U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No.	95-16
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License No.	DPR-16
Licensee:	GPU Nuclear Corporation 1 Upper Pond Road Parsippany, New Jersey 07054
Facility Name:	Oyster Creek Nuclear Generating Station
Location:	Forked River, New Jersey
Inspection Period:	September 11, 1995 - October 15, 1995
Inspectors:	Larry Briggs, Senior Resident Inspector Stephen Pindale, Resident Inspector Herb Williams, Senior Operations Engineer Kenneth Kolaczyk, Operations Engineer

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Peter Eselgroth, Branch Chief — Date
Reactor Projects Branch 7

Inspection Summary: This inspection report documents the safety inspections conducted during day shift and backshift hours of station activities including: plant operations, maintenance, engineering, plant support, and safety assessment/quality verification. The Executive Summary provides the inspection findings and conclusions.

EXECUTIVE SUMMARY

Oyster Creek Nuclear Generating Station
Report No. 95-16

Plant Operations

During the inspection period, the plant was operated safely by the licensee. There were no unscheduled or unplanned operational events. The Oyster Creek licensed operator requalification program was identified as having good management support and providing the licensed operators with the knowledge and skills necessary to ensure safe plant operation. One operating crew and one staff crew simulator examinations were observed with no failures. One operator failed the job performance measures portion of the examination. Simulator evaluations were noted as adequate. Remedial training could be enhanced by more focused training on identified weaknesses.

Maintenance

The inspectors determined that maintenance and surveillance activities were, in general, conducted safely. However, several examples of poor implementation of the foreign materials control program were identified, such as metal debris in the discharge check valve of the "A" spent fuel pool cooling pump and multiple items in the suction line of the 1B high purity pump. The licensee established a working group to evaluate the problem and recommend corrective actions by the end of November, 1995. Ineffective control of maintenance activities was identified concerning proper implementation of the heat stress control program and preauthorization of work activities. Both examples were related to leak repair activities in the condenser bay. The licensee identified a missed surveillance test. There were also two LERs (95-01 and 02) issued earlier this year concerning surveillances. The licensee has implemented aggressive action to address and correct this adverse trend. This is an Unresolved Item 50-219/95-16-01.

Engineering

The licensee took good corrective action to repair a pinhole leak and the adjacent area of wall thinning on a 12 inch flash tank inlet header. Thorough evaluation resulted in the identification of adjacent wall thinning and design of a clamp to ensure enclosure of all susceptible areas. Additional examination of the other flash tank piping is planned for the next power reduction in November 1995.

Plant Support

Routine observation of station personnel by the inspectors indicates that radiological controls and security program requirements were being effectively implemented by the licensee and followed by station personnel.

Safety Assessment/Quality Verification

The licensee did not take prompt and effective corrective action to address repeat, multiple failures of emergency lighting units, many of which were required by Appendix R. This resulted in a violation. Determination of reportability also appeared to be somewhat delayed. The licensee has been very proactive and has provided a high level of management attention to ensure the torus and drywell are clean and clear of debris. They were quite responsive to a recent event at Limerick Unit 1 involving clogging of a suction strainer by ensuring that similar conditions did not exist at Oyster Creek.

TABLE OF CONTENTS

DETAILS

1.0 PLANT OPERATIONS (71707,93702,71001)

1.1 Operations Summary

The plant operated at full power during this report period. Excellent operations and support staff performance precluded any operational events or unplanned transients during this reporting period.

1.2 Facility Tours

The inspectors observed plant activities and conducted routine plant tours to assess equipment conditions, personnel safety hazards, procedural adherence and compliance with regulatory requirements. Tours were conducted of the following areas:

- control room
- cable spreading room
- diesel generator building
- new radwaste building
- old radwaste building
- transformer yard
- intake area
- reactor building
- turbine building
- vital switchgear rooms
- access control points
- fire pump building

Control room activities were found to be well controlled and conducted in a professional manner with staffing levels above those required by Technical Specifications. The inspectors verified operator knowledge of ongoing plant activities, the reason for any lit annunciators, safety system alignment status, and existing fire watches. The inspectors also routinely performed independent verification from the control room indications and in the plant that safety system alignment was appropriate for the plant's current operational mode.

1.3 Licensed Operator Requalification Program Evaluation

Examinations

The licensee's sample plan used to construct the biennial written examination provided the necessary guidance to ensure that subjects taught during the two year period were appropriately examined as defined in the Oyster Creek administrative procedures.

The inspectors reviewed representative written examinations given prior to the inspection and operating examinations used during the week of October 2, 1995. The inspectors compared the job performance measures (JPM) and the simulator scenarios that were administered during the week of the inspection to the guidance contained in NUREG 1021, "Operator Licensing Examiner Standards" and the Oyster Creek procedures. The scenario critical tasks were well defined and contained an appropriate amount of component failures. The JPMs concerned relevant operator task items. The inspectors concluded the scenarios and JPMs were of the appropriate difficulty to test the competence of the operators. All of the exams reviewed met the applicable standards.

The inspectors observed portions of the operating exams given to one operating crew and one staff crew. Critiques of the dynamic examination were performed by managers from training and operations. Evaluations were performed for each individual and the crew. No failures were identified in the dynamic simulator exams during the time the inspectors observed performance. The evaluations were objective and effective. The Oyster Creek practice was to use three evaluators for a six man crew (four reactor operators and two senior reactor operators). The inspector commented to the licensee that the low evaluator-to-operator ratio may limit the effectiveness of evaluators in detecting individual performance weaknesses. When this observance was discussed with the training manager, he indicated that they would consider revising their evaluation process. The inspectors did not identify any performance deficiencies that were not identified by the facility evaluators. The facility evaluators used proper techniques when administering the job performance measures (JPM). One operator failed the JPM portion of the exam while the inspectors were observing the examination process.

The inspectors reviewed the remedial training program for several operators who had failed weekly quizzes or the biennial written exam. Remedial training was adequate, but could be strengthened if training and retesting focused more on the identified weaknesses.

Licensed Operator Requalification Training (LORT) Program Updates

The inspectors reviewed the process for revising and maintaining the LORT program up-to-date. The LORT program was modified based upon operator feedback. Operator feedback was effectively tracked and the operators were informed about the disposition of their comments. Through interviews, the inspectors determined that operators were satisfied with the feedback system.

The Oyster Creek training staff periodically reviewed the LORT training program and revised the frequency that subjects were taught during the biennial training cycle. Revisions were implemented, based upon the installation of plant modifications such as the digital feedwater control system, or as a result of a reassessment of task importance. Proposed changes to the LORT program received concurrence from the operations department prior to implementation. The inspectors determined that appropriate administrative systems were established in the training department to revise task analyses and lesson plans if the proposed changes were implemented.

A probabilistic risk assessment (PRA) was performed at Oyster Creek in response to NRC Generic Letter 88-20, "Individual Plant Examination of External Events for Severe Accidents Vulnerabilities". The inspectors discussed the results of the PRA with the training staff to determine if the PRA results were used in training. During the training cycle, the inspector noted that operators were provided an introduction to PRA through a one hour lecture. Additionally, two simulator scenarios were developed which included a high risk event (a failure of a relief valve to close). The inspectors concluded that the training staff had effectively used the PRA results to focus training on items of high importance from a risk perspective.

License Condition Verification

The inspectors reviewed the Oyster Creek program to ensure that only ROs and SROs with active licenses performed licensed duties. The Oyster Creek program was well developed and managed. No problems were identified.

The inspectors reviewed the medical records of a sampling of licensed operators to ensure that biennial medical examinations were performed. The medical exams were given as required and the records were effectively maintained.

The inspectors reviewed the records of participation (by attendance) in the LORT program and determined that licensed operators were participating in the program as required. No problems were identified.

The inspectors concluded that operations management was effectively involved in the LORT program through evaluating operator performance in the simulator, reviews of the LORT program and frequent dialogue with training. Management support for the use of PRA in training was a good initiative. The Oyster Creek LORT program provides the licensed operators with the knowledge and skills to ensure safe plant operation. The program was effectively managed.

2.0 MAINTENANCE (62703,61726)

2.1 Maintenance Activities

The inspectors observed selected maintenance activities on both safety-related and non-safety-related equipment to ascertain that the licensee conducted these activities in accordance with approved procedures, Technical Specifications, and appropriate industrial codes and standards.

The inspector observed portions of the following activities.

Job Order (JO)	Description
63763	4160 Volt Breaker Preventive Maintenance (2400-SME-3915.03)
500736	Repair 12 Inch Main Flash Tank 1-2 Inlet Header
500009	Replace Liquid Poison Relief Valve V-19-42

The inspectors concluded that the above activities had been approved for performance and were conducted in accordance with approved job orders and applicable technical manuals. In general, personnel performing the activities were knowledgeable of the activities being performed and were observing appropriate safety precautions and radiological practices.

2.2 Foreign Material Control Weaknesses

During this inspection period, the licensee identified several instances of foreign material/debris within plant systems. On September 18, 1995, metal debris was found inside the "A" spent fuel pool cooling pump discharge check valve. On September 19, 1995, an extensive amount of debris (three knives, nut, bolt, wire, washer and flashlight) was found in the suction line for the

radioactive waste system high purity pump 1B. Both events were documented in a deviation report. Due to these, and other similar recent problems, the licensee initiated a separate deviation report on September 21, 1995, to collectively address the adverse trend concerning work practices and foreign material intrusion.

The NRC previously reviewed the licensee's foreign material exclusion controls program in NRC Inspection 50-219/94-22. The program was determined to be acceptable at that time. However, recent implementation of the program appears to be deficient.

The licensee's review of the September 19 event determined that it was caused by contractor personnel during maintenance work in high purity tank 1B. However, the review failed to identify the root cause(s) for the poor contractor performance. The inspector's independent review identified that inadequate licensee oversight of the contractor activities contributed to this occurrence. The inspector concluded that the licensee's initial followup and evaluation for this individual event was incomplete in that they did not identify all relevant contributing causes.

The licensee's subsequent efforts to collectively review the foreign material control implementation weaknesses were aggressive and appropriate. They developed a working group to respond to industry communications regarding foreign material controls. The inspector interviewed personnel involved with the committee. The committee stated that they had identified weaknesses related to training and implementation. The committee plans to complete their evaluation and make recommendations by the end of November 1995.

The inspector concluded that foreign material programmatic controls and implementation is generally effective in the plant areas or systems provided with a high level of attention, such as the fuel storage pool, torus, and nuclear safety-related systems. However, workers appear to be less sensitive to other plant areas. The inspector concluded that the licensee is providing an acceptable level of attention in reviewing the recent events to determine appropriate corrective actions.

2.3 Ineffective Control of Maintenance Activity

On October 6, 1995, the inspector observed maintenance activities associated with repairing a steam leak on the 1-2 flash tank 12 inch inlet header (Job Order 500736). Two concerns were identified. One was related to implementation of the heat stress control program. Another concern dealt with licensee practices related to authorizing maintenance work several days prior to actual work performance.

The licensee maintains a formalized heat stress control program that places responsibility with the work supervisor to determine heat stress requirements. For the above maintenance activity, two contractor personnel entered the condenser bay to perform the repairs. The temperature was estimated to be about 100 degrees F. The inspector questioned the GPUN supervisor who was monitoring the contractor work from outside the condenser bay regarding the heat stress limitations. The maintenance supervisor estimated the "stay time"

to be about 25 minutes based on existing environmental conditions. That time can be doubled if ice vests are worn by the workers. The supervisor believed that both workers were wearing ice vests. Both workers exited the work after about 55 minutes, before the job was completed, due to heat related concerns. The inspector observed the workers remove their protective clothing at the contamination boundary. Only one of the two workers was wearing an ice vest. Based on additional discussion, the inspector concluded that the heat stress program controls were not effectively evaluated and communicated.

The second concern was that the operations senior reactor operator authorization signature for the job order (JO) was dated September 24, 1995. However, the work did not occur until October 6, 1995. In this instance, the work was designed to be performed during power operations, and the operators were aware of the activity. Conversely, on October 9, 1995, when the condenser bay was re-entered for job completion, there was no apparent notification to control room operators that the work was to be performed. There was likewise no re-authorization signature by control room senior operators.

The inspector expressed a concern to operations and maintenance management regarding the potential for system or plant changes that can adversely affect pre-authorized maintenance work. The operations manager stated that his expectations are that senior reactor operators re-sign and re-authorize maintenance work when a significant time elapses from an original authorization. The inspector determined that JOs previously completed in several phases contain multiple authorization signatures. The licensee's practice in this area appears to be inconsistent among different staff. The licensee stated that they would assess this area to determine whether programmatic improvements are warranted.

The inspector concluded that this work activity demonstrated a weakness in coordinating, controlling and implementing maintenance.

2.4 Surveillance Activities

The inspectors performed technical procedure reviews, witnessed in-progress surveillance testing, and reviewed completed surveillance packages. They verified that the surveillance tests were performed in accordance with Technical Specifications, approved procedures, and NRC regulations.

The following surveillance tests were reviewed with portions witnessed by the inspector:

Procedure No.	Test
636.4.003	Diesel Generator Load Test
610.4.012	Core Spray Pump In-Service Test

A properly approved procedure was in use, approval was obtained and prerequisites satisfied prior to beginning the test, test instrumentation was properly calibrated and used, radiological practices were adequate, technical

specifications were satisfied, and personnel performing the tests were qualified and knowledgeable about the test procedure.

2.5 Missed Surveillance Test (URI 50-219/95-16-01)

On October 10, 1995, the licensee identified that a Technical Specification (TS) required surveillance test had not been performed within the allowable time period (due date was September 11, 1995). TS 4.2.G requires that the scram discharge volume drain and vent valves shall be stroke tested at least quarterly. The licensee immediately applied the guidance of TS 3.0.A upon discovery, to conduct a 30 hour shutdown. They also promptly commenced the required test. Within about 30 minutes, the test was satisfactorily completed. A plant shutdown was not initiated due to the short time that was required to satisfy the surveillance requirement. The licensee reported this event to the NRC via the emergency notification system.

This condition was identified during the review of surveillance test procedure 619.3.011, "Scram Discharge Instrument Volume (SDIV) Digital Level Calibration and Test, and SDIV Valve Exercise and Inservice Test," which was completed on August 29, 1995. The test procedure implements multiple surveillance functions, including both instrument calibrations and valve inservice testing. Other individual station surveillance procedures implement surveillance requirements of multiple frequencies as well. To ensure the proper test is performed by the multiple purpose procedure, the group supervisor reviews the governing job order that specifies the specific task to be done. Then, the individual sections of the procedure that are not required to be performed are marked as N/A ("not applicable"). In this instance, the maintenance foreman incorrectly marked section 6.8 ("Instructions for Testing SDIV Vent and Drain Valves") as N/A. Multiple reviews were done of the completed procedure shortly after test completion, however, none of those reviews identified that the required section was not performed.

The licensee conducted a meeting to review this event on October 11, 1995. Licensee management recognized an adverse trend related to missed or late surveillances (Licensee Event Reports 95-1 and 95-2). Although the prior two appeared to have been caused by different reasons, the licensee is attempting to identify common causes. Licensee management directed the development of a task force to fully review the surveillance test program and its implementation and to recommend corrective actions for improved performance. The task force is expected to complete an Action Plan by October 20, 1995, to identify the scope and schedule of its review. For the interim, additional administrative actions will be implemented to provide assurance that the correct section(s) of test procedures are completed. These additional reviews will be performed by the control room group shift supervisor, who will use the computerized scheduling system and the procedure to ensure the proper sections are performed. In addition, the licensee plans to conduct an audit of completed surveillance tests for multiple purpose procedures to determine whether similar instances have occurred in which required sections were not performed. That review is expected to be completed by the end of November, 1995.

The inspector reviewed the licensee's followup to this event and attended the October 11 meeting. Licensee management identified and placed strong emphasis on the adverse trend in this area. Actions taken to date have been aggressive. However, the extent of this problem is not yet known. Pending completion of the licensee's audit to determine if this was an isolated incident, this item is unresolved. Possible enforcement actions will be considered following the completion of the licensee's and NRC's independent review of prior performance. **Unresolved Item 50-272/95-16-01**

3.0 ENGINEERING (37551,71707,92903)

3.1 Through-Wall Pinhole Leak on Main Flash Tank Header Pipe

On September 21, 1995, the system engineer identified a small steam leak on the 1-2 flash tank 12 inch inlet header piping. The flash tanks (two main, one auxiliary) collect drainage from the moisture separator and reheater drain tanks. The licensee subsequently evaluated the existing conditions related to wall thickness and pipe structural integrity, and repaired the leak by installing and sealing a pipe clamp.

The licensee's inspection of the 12 inch, Schedule 100, piping near the pinhole leak identified localized wall thinning in an approximate five inch by six inch area. Within the area, thickness measurements ranged from 0.10 inch to 0.50 inch. Outside the area, thickness readings were all greater than 0.80 inch; nominal pipe thickness is 0.84 inch. There are three lines that connect to the 12 inch header. The eroded section was located at the impingement area on the interior pipe surface opposite one of the three connection lines. That line was determined to be of the highest energy (temperature). The licensee obtained single point measurements opposite the connections for the other two lines; both were 0.84 inch.

This piping is included in the licensee's Erosion/Corrosion Program. The other flash tank, No. 1-1, and the 1-3 auxiliary flash tank were ultrasonically tested in 1987; no wall thinning was identified. As a result, flash tank 1-2 was not measured due to the similar piping configuration. The piping was previously replaced in 1980 due to wall thinning. During the next power reduction (November 1995), the licensee plans to take additional thickness measurements on flash tank 1-1.

The leak was subsequently repaired by contractor personnel. A clamp was designed and fabricated by the contractor. The clamp was made to be wide enough to encapsulate all of the area that was less than nominal thickness. Licensee personnel completed an engineering evaluation and temporary modification for the associated repairs.

The repairs were completed on October 10, 1995. See Section 2.3 concerning the maintenance activities. The inspector concluded that proactive system engineer efforts resulted in identifying this leak. In addition, the licensee appropriately reviewed Erosion/Corrosion Program data to determine historical performance. The localized nature of this leak indicated that the program would not have likely predicted the wall thinning, although it occurred in a susceptible area.

3.2 Gas Bottle Regulators Incorrectly Replaced with Non-Safety Related Components

On September 28, 1995, the licensee identified that two leaking reagent gas (oxygen) bottle regulators for the drywell hydrogen/oxygen (H2O2) monitoring system had been replaced on September 6, 1995, with non-safety related commercial grade regulators. The replacement regulators had been withdrawn from spare parts and installed before they had been properly upgraded to safety grade through the commercial grade dedication process. The licensee subsequently evaluated the installed regulators and found them to be the same as those on other hydrogen and oxygen bottles, and to be acceptable. Nonetheless, they procured new safety related regulators from the H2O2 vendor and replaced the newly installed regulators on the two oxygen gas bottles, one bottle in each H2O2 monitor channel.

The H2O2 monitoring system is a two channel system. Each channel uses two (redundant) oxygen bottles for hydrogen monitoring and one hydrogen bottle for oxygen monitoring. The two regulators that were replaced were associated with one oxygen bottle per channel. The licensee initiated a deviation report and evaluated system operability. They determined that a total of 1000 psig between the two oxygen bottles (per channel) is the minimum operability requirement. The oxygen bottle pressure in each of the two unaffected oxygen bottles was greater than 2000 psig. Therefore, both H2O2 channels remained operable throughout the replacement and evaluation process.

The inspector discussed this event with engineering and maintenance personnel. The H2O2 monitoring system was procured in 1980 and installed in 1983. Due to some early operational difficulties, the regulators that were originally used were not provided by the system vendor. They had been procured commercially, but were properly upgraded for safety related use. However, the regulators did not have a stock symbol, which made it difficult to readily determine their safety classification. The licensee initiated a deviation report and a material nonconformance report to address this problem. In addition, a separate operability evaluation was performed. The inspector monitored the licensee's response to this event, and determined that it was prompt and appropriate. Additional actions are being developed as part of the deviation report response to prevent similar confusion regarding component safety classification.

4.0 PLANT SUPPORT (71707,71750)

4.1 Radiological Controls

During entry to and exit from the radiologically controlled area (RCA), the inspectors verified that proper warning signs were posted, personnel entering were wearing proper dosimetry, personnel and materials leaving were properly monitored for radioactive contamination, and monitoring instruments were functional and in calibration. During periodic plant tours, the inspectors verified that posted extended Radiation Work Permits (RWPs) and survey status boards were current and accurate. They observed activities in the RCA and verified that personnel were complying with the requirements of applicable RWPs, and that workers were aware of the radiological conditions in the area.

4.2 Security

During routine tours, access controls were verified in accordance with the Security Plan, security posts were properly manned, protected area gates were locked or guarded, and isolation zones were free of obstructions. Vital area access points were examined and verified that they were properly locked or guarded, and that access control was in accordance with the Security Plan.

5.0 SAFETY ASSESSMENT/QUALITY VERIFICATION (90713,90702,71707)

5.1 Multiple Emergency Lighting Unit Failures (VIO 50-219/95-16-02)

On October 11, 1995, the licensee reported to the NRC that five battery-operated emergency lighting units (ELU), required by 10 CFR 50 Appendix R, had been inoperable for at least a two month period without taking compensatory action. The units have been repaired, and the plant was in full compliance with Appendix R by the end of the inspection. However, several weaknesses were identified that resulted in the above condition. In addition, the licensee was slow to develop the reportability conclusion, although ample information was previously available to support the determination.

The licensee's maintenance assessment group initiated an investigation in response to a deviation report (DR), dated May 13, 1995, related to multiple ELU test failures. The response due date for the DR was September 15, 1995. On August 28, 1995, the licensee completed an evaluation report concerning the multiple failures from the May 1995 monthly surveillance test (procedure 658.2.001). The report documented long-standing and extensive problems with the 107 ELUs at Oyster Creek. The causes for the failures were varied, but mostly were related to design problems.

The report documented that since 1989, there have been 326 battery replacements on the ELUs manufactured by Exide Electronics. One hundred two of the 107 ELUs are manufactured by Exide (battery model LEC-36). The licensee contacted Exide, who stated many of the earlier failures (pre-1992) were attributed to a design deficiency, which resulted in "wicking" problems. Specifically, the positive and negative wires were connected directly to the battery such that the electrolyte solution traversed the cables and corroded the battery charger module. Exide modified the battery design around 1993 by using connectors on the exterior of the cell to attach to the cables. However, a separate problem is also being evaluated by both Exide and the licensee that is related to a possible manufacturing defect. Apparently, due to inadequate lubrication of the battery vent seal, excessive hydrogen can escape and result in lower electrolyte level (after the seal loses elasticity with time).

The August 28, 1995 report documented multiple ELU failures and battery replacements during monthly surveillance tests for several years. The inspector concluded that the licensee had not adequately evaluated and corrected the adverse condition. A contributing reason for this was the absence of a system engineer due to personnel changes. Nonetheless, the DR multi-disciplinary reviews and the DR trending program failed to identify this condition for several years.

The August 1995 Report determined additional engineering review is needed to 1) determine all causes for the ELU problems and failures, and 2) evaluate whether there was an Appendix R concern. The determination for the Appendix R concern was not made until over a month after the August 1995 report. The inspector felt that sufficient data and information was available to support the ultimate reportability decision, however, the determination was unnecessarily delayed.

The licensee determined that a contributing cause for the failure to adequately correct the ELU failures was related to the surveillance process. The electricians meticulously conducted the monthly tests and identified the failures; however, individual job orders were then required to replace/repair the ELUs. On several occasions, the job orders were not completed in a timely fashion. As a result, several of the monthly tests were performed prior to completing the job order. To address this concern, the licensee revised the surveillance to allow the electricians to correct failures "on-the-spot." The licensee is also developing guidance for the type and compensatory timeliness for actions to implement when the ELUs cannot be restored immediately.

The inspector concluded that the licensee failed to promptly identify and correct this condition that was adverse to quality, and is a violation of 10 CFR 50, Appendix B, Criterion XVI (Corrective Action). In addition, the associated reportability determination appeared to be slowly developed. However, the August 1995 evaluation that was conducted by maintenance assessment was very thorough and of excellent quality. **(Violation 50-219/95-16-02)**

5.2 Followup on Industry Event

The inspector reviewed several of the licensee's actions and systems to assess whether they were vulnerable to a particular event that occurred at another nuclear power plant (Limerick 1). In particular, a safety relief valve failed open (at Limerick 1) while operating at full power. It had been leaking previously during power operations. During the licensee's recovery and response, the safety pump used for shutdown cooling demonstrated abnormal flow characteristics while taking a suction from the suppression pool (torus for Oyster Creek). It was subsequently identified that foreign fibrous material from the suppression pool partially clogged a strainer, technically rendering the safety pump inoperable.

At Oyster Creek, the licensee has taken several actions to prevent debris from entering the torus. During the recent refueling outage, removable covers were installed (and subsequently removed) on the downcomer vents to prevent debris intrusion; and they inspected and cleaned the torus, vent headers, and downcomers. The licensee also inspected, measured and sampled (for size and composition) the torus sludge. There were no fibrous materials found. NRC Inspections 50-219/94-22 (Section 2.3) and 50-219/95-01 (Section 5.3) provide additional details regarding the sludge composition and amount.

The torus at Oyster Creek was drained and coated during the 10R outage (1984-1986) to prevent corrosion. Since that time, the licensee has periodically performed inspections to verify the integrity of the coating. They also

occasionally inspect the internal torus volume by use of a submarine video machine and/or divers. During the 13R and 14R refueling outages, partial sludge removal efforts were completed. Additional sludge removal is planned for the next refueling outage (fall 1996).

The pressure relief systems are comprised of five electromatic relief valves (EMRV) for the automatic depressurization system, and nine main steam safety valves. Safety/Relief valves are not used at Oyster Creek. Only the EMRVs discharge to the torus. The safety valves discharge to the drywell atmosphere.

Operators are alerted to leaking EMRVs via several means. Two digital displays in the control room indicate the temperature of the two EMRV discharge headers (both are currently reading 116° F). In addition, each EMRV has an acoustic monitor that displays and alarms in the control room. There is also a local panel in the plant (elevation 23') that digitally displays the tailpipe temperature for each EMRV and safety valve. The licensee has not experienced leaking EMRVs or safety valves in several years.

There is no formal program to log, document or trend EMRV tailpipe temperatures. However, the shift technical advisors (STA) periodically record, plot and trend tailpipe temperatures for all five EMRVs. The inspector reviewed the data and no adverse trends were apparent. Also, the inspector observed the readings on the local display panel for all EMRVs and safety valves; none indicated significant leakage (temperatures were between 115° F and 150° F).

The torus inventory is closely monitored by the licensee. Changes in leakage rates are promptly identified and reviewed by the licensee's staff. The same applies to temperature changes. During the past summer, torus temperature was elevated due to a leaking reactor water cleanup valve and high ambient temperature conditions. The conditions and possible causes were aggressively evaluated and monitored by the licensee. Torus cooling was occasionally placed in service during that time. Typically, torus cooling is not needed.

Based on the above, the inspector concluded that the licensee provides a high level of attention (management and staff) to torus conditions (cleanliness and quality). Torus level and temperature parameters are closely monitored. Also, EMRV leakage trends are closely observed although no formal periodic surveillance or monitoring is required.

5.3 Periodic Report Review

NRC inspectors reviewed the following periodic report.

- Monthly operating report for August 1995.

6.0 EXIT INTERVIEWS/MEETINGS (71707)

6.1 Preliminary Inspection Findings

A verbal summary of preliminary findings was provided to the senior licensee management on October 26, 1995. During the inspection, licensee management

was periodically notified verbally of the preliminary findings by the resident inspectors. No written inspection material was provided to the licensee during the inspection. No proprietary information is included in this report.

The inspection consisted of normal and backshift inspection; 27.5 of the direct inspection hours were performed during backshift periods.

6.2 Attendance at Management Meetings

The resident inspectors attended exit meetings for other inspections conducted as follows:

Date	Lead Inspector	Subject	Report No.
October 6, 1995	J. Carrasco	Concrete Pad	95-18
October 6, 1995	H. Williams	Operator Requal	95-16
October 5, 1995	E. King	Security	95-19

At these meetings the lead inspector discussed preliminary findings with senior GPUN management.