasks is estimated as follows:	Working Days
Review and verification of input data	3
· Perform preliminary fuel temperature transient calculations	5
· Perform clad deformation and perforation calculations	3
· Recalculate fuel temperature transients	5
· Verify clad deformation and perforation results	2
Document results of calculations	4
· Review of final analytical results	5
Transmittal of results to GPU	_3_
TOTAL	30

The foregoing is true and correct to the best of my information, knowledge and belief.

Warren S. Nechodom

Subscribed and sworn to before me this 6th day of June, 1974.

Dickey Brown



ATOMIC ENERGY COMMISSION

WASHINGTON, D.C. 20145

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JUN 1 4 1974

J. P. O'Reilly, Director Regulatory Operations, Region I

JERSEY CENTRAL POWER AND LIGHT COMPANY (JC) OYSTER CREEK, LEAK IN BOTTOM VESSEL HEAD AT INSTRUMENT PENETRATION

This refers to your memorandum of June 14, 1974 on this subject.

The method of vessel repair has been reviewed by Licensing and found to be acceptable under the ASME B&PV Code. Further, Licensing has concluded that no restrictions on resumption of operations should be imposed on the licensee because of this matter. It is recommended that the licensee be informed of the finding by Licensing. Further, it is recommended that the licensee be requested to submit a full report of the vessel repair to Licensing on a prompt basis.

> for Construction & Operation Directorate of Ragulatory Operations

cc: D. F. Knuth, w/cpy of incoming memo J. C. Davis, RO, w/cpy K. R. Goller, L. w/cpy

Lanin far 1/1 5pm

JUN 1 4 1974

B. H. Grier, Assistant Director for Construction and Operations

JERSEY CENTRAL POWER AND LIGHT COMPANY (JC) CYSTER CREEK, LEAK IN BOYTON VESCUL BEAD AT INSTRUMENT PENETRATION

Mr. Bon Ross, e. JC, has described the procedure to be used to repair the leaking penetration in the wasel's bottom head. We do not find the repair, rolling of the tube, to be in accord with our understanding of Section I or Section XI of the ASME Boiler and Pressure Vessel Code. It is recommended that this method of repair be reviewed by Licensing or Standards to determine acceptability.

If you have any questions on the details of the proposed repair please contact me.

> James P. O'Reilly Director

Caphton/cr 6/14/74

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