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August 3, 1990  
 C320-90-774

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

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station  
 Docket No. 50-219  
 Systematic Assessment of Licensee Performance Response

This letter and attachment provides our response to the Systematic Assessment of Licensee Performance (SALP) Report No. 50-219/88-99.

We believe the value of the SALP process is in the dialogue it promotes and the identification of areas where improvements can be made. Attachment 1 provides a response by functional area and summarizes key elements of our efforts for possible further improvement.

Although minor in nature, several factual errors were noted in the SALP report. These errors are described separately in Attachment 1.

On August 1, 1990, GPUN notified the NRC that this response would be submitted prior to August 8, 1990. The NRC stated this date was acceptable.

Very truly yours,

*Robert A. Long*  
 for P.R. Clark  
 President

PRC/DOB:jc  
 Attachment  
 (SALP88-99)

cc: Mr. Thomas Martin, Administrator  
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NRC Resident Inspector  
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Attachment 1

Attachment 1 includes our response to each of the following areas:

Summary and Overview

- a. Management
- b. Maintenance
- c. Radiological Controls

Detailed Response

- a. Plant Operations
- b. Radiological Controls
- c. Maintenance/Surveillance
- d. Emergency Preparedness
- e. Security
- f. Engineering and Technical Support
- g. Safety Assessment/Quality Verification

Factual Errors and Inconsistencies

- a. Plant Operations
- b. Engineering and Technical Support

## Summary and Overview

### Management

The safe operation and improvements in long term performance at Oyster Creek Generating Station continue to be the priority of GPU management. Many of our programs developed for performance improvement, including many formulated as a direct outcome of earlier SALP assessments, were implemented during the last SALP assessment period and therefore performance improvements resulting from these initiatives are only now being fully realized.

Management involvement, promoting consistent improving performance, and raising standards and expectations of workers at Oyster Creek may be evidenced by our Plan for Excellence. As indicated in the SALP report, improvements in both the operations areas and overall plant performance are directly attributable to direct management involvement, to improved communications and to our ongoing plant assessment programs.

### Maintenance

Equipment problems, as stated in the SALP, continued to present a challenge to our site resources. GPUN is, however, committed to continuous improvement in plant equipment conditions through an aggressive maintenance program.

New maintenance initiatives and programs to provide improvements in plant material conditions are currently underway. The Tracking and Trending Program, The Life of Systems Maintenance Plan, and the Reliability Centered Maintenance Analysis Programs were all implemented during the assessment period. Positive results in specific plant material conditions and improvements in maintenance effectiveness are a direct result of these ongoing programs.

Recent management changes, including a major reorganization in the maintenance area with a new Site Maintenance Director, along with the other new maintenance programs have been effective in providing measurable improvements in plant material conditions.

### Radiological Controls

GPUN recently implemented programs for improvement in this area, and similar to other areas, we are now seeing these improvements as a result of our programs.

An independent Radiological Controls assessment was recommended by the NRC and was performed by a independent contractor. Many specific actions for improvement were recommended subsequent to the assessment, and we have already completed more than 50 percent of the recommended actions with the remainder of the recommended actions scheduled for completion during the next refueling outage.

Further, the long term results from changes made for improvements in radiological training, including an expansion in worker radiological training efforts are more evident. Since the end of the SALP period, measurable results in the areas of exposure, contamination control, and radiological awareness have been seen.

We remain confident that the implemented changes that were made in the Radiological Control area have, in fact, resulted in long term improvements in performance in all functional areas.

Detailed Response

Plant Operation

The Operations Department has an ongoing self-assessment program reviewing forty-two categories of plant operation evolutions. This self-assessment program along with the concurrently developed corrective actions has resulted in significant long term operational improvements.

A reduction in the number of operator errors, improvements in teamwork, cooperation and improved management overview and involvement are evident because of these ongoing Operations improvement programs. Management involvement and responsiveness to the Operations area continues to be one of many areas where GPUN Nuclear strives for further improvement through existing, planned improvement programs.

Recently, due to the Operator Concern Program, management responsiveness to operator concerns has significantly improved, resulting in better, improved communications.

Procedures and procedure use continue to be an Operations Department priority. Operations management recently instituted a "procedure-in-hand" concept. To implement the new concept, copies of procedures have been strategically located in the plant to make operating procedures more readily available for operators to have the procedure in hand for step by step use.

The Operations Department is confident that the recently developed Procedures Guide, the Biennial Review, shift supervisors reviews, along with the Operator Concern Program, the Plant Labeling Program and our increased emphasis on procedures during simulator training, have resulted in long term improvement in technical quality and format.

These many new on-going initiatives have improved the Operations functional area. Further, Operations has aggressively taken actions to pursue other enhancements to correct the procedural deficiencies which have been identified.

Radiological Controls

Ongoing efforts have improved performance in the Radiological Controls area. These include improved planning, better dose estimations and a renewed emphasis on adherence to procedures.

A newly formulated Technical Support Group is in the process of being organized and a certified health physicist with significant experience has been hired to head this new Radiological-Technical Support Group.

Over fifty percent of the specific actions, confirmed by an independent third party evaluation as necessary for improvement, have been implemented, with the remaining action items to be implemented during the next refueling outage.

Our recently implemented Advanced Radiation Worker Training Program includes a full three day program of formal classroom training exercises conducted with sophisticated, realistic field mock-ups. Field radiation levels, contamination and realistic field environmental conditions are simulated during these exercises. Craft employees, contractors, and engineering personnel are trained in this realistic simulated environment with emphasis being placed on methods for lowering their working exposures.

Qualifications of contractor radiological control technicians were reviewed, resulting in revisions to the procedure which specifies qualification requirements. Further, all radiological control technicians participate in site specific training. Formal classroom instruction with demonstrations of field proficiency is now required.

Significant changes in orientation toward radiological controls has resulted from renewed efforts to improve personnel attitudes and procedure compliance. Management remains committed to continue the plans for performance improvements which were being implemented during the SALP assessment period and remains confident that these plans will continue to result in further long term improvements in the Radiological Controls area.

#### Maintenance/Surveillance

Changes in the management and organization of maintenance forces to improve maintenance performance have resulted in an increase in plant materiel condition.

Significant resources have been devoted to improving the plant materiel conditions with improvements in housekeeping, major O&M maintenance, and capital upgrades being completed over the last three and one half years. Over seventy nine million dollars has been allocated, with forty eight new projects to be completed during the upcoming outage, to maintain and upgrade the reliability of plant equipment.

Ongoing programs have resulted in plant condition improvements. Indirect maintenance improvements can also be found in areas such as an improvement in the ratio of preventive maintenance to corrective maintenance, a reduction in the amount of leaks throughout the plant, along with a noticeable reduction in the number of deficiencies and equipment alarms during plant operations.

Presently, other additional efforts are also being directed toward improvements in specific plant materiel conditions. The Tracking and Trending Program, Life of System Maintenance Plan along with the Reliability Centered Maintenance Analysis, have all resulted in improvements to the plant preventive maintenance programs. MOVATS testing of motor operated valves and the inservice monitoring of check valves with the "Checkmate" system also strengthened the Predictive Maintenance Programs.

Many indirect benefits and performance improvements derived from these ongoing programs have been realized. These major initiatives will, over the long term, continue to significantly improve the plant materiel conditions.

#### Emergency Preparedness

Management concern for the quality and importance of Emergency Preparedness will continue, with a commitment to support the program and facilities in a state of readiness. New methodologies in the training program for exercise improvement will continue.

Management is actively working to correct those areas identified in the annual exercise where improvement was indicated.

To address the scenario similarity weakness identified in the SALP, an independent scenario review mechanism was developed and has been established. Written guidance on scenario development was completed and has been published. The new publication has been thoroughly reviewed by both staff and management. Further, performance based EP training will be expanded to further improve our exercise performance.

During the assesment period, Emergency Preparedness made major upgrades to EP equipment. A new data projection system was installed in the Emergency Operations Facility and the Technical Support Center. A laser video disc system was added to the Operations Support Center, and Safety Parameter Display System terminals were added to the Operations Support Center and the Parsippany Technical Functions Center. New field monitoring team vans were acquired. Lastly, Oyster Creek Nuclear Generating Station is among the first plants to volunteer for the Emergency Response Data System (ERDS). Our plant computer system was also modified in order to accommodate this new response system.

#### Security

Increased management attention to the area of Security was noteworthy during the SALP assesment period. Noteworthy improvements in addition to the significant force improvements noted in the SALP report included many hardware upgrades such as the installation of road barriers at entrance roads to thwart terrorist attacks, the installation of a fully equipped ready room in the Main Gate Processing Center, a redesigned and rebuilt pistol range recently certified by the State of New Jersey and the upgraded gate duress alarm systems and Perimeter Alert III sensors on the entire protected area fenceline.

The management and Licensing Department Review Process has been successfully used to identify trends in the Security Log. An example of its successful use identified and significantly reduced the misplacing of Security Protection Officer Identification badges from seven to none, per quarter.

Management continues to maintain a strong, effective security program and continues to strive to improve our program through the use of training, self assessment and management attention to detail.

#### Engineering and Technical Support

The recent System Engineer concept which was implemented has significantly improved communications and cooperation between Engineering and Operations. Team work was stressed at all levels of engineering and resulted in performance improvements, inter-departmental cooperation, and Operations support.

Engineering reviewed the SALP report in depth and continues to strive to improve those areas where weaknesses were reported.

#### Safety Assessment\Quality Verification

All areas of plant operation are affected by comprehensive programs that were implemented during the SALP assessment period, including programs to improve the standards of performance, the materiel conditions, radiological controls, and plant design. Some of the results of these programs became evident during the assessment and were noted in the SALP report. All of the results from these recently implemented programs, however, would not be realized and therefore were not included in the SALP assessment.

Two specific issues were identified in the SALP which indicate performance problems to be addressed by Quality Assurance.

First, the issue of corrective action which was identified on page 30 of the SALP. This issue is a general issue for the site, and the SALP does recognize that actions have been taken and some improvements noted. A specific comment was made about QA Inspectors informally addressing their concerns. This problem was recognized by GPUN in early 1989 and actions were taken to better define minor deficiencies and more formalize the process. It is our understanding that the NRC recognizes that formality of handling QA identified concerns has improved and that the NRC concerns in this area have been resolved.

The second issue involves the comments on page 31 regarding aggressiveness and a questioning attitude. The report references two examples to support this conclusion. QA Management has been working on this issue for several years. We think that performance has improved, but do agree that it can be further improved. Several initiatives are being planned, including using QC inspectors to perform monitorings of their assigned areas and more involvement in document review functions. These actions will be identified in an action plan which will be available for NRC review.

Factual Errors and Inconsistencies

Plant Operations

The SALP reported on Page 7 that "...plant transients have created numerous challenges to control room operators. One plant trip was caused by personnel error when a control room operator overexcited the main generator. On this scram, site power did not automatically transfer to offsite supplies..."

The statement implies power should automatically transfer to offsite supplies. This does not actually occur because overexcitation is considered a fault and a protective relay prevents the automatic transfer to a faulted system. Therefore, automatic transfer would not have occurred because of plant design.

In the second example, the SALP reported that the plant did not commence a shutdown when the low vacuum scram setpoints were questioned following a vacuum transient that occurred at the plant. Operations management believes that the appropriate actions were taken in response to this vacuum transient and that the PTRG process was not able to complete its function prior to being interrupted by the NRC's AIT team. We believe that had the PTRG been allowed to complete its review process, without AIT interruption, a plant shutdown would have been ordered in order to test the scram setpoint sensors in question.

Engineering and Technical Support

In paragraph 2, page 18 of Section III.C.1, it is stated in part that: 1) "The licensee deleted the high and low alert ranges and increased the high action range above the ASME Code for the Emergency Service Water pumps without the proper relief request;" 2) "Several Chlorination System valves and certain relief valves were not included in the valve In-Service Test Program;" 3) "The Emergency Service Water Pump In-Service Test is run only quarterly even though numerous problems have been observed with the pumps over the years." 4) "No maintenance requirements are established for the torus strainers." For clarity, each of these issues is restated below followed by the GPUN response.

- ° "THE LICENSEE DELETED THE HIGH AND LOW ALERT RANGES AND INCREASED THE HIGH ACTION RANGE ABOVE THE ASME CODE FOR THE EMERGENCY SERVICE WATER PUMPS WITHOUT THE PROPER RELIEF REQUEST"

It is true that, for the In-Service Test Program, the high alert range for the Emergency Service Water pumps was deleted, and the high action range was increased without a relief request being submitted. However, we believe this to be more of an administrative deficiency than a technical one. The basis behind the deletion of the high alert and the increase of the high action was, and is, sound and in accordance with the latest industry standards as found in OM-6. We concur with the Working Group that developed OM-6 that pump hydraulic performance is not expected to improve over pump life, and that any increase in differential pressure for a constant flow rate will be the result of instrument failure/inaccuracies.



Additionally, Paragraph IWP-3210 of the ASME Code allows the owner to establish ranges for in-service test limits other than those specified in the Code if those in the Code cannot be met. Oyster Creek has exercised this provision to establish higher alert and action limits, above those specified in the Code, for several years to encompass the deviations due to instrument tolerance. These alternate ranges have been properly documented in the Record of Tests as required by the ASME Code. The increase in the high action range for the ESW pumps discussed in the SALP was documented in the Record of Tests for the Pump In-Service Test Program.

- ° "SEVERAL CHLORINATION SYSTEM VALVES AND CERTAIN RELIEF VALVES WERE NOT INCLUDED IN THE VALVE IN-SERVICE TEST PROGRAM"

The Chlorination System valves called out in the SALP Report have not been included in the In-Service Test Program and were not intended to be included in the Program. The valves of concern are the boundary check valves between the Chlorination System and the Emergency Service Water System (The Chlorination System itself is not included in the Program). Calculations for required flow from the ESW System includes the assumption that the Chlorination System lines will be sheared during a seismic event. The ESW pumps must meet the required flow specified in the IST procedures or the ESW System is declared inoperable. There are no future plans to include these valves in the In-Service Test Program.

With reference to the relief valves mentioned above, we would like it noted that Oyster Creek has been in the process of completely reviewing and updating the Valve In-Service Test Program to comply with Generic Letter 89-04. This involves a complete review of all of the systems included in the Program to ensure that all valves that should be tested by the Program are indeed tested. We believe that this review has enhanced the effectiveness of the Surveillance Program to the point that all valves that should be tested are being tested, or have been recognized as needing modifications to allow them to be tested.

- ° "THE EMERGENCY SERVICE WATER PUMP IN-SERVICE TEST IS RUN ONLY QUARTERLY EVEN THOUGH NUMEROUS PROBLEMS HAVE BEEN OBSERVED WITH THE PUMPS OVER THE YEARS"

The Emergency Service Water Operability and In-Service Test Surveillance is run on a monthly basis to check the operability of the ESW System. On a quarterly basis, vibration data is taken for the In-Service Test Program. Regardless of whether the pumps are run for the operability test or the In-Service Test, all hydraulic data is taken so that any problems that develop can be recognized and resolved on a timely basis. Since these are vertical line shaft pumps, pump degradation will be identified sooner through changes in hydraulic parameters than through vibration analysis; therefore, the ESW pumps are effectively monitored on a monthly basis for problems, and not quarterly as stated. Also, the ESW System Engineer has, and is, maintaining a detailed tracking system for all of the major parameters in the ESW System to trend problem components and anticipate difficulties before they occur.

° "NO MAINTENANCE REQUIREMENTS ARE ESTABLISHED FOR THE TORUS STRAINERS"

The above portion of the SALP Report also references the fact that no maintenance requirement has been established for the torus strainers that act as the suction points for the Containment Spray and Core Spray Systems. A detailed review of this concern, brought out by the recent Safety System Functional Inspection (SSFI) on the Containment Spray and ESV Systems, shows that a surveillance or inspection program for these components is impractical and unnecessary. Monthly operability checks on the Core Spray and Containment Spray Systems would indicate any blockage of these strainers by decreasing system flows common to all four systems.

An evaluation shows that debris large enough to be able to block these strainers during non-accident conditions has minimal chance of accumulating in the torus because of controlled access to the torus internals.