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January 23, 1990

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Dear Sir:

Oyster Creek Nuclear Generating Station
Docket No. 50-219
Inspection Report 89-80

In accordance with our letter of November 27, 1989, Attachments A and B provide GPU Nuclear's response to the unresolved items and weaknesses identified in NRC's Inspection Report 50-219/89-80.

If further information is required, please contact Kathy Barnes, OC Licensing Engineer at 609-971-4390, or David Jerko, BWR Licensing Engineer at 201-316-7976.

Very truly yours,

E. E. Fitzpatrick
Vice President and Director
Oyster Creek

EEF/KB:jc
Attachment
cc:
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ATTACHMENT A

Response to Unresolved Items

Item: 89-80-01 Stress Isometric drawings not prepared for safety related piping.

Response: We are revising our previous commitment to prepare stress isometric drawings for safe;ty related piping. GPUN will utilize the piping stress isometric sketches that are integral with the piping stress analysis calculations. Developing and maintaining a separate set of piping isometric drawings is not essential to provide control of plant configuration. The reasons for this change are as follows:

1. Design verified piping stress analysis calculations and corresponding pipe support calculations have been entered into CARIRS. These calculations reflect the "as-installed" plant configuration and are based on the Quality Control (QC) re-inspections/walkdowns that were performed in 1985 and 1986. The results of the QC inspections were documented via Material Nonconformance Reports (MNCR's) i.e., discrepancies between the "as-designed" vs. "as-installed" configurations.

2. I.E.Bulletin 79-14 Program related MNCRs, Field change Requests (FCR's), and rollup Field Change Notices (FCN's) are now entered into CARIRS and are posted against the affected support number. Similarly, any future change documents will also be posted against the affected support number.

3. Technical Functions procedural control will ensure that any future piping/pipe support modifications are incorporated into the present "as-installed" plant configuration. Specifically, Exhibit 3-1 of Technical Functions Procedure EMP-008 (Technical Document Release) requires that piping and pipe support engineering configuration concerns be resolved via Technical Functions Procedure EMP-014 (Project Reviews).

In summary, the availability of stress isometric sketches, the piping stress analysis calculations, CARIRS database, and procedural control will collectively ensure that GPUN maintains plant configuration control.

Item: 89-80-07 CS HX relief valves, chlorine line boundary valves not included in IST program.

Response: In accordance with our response to Generic Letter 89-04, GPUN will submit Revision 6 to the IST Program in August, 1990. This revision will include testing of the Containtment Spray Heat Exchanger Relief Valves as part of the IST Program

Previous engineering evaluations to determine required ESW flow have assumed a chlorine line break as a result of a seismic event. The analyses have concluded that sufficient ESW flow would still be provided to ensure heat removal capability of the Containment Spray System and that testing of the valves is therefore not required.

Item: 89-80-08 Potential clogging of CS strainers in torus.

Response: Existing system surveillance procedures that are performed monthly would provide early indication of strainer clogging by an observed decrease in pump suction pressure. However, Engineering is evaluating this identified concern and, if warranted, a preventive maintenance/inspection program will be developed.

Item: 89-80-09 Procedure change and preparation of jumpers for containment spray system - diagnostic and restoration actions.

Response: Procedure 2000-OPS-3024.05 "Containment Spray System-Diagnostic and Restoration Actions" is being revised to stand alone regarding installation of jumpers. Electrical jumpers to perform the required actions will be prepared as necessary. These actions are scheduled for completion by March 31, 1990.

ATTACHMENT B

Response to Identified Weaknesses

Item: 1 The licensee has failed to demonstrate timely responses to USNRC inspection report unresolved and/or open items and to a self-audit per corporate policy.

Response: As part of GPUN's effort to provide timely responses to USNRC inspection report unresolved/open items, we have provided our proposed resolutions to the SSFI identified items in Attachment A. As a result of a previous concern regarding the number of NRC open items for Oyster Creek, GPUN developed a database to track the status of open items. As items are determined to be ready for close out, NRC resident inspectors are informed of their "ready" status, and the items are closed out dependent on the time available to the inspectors for these activities. We will continue to actively pursue the closeout of other unresolved issues with the NRC resident inspectors.

GPUN acknowledges that the memorandum referred to in the inspection report (page 35, item d) should have been written. It should be emphasized that a recommendation is not a deficiency; it is a proposed improvement. The NRC inspector was briefed on this distinction and did not indicate that any "deficiencies" were reported as "recommendations." GPUN feels that this policy provides the proper environment to use the QA audit process to look for and consider improvements.

Item: 2 Communication between Operations, Maintenance and Corporate Engineering.

Response: In September 1989, Corporate Engineering (Engineering & Design) initiated a monthly meeting with Plant Engineering and Plant Materiel to discuss immediate and long term issues. Director level personnel are in attendance in order to set priorities, assign appropriate resources, and establish contact with other plant representatives as required.

Item: 3 A fault on the cables connecting an emergency diesel generator to its bus will result in the temporary loss of that bus.

Response: These circuits are a weakness as any faults on the cables will result in the loss of diesel generator supply and normal power supply to the bus. The faulted cables must be manually disconnected from the bus and then the normal power supply can be reconnected. In October 1988, some of these cables were replaced and the remaining cables were tested. The circuits are not expected to fail in the near future. As a means of detecting incipient failures, a cable testing program will be developed and implemented prior to the 13R refueling outage.

The circuit design is part of the original design basis and met the applicable standards and requirements at the time. Circuit failures will not violate the single failure criteria.

Item: 4 The worst case fault on the 4.16 KV system that was analyzed is not demonstrated by calculations or studies to be the worst case.

Response: The fault calculations in TDR-630 are based on the maximum bus loadings during normal plant operation and emergency (LOCA) conditions. These loads are documented in studies which are referenced in the TDR. The worst case motor loading for both normal and emergency conditions were selected for short circuit studies.

Under normal plant loading, the auxiliary electrical system is powered by the Main Generator via the auxiliary transformers. Maximum loading considers the largest number and horsepower of motors required for normal operation. Emergency loads are not considered since they will not be running, and will only be energized periodically for testing purposes. Testing will energize individual motors separately for short periods of time. These loads are not considered in the fault studies.

Under emergency conditions, the Main Generator will trip and initiate transfer of the 4.16KV buses from the auxiliary transformer to the startup transformers. This condition will also automatically start the emergency loads and trip unnecessary BOP loads. The fault study for emergency conditions is based on the maximum loading for this condition.

Based on the loading studies, the fault calculations have considered the worst combination of short circuit current contributors. No additional action is required.

Item: 5 Impact of automatic fast transfer on motors and motor-driven equipment has not been analyzed.

Response: An automatic fast transfer study has not been performed for Oyster Creek. Transfers have occurred during the past 20 years of plant operation with the most recent transfer occurring in July 1989 (main transformer failure). There has been no evidence of motor-driven equipment failures as a result of automatic transfers.

A study will be initiated to review the transfer times and determine the effects associated with automatic transfers on the 4.16KV buses. Expected completion is December 1990.

Item:6 Synchro-check logic is not used in the automatic fast transfer scheme to reduce the potential for out-of- phase transfer of motors.

Response: Based on twenty years of operating experience (see item #5), GPUN does not concur that a synchro-check feature is warranted for Oyster Creek.

Item: 7 The Class 1E station battery "C" rack as installed has the potential to damage battery jars during a seismic event.

Response: Upon identification of the sharp edges on the battery rack during the team inspection, a deviation report and a work order were issued and the condition was corrected in October, 1989. The resolution of this item has been documented in NRC Inspection Report 89-27 as a closeout of unresolved item 86-37-02. The report documents correction of the sharp edges and the concern that spacing between certain battery cells and racks may have been inadequate.

Item: 8 Emergency diesel generator loading on loss of off-site power followed by a loss of coolant accident can result in potential overloads to the machines.

Response: The following discussion assumes the worst case emergency diesel generator (EDG) loading when one EDG has failed. EDG loading on loss of offsite power followed by a LOCA will not exceed its 2000 Hour rating when loads are not manually applied after loss of offsite power. Oyster Creek procedure #341 "Emergency Diesel Generator Operation" allows the connection of non-safety related loads which will benefit the plant shutdown process during loss of offsite power. Typical loads in this category are:
Air Compressors, Battery Chargers, Fire Pond Pumps, and Ventilating Fans.

After connection of the manually applied loads, if a LOCA occurs, the auto-connected loads on the EDG will load the machine beyond its 2,000 hour rating but will <u>not</u> exceed the short term rating of the machine. Procedure 341 provides guidance for controlling the loads manually. Based on the controls provided in the operating procedure, overload of an EDG is not expected.

Item: 9 The licensee failed to adequately review the accuracy of their self-SSFI report TDR 986 prior to its issue.

Response: The TDR will be reviewed and a revision issued by March 16, 1990.

Item: 10 In the area of calculations, the team identified errors in I&C and Mechanical Engineering calculations that where not found by the calculation verifier.

Response: The I&C calculations involved were revised to reflect the comments noted. With the implementation of ES-002, "Instrument Error Calculation and Setpoint Determination", GPUN has established guidelines for the performance of these calculations, and the recurrence of these problems will be minimized for future calculations.

During the SSFI, the team identified non-conservative assumptions, not errors, in the mechanical engineering calculations. These concerns were further discussed in meetings at GPUN (9/13/89) and Region 1, (12/5/89). By letter dated 12/20/89, the NRC has accepted the resolution of these concerns.

Item: 11 Corporate System Engineers do not have a procedure or formalized listing of their primary responsibilities.

Response: GPUN will issue a guideline in March, 1990, which will list the primary responsibilities for the Corporate System Engineers.

Item: 12 Engineering does not have a calculation review and update program.

Response: GPUN will revise Technical Functions Procedure EP-006 titled "Calculations" to require the review and update of Calculations on a system basis.

Item: 13 Failure to resolve repetitive heat exchanger maintenance problems including need for chlorination improvements.

Response: Heat exchanger maintenance and chlorination system improvements are being evaluated in response to the requirements of Generic Letter 89-13. GPUN plans for improvements in these areas will be documented in future correspondence related to the Generic Letter.

Item: 14 Corroded condition of steel support beams and electrical conduits at service water intake areas.

Response: The corroded condition of New Radwaste service water piping and piping supports, electrical feeds, conduits, and conduit supports will be repaired during 1990 and 1991. All other intake work has been in progress since November, including service water check valve replacement, new insulation and heat trace, and overall refurbishment. The required work will continue during 1990.

Item: 15 Observations of heat exchanger relief valves with broken or missing adjustment lockwires and nameplates.

Response: As provided in our response to the Notice of Violation on this same subject, the eight (8) heat exchanger relief valves are scheduled for replacement during the next system out of service period, not to exceed startup following 13R outage. The replacement valves located in the Warehouse were inspected and found to have the required manufacturer nameplates and lock wires in place.

Item: 16 Excessive paint on valve packing, lubrication sight glasses and pump vibration marks.

Response: During the inspection, a memorandum was issued as a reminder of precautions to be taken when painting plant equipment. Supervisors held meetings with painters to emphasize that caution should be taken to avoid painting sight glasses, valve stems, vibration indicators, valve position indicators and packing glands. During January 1990, the Training Department will be discussing this concern during training with all employees doing painting. Plant procedures will be revised as necessary to remind shift operators to pay particular attention to recently painted equipment. The vibration markings for the containment spray pumps which had been painted over, have been replaced with permanently mounted vibration blocks that will not be affected by future painting of the equipment.

Item : 17 Lack of understanding on how to grease pumps with grease cups.

Response: As provided in our response to the Notice of Violation on this subject, the surveillance procedure will be revised to delete the step requiring addition of grease. Future greasing requirements will be fulfilled by performance of a preventive maintenance task on a regular interval. Completion of these actions is scheduled for February 28, 1990.

Item: 18 Observation of pump lubricant level is not part of the surveillance procedure prerequisites.

Response: Upon further review of this concern, Engineering has concluded that additional checks of pump/motor lubrication are unnecessary and would not provide added equipment reliability, when compared to current surveillance practices. Lubrication levels are adequately checked during other surveillances and by performing preventive maintenance tasks. It should also be noted that pump drivers are not within the scope of IST for this type of pump and, therefore, there are no IST program requirements to check pump motor lubrication.

Item: 19 Engineering requests for operations to deviate from procedures during surveillance testing.

Response: On August 18, 1989, the containment spray system engineer reported to the control room due to a problem with an Emergency Service Water (ESW) pump. The "C" ESW pump was failing the Inservice Test portion of the system surveillance being performed. The system engineer discussed the condition with the IST coordinator, who was also present in the control room, and they agreed that there may be a problem with the keep full line check valve.

In an effort to confirm the suspected problem, the engineers asked the operator who was performing the surveillance if he would restart the "C" pump. The control room operator responded that he had completed that portion of the test and that he could not restart the pump, and that they should discuss the request with the Group Operator Supervisor (GOS). The GOS agreed that the pump could not be restarted. Approximately 30 minutes later, the operators agreed to restart the pump to confirm the suspected leaking check valve.

The GOS later informed the system engineer that the reason they would not restart the pump when requested, was because the operators were within a surveillance procedure at the time and they could not deviate from the procedure. The system engineer did not intend for the operator to deviate from the procedure. The engineer did request that the pump be restarted, not necessarily at that moment, although that was how it was interpreted.

In summary, GPUN has not found this to be a weakness in the interface between system engineers and operators, but possibly a misinterpretation of a request. The operator took appropriate actions in not deviating from the procedure during the surveillance, and later restarted the pump, as the system engineer intended.

Item: 20 There is a need to resolve technical specification vs. design basis conditions such that needed setpoints and values are included in procedures to adequately quantify "operability".

Response: GPUN recognizes the importance of a system's design basis whether or not it is identified in the technical specifications. We believe that these design bases must be clearly defined in a source document such that assigned personnel can review and update the plant procedures to define system operability.

As a first step, the development of Design Basis Documents (DBD's) is underway for Oyster Creek. Two systems were completed in 1989 with plans for an additional four systems per year. This effort is being led by the engineer responsible for each system. Working with counterparts at the site and other members of the staff, improved documentation and understanding of the system (i.e. design basis) will result.

As a second step, an upgrade of the FSAR will commence in 1990. By using information from internal technical reviews and the DBD's an accurate and verified FSAR will be available for GPUN personnel responsible for plant procedure updates.

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