GPU Nuclear

GPU Nuclear Corporation
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Writer's Direct Dial Number:

November 14, 1983

Director, Division of Licensing
Nuclear Regulatory Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Generic Letter 83-28

As stated in our letter of September 6, 1983, 120 days is not adequate enough to provide the current status of conformance with the positions presented in the generic letter nor sufficient to provide plans and schedules for any needed improvements relative to these positions. The enclosed Generic Letter 83-28 Report is in response to your letter of October 26, 1983 and represents, to the extent practicable, the current status of conformance relative to the positions of the generic letter for the Oyster Creek Nuclear Generating Station.

As a result of our intention to participate in the presently developing generic industry efforts, GPU Nuclear's plans and schedules (if required) for implementing the required programs must accommodate the evaluationary nature of these efforts. Any remaining outstanding item with respect to the generic letter will be provided at a later date.

GPU Nuclear has determined that the submittal of any outstanding items for the Oyster Creek Nuclear Generating Station at a later date is justified because the scram system does not utilize circuit breakers similar to those which failed at the Salem plant, the demonstrated high reliability of the scram system and the presently operational ATWS recirculation pump trip capability.

A055
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If you have any questions or require additional information, please do not hesitate to contact James Knubel of my staff at (201)299-2264.

Very truly yours,

Peter B. Fiedler
Vice President and Director
Oyster Creek

Sworn to and Subscribed
before me this 14 day
of November 1983.

Michael Laggart
MICHAEL LAGGART
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires December 31, 1985

PBF/dam

cc: Administrator
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

NRC Resident Inspector
Oyster Creek Nuclear Generating Station
Forked River, NJ 08731

1.1 Post-Trip Review (Program Description and Procedure)

Status of Conformance

Plans and Schedules

Program Description: Oyster Creek Reactor Trip Review Program

This report describes the reactor trip review program for GPUNC's Oyster Creek Nuclear Generating Station. The report describes the program's essential elements and basic requirements, with specific details to be incorporated into Oyster Creek plant procedures and Technical Functions (TF) procedure EP-029, "Analysis of GPUN Plant Transients." This report addresses items 1.1 and 1.2 identified in NRC Generic Letter 83-28. The status of actions required to implement this program and a schedule for completion of required actions is provided in the Implementation section of this report.

Purpose

The purpose of the program is to establish a systematic method of conducting the technical review and analyses of Oyster Creek plant performance associated with reactor trips in order to:

1. Determine the immediate and root causes of the trip.
2. Identify unexpected, abnormal responses to the trip by plant systems, equipment, and personnel.
3. Assess the impact of identified abnormalities on nuclear safety, equipment reliability, system performance, and availability.
4. Develop corrective actions to prevent the recurrence of the trip and mitigate abnormal responses.
5. Document observed plant behavior for use in subsequent evaluations.
6. Satisfy reporting requirements.

Scope

The GPUN Reactor Trip Review Program implemented at Oyster Creek applies to every reactor trip, planned and unplanned. However, planned reactor trips need not undergo all phases of the review if response is normal. The scope of the information reviewed under the program is sufficient to accomplish its objectives and includes data on plant system behavior, actuation and sequence of operation of equipment, records of operator actions, and plant activities affecting the event. The program prescribes activities that are performed immediately following a trip, prior to restart, and continue through a subsequent in-depth evaluation that supports preparation of internal and external reports.

Roles and Responsibilities

Several groups, including plant and Technical Functions staff participate in the reactor trip review program. The responsibility and authority of each participant has been clearly defined below.

Plant Operations is responsible for operating the plant. Under the program, the Group Shift Supervisor (GSS) is responsible for notifying plant management. The Shift Technical Advisor (STA) is the Technical Functions contact with the operating plant. The STA is responsible for notifying Technical Functions personnel per TF Engineering Standard ES-005, "STA Duties and Responsibilities." The Operating Shift, along with the STA, are responsible for diagnosing and controlling the event and thus will have firsthand knowledge of the event. This information is to be promptly documented to help ensure that a complete record of the event is obtained. In addition, the STA will have complete authority to obtain all necessary data pertinent to the trip, and will be responsible for its subsequent control.

At the operating site, the Plant Analysis Section is responsible for performing the post trip review. The Plant Analysis Section reports to the Director of Systems Engineering, and thus will provide an independent assessment of the plant's behavior and the acceptability of restarting. The post-trip review must be completed and documented prior to restart.

Various Technical Functions Organizations, especially the Safety Analysis and Plant Control, Engineering & Design groups, will provide analytical and technical support as required.

The Plant Engineering, Operations and Materiel departments will determine the root cause(s) of the event in conjunction with the STA, specify corrective actions, and implement corrective actions.

Plant Management is responsible for determining when and how the unit is to be restarted.

Technical Functions is responsible for concurring with Restart Plans and corrective actions.

Training and Qualification

Training and qualification for key responsible Oyster Creek personnel is detailed below:

Group Shift Supervisor - The GSS is qualified to the present job description for this position, and to Technical Specification requirements.

Manager, Plant Operations - The Manager, Plant Operations is qualified to the present job description for this position, and to Technical Specification requirements.

Plant Operations Director - The Plant Operations Director is qualified to the present job description for this position, and to Technical Specification requirements.

Plant Operations Review Committee - PORC members are qualified to the requirements of the Technical Specifications, and their own job descriptions.

Plant Engineering Director - The Plant Engineering Director is qualified to the present job description for this position, and to Technical Specification requirements.

Vice-President/Director for Oyster Creek - The V.P./Director-Oyster Creek is qualified to the present job description for this position, and to Technical Specification requirements.

Shift Technical Advisor - The STA is qualified to TF procedure TAP-005, "STA Selection & Qualification," and trained to the requirements of the Oyster Creek Training Department Program document, "Shift Technical Advisor Training Program." Specifically included is training in safety analysis, and transient and accident analysis.

Plant Analysis Manager-Oyster Creek - The Plant Analysis Manager-Oyster Creek is qualified to the present job description, which includes training and experience in safety analysis, and transient and accident analysis.

Director, Systems Engineering - The Director SE is qualified to the present job description for this position.

V.P. Technical Functions - The V.P. TF is qualified to the present job description for this position.

Program Phases

The reactor trip review program consists of four distinct phases:

1. Post-trip review
2. Restart decision
3. Independent review
4. Subsequent evaluation

Every reactor trip will be subjected to a post-trip review and restart decision. Planned reactor trips, where no abnormalities have been identified, need not proceed to the subsequent evaluation phase. The major elements of each of these phases is described below.

Post Trip Review

The post-trip review is performed immediately following the trip and completed prior to restart.

The purpose of the post trip review is to:

1. Determine the cause(s) of the trip.

2. Identify other-than-expected performance of plant systems and equipment.

3. Assess the impact of identified abnormal performance on safe operation, including:

    a) If operator actions affected technical performance, and how;

    b) If procedures affected the course of the event, and how.

4. Ensure continued availability of information and data pertaining to the event.

The scope of the post-trip review has been established to ensure that abnormal performance in important systems will be identified. Guidelines and criteria, which define the range of expected system response, are used in the process. The major elements of the post-trip review, and the responsible lead organization are:

1. Plant Operations, and Plant Materiel, in conjunction with the STA will determine the cause(s) of the trip (per plant procedures).

2. Plant Analysis will determine the reactor trip sequence (per EP-029).

3. Plant Analysis (per EP-029) will review the pre- and post-trip behavior of key parameters that reflect overall plant performance and will identify abnormal performance of important systems.

4. Plant Analysis (per EP-029) will review the performance of important systems and equipment, both safety and control, to identify other-than-expected response to the trip.

5. The Plant Staff (per Plant Procedures) and Technical Functions (per EP-029) will identify those corrective actions that must be completed prior to restart.

The sources of information necessary to conduct the review and analysis are detailed in Appendix A.

Restart Decision

Prior to restarting the unit, Oyster Creek and Technical Functions must ensure that:

1. The cause(s) of the trip (RPS Trip function and initiating event) are known or have been investigated to the fullest extent possible. This means that when the root cause is unknown, that attempts have been made to locate and duplicate the cause by troubleshooting, and that testing and appropriate calibration and maintenance checks have been conducted.

2. The plant's transient response was as expected for the type of event, and either did not identify any problems that impact the ability of the unit to be safely restarted, operated and shutdown, or that the problems have been corrected.

3. Any problems with equipment subject to Technical Specification LCO requirements are corrected as required.

4. The recommended corrective actions identified during the post-trip review as being required for start-up are implemented.

The decision to restart will be made by the Oyster Creek Management and concurred with by the Technical Functions Management. The level of approval, and concurrence may depend on the seriousness of the conditions which exist after the plant trip.

Independent Review

Under certain conditions, further independent review must be performed prior to restart to ensure that all questions regarding the ability to safely restart and operate the plant are resolved. Criteria have been established as to when an independent review is required. They are as follows:

1. If the immediate (RPS trip function) and root cause(s) of the trip cannot be determined, or

2. Plant post-trip response is abnormal, or

3. If any unresolved safety issues exists, or

4. If compliance with licensing requirements is in question.

The independent review will be performed by a group of knowledgeable individuals designated by the VP/Director-O.C., and the Director, Systems Engineering. Results will be reported to the VP/Director-O.C., and the Director, Systems Engineering.

Subsequent Evaluation

Every unplanned reactor trip will be subjected to a follow-up, in depth evaluation. In addition, planned reactor trips which show abnormalities in plant response will also receive further evaluation. The purpose of the subsequent evaluation is to ensure that all aspects of the events are fully investigated, evaluated, and documented.

The subsequent evaluation takes the knowledge gained from the post-trip review and expands upon it in areas of identified abnormal response. It ensures that the more subtle aspect of system performance, even though they did not significantly affect the plant response, are evaluated and needed corrective action identified. This report need not be completed before restart. The scope of the subsequent evaluation is prescribed to ensure that all reporting requirements can be met.

Implementation and Statu

The Reactor Trip Review Program will be implemented as described above at Oyster Creek via a plant procedure(s), with supporting guidance contained in TF Procedure EP-029.

The above described program meets the requirements of Generic Letter 83-28 Action Items 1.1 and 1.2.

The status of actions required to fully implement the Oyster Creek Reactor Trip Review Program is detailed below. Where items require additional work to complete implementation, a schedule is provided.

1) Criteria for determining the acceptability of restart.

   Action Required: Plant Operations will include the four elements discussed under "Restart Decision" into an Oyster Creek procedure.

   Completion Date: March 31, 1984

2) Include responsibilities and authorities of personnel who will perform the post-trip review and analysis of the event.

   Action Required: Plant Operations will incorporate program guidance described in "Roles and Responsibilities" section into Oyster Creek Procedures

   Completion Date: March 31, 1984

   Action Required: Plant Analysis will incorporate similar guidance into TF Procedure EP-029

   Completion Date: March 31, 1984

3) Incorporate qualification and training requirements for responsible personnel.

   Action Required: Plant Operation incorporate qualification requirements (e.g., GSS, PORC member) into a plant procedure

   Completion Date: March 31, 1984

   Action Required: Plant Analysis incorporate qualification requirements into EP-029.

   Completion Date: March 31, 1984

4) Describe sources of info necessary to conduct the review, analysis, and reconstruction of the event. See Appendix A.

5) Incorporate methods and criteria for comparing the event information with known or expected behavior.

Action Required: Plant Analysis add an Appendix to EP-029 with such criteria.

Completion Date: March 31, 1984

6) Include criteria for determining the need for independent assessment.

Action Required: Plant Operations include the 4 items from the "Independent Review" section above into a plant procedure.

Completion Date: March 31, 1984

7) Finalize Reactor Trip Review Program Report to include above items scheduled for completion.

Completion Date: March 31, 1984

GPU NUCLEAR CORPORATION

OYSTER CREEK NUCLEAR GENERATING STATION

Reactor Trip Review Program

Appendix A

APPENDIX A

I. 1. Sequence of Events Recorder (Strip Chart)

2. Monitors - 60 signals broken down as follows:

a. 4 pens for Neutron Monitoring System

b. 4 pens for Reactor High Pressure

c. 4 pens for Reactor Low Water Level

d. 2 pens for Dump Volume High Water Level

e. 2 pens for Low Scram Air Header Air Pressure

f. 4 pens for Main Steam Line Low Pressure

g. 4 pens for Drywell High Pressure

h. 4 pens for Condenser Low Vacuum

i. 4 pens for Main Steam Line High Radiation

j. 4 pens for Main Steam Line Break

k. 4 pens for MSIV Closure

l. 4 pens for Reactor Low-Low Water Level

m. 2 pens for Reactor Manual Scram

n. 2 pens for Automatic Depressurization

o. 2 pens for Containment Spray System

p. 2 pens for Core Spray System

q. 4 pens for Reactor Triple Low Level

r. 4 pens for Drywell High-High Pressure

3. Chart speeds for this recorder:

Normal - 3/4 inch per hour

Fast - 6 inches per minute

Chart speed switches automatically to fast speed after first signal. In fast speed it is possible to see time between events to the nearest half-second or better.

4. Information is displayed on a roll of chart paper on which each of the pens tracks a straight line on one side of its own narrow band. This line may indicate an "off" condition, and a rapid movement of the pen to the oppsoite side of the band indicates an "on" condition exists.

   If any one of the signals comes "on", the recorder goes to fast speed for a 3-minute period, after which time it goes back to slow speed. It will not go back into high speed again until all "on" indications have first been cleared.

5. The Sequence of Events recorder paper is kept in the plant's Document Center for a period, after which time it may be transferred to a vault.

6. The power supply for a Sequence of Events recorder is from a non-interruptable source.

II.

A. 1. Plant Process Computers: Sigma and Prime

2. Process Computer Parameters:

a. APRMs 1 through 8

b. Recirculation Flow 1 through 5

c. Recirculation Temperature 1 through 5

d. Feedwater Temperature

e. Feedwater Flow

f. Reactor Steam Flow

g. Reactor Pressure Wide Range

h. Reactor Pressure Narrow Range

i. Reactor Water Level

j. Core Thermal Power

The "Sigma" computer reads the parameters above. Depending on the parameter it may be read at time intervals of 1 second, 10 seconds, or 60 seconds. It then feeds this information to the "Prime" computer which reads data from the "Signa" every 6 seconds.

Given the monitoring capability of the computer, it was decided that these were the most important parameters to use to maintain an effective overview of the reactor and plant. The sampling rate is based on the importance of these parameters to a post-trip evaluation, and their rate of change under various operating conditions.

3. The computer can be set to record data up to six (6) hours. This 6-hour block may be divided up into any combination of time blocks before and after a trip. For example, we typically set the computer to monitor data 2 hours before a trip and 4 hours after.

4. Data can be printed out one line at a time of ten (10) parameters with each parameter name printed at the top of a column.

Data can also be graphed with time, and several parameters can be graphed on the same chart for convenience.

5. Data may be stored on disk, or transferred to tape, and may be printed out on paper.

6. The process computer is powered from interruptable sources.

II.

B. 1. Various strip chart recorders are mounted in Control Room panels. These recorders are either the multipoint chart type or the continuous ink pen type.

2. The following list of parameters read out on ink pen type charts, and are therefore continuously sampled:

	Parameter	Chart Speed (Normal//Fast)
a.	Clean-up Conduct (outlet) Clean-up Conduct (inlet)	1 in/hr//60 in/hr
b.	Clean-up Flow Clean-up Recirc. Suction Pressure	1 in/hr// -
c.	Drywell Unidentified Leakage	1 in/hr// -
d.	Recirc. Pump Suction Temperature	1 in/hr// -
e.	Vessel Head Temperature (metal) Vessel Head Temperature (Flange)	1 in/hr// -
f.	Core Delta-Pressure Total Recirc. Flow	1 in/hr// -
g.	Source Range Monitors	1 in/hr//60 in/hr
h.	IRM - APRM	1 in/hr//60 in/hr
i.	LPRM Trend	1 in/hr// -
j.	Feedwater Flow Reactor Water Level	1 in/hr//60 in/hr
k.	Steam Flow Steam Pressure	1 in/hr//60 in/hr
l.	Reactor Pressure Turbine Steam Flow	1 in/hr//60 in/hr
m.	Feedwater Temperature	1 in/hr// -
n.	Reactor Core Region Level	1 in/hr// -
o.	Steam Flow to First Stage Reheater	1 in/hr// -
p.	Steam Flow to Second Stage Reheater	1 in/hr// -

	Parameter	Chart Speed (Normal//Fast)
q.	Torus Level (Narrow Range) Torus Level (Wide Range)	1 in/hr// -
r.	Turbine Speed Eccentricity	1 in/hr// -
s.	Control Valve Position Bypass Valve Position	1 in/hr// -
t.	Drywell Pressure Torus Pressure	1 in/hr// -
u.	N_2 Purge Flow N_2 Make-up Flow	1 in/hr// -
v.	Torus Oxygen Meter Drywell Oxygen Meter	1 in/hr// -
w.	Generator Output (Vars) Generator Output (Watts)	1 in/hr// -
x.	Generator Voltage	1 in/hr// -

3. These recorders are normally running continuously when the plant is operating. During shutdown conditions, only certain recorders are left on. However, many minutes of data are always available both before and after a trip.

4. The parameters that are monitored on these recorders are bounded by upper and lower values. The span of the recorder is calibrated to accommodate these bounds. Sometimes, multipliers are needed to allow readings to be made in the right order of magnitude. These adjustments are made in an effort to insure readability.

5. The data is permanently marked on the chart paper, and at one interval the operator will mark the time of day and date on the recorder paper. Under normal conditions a roll of chart paper should last several days. After that, it is replaced with a new roll, and the old one is sent to the plant's Document Control Center where it is sorted and filed.

6. All these recorders are powered by non-interruptable sources.

II.

C. 1. The list of parameters that are monitored on multipoint chart recorders in the Control Room is shown below. These recorders monitor several related parameters independently and intermittently. Each time the point is monitored, a colored dot is printed on the chart paper after which the recorder moves to monitor another point.

2. The following is a list of multipoint parameters monitored and the chart speeds.

	Parameter	No. of Points	Chart Speed (Normal//Fast)
a.	Drywell and Containment Temperatures	9	1 in/hr//60 in/hr
b.	Isolation Condenser and Reactor Vessel Discharge Temperatures	8	1 in/hr//60 in/hr
c.	Shutdown Cooling and Fuel Pool Temperatures	9	1 in/hr//60 in/hr
d.	Recirculation Pump Seal Temperature	1	1 in/hr//60 in/hr
e.	Hotwell Conductivity Common Demin. Influent	9	1 in/hr//60 in/hr
f.	Demin. Effluent Demin. Common Effluent	9	1 in/hr// -
g.	Turbine Vibration and Expansion Turbine Metal Temp.	13 16	
h.	LPRM % Power (Rec. 1) LPRM % Power (Rec. 2)	62 62	1 in/hr// -
i.	Reactor Recirculation Pumps and MG Temperatures	62	1 in/hr// -
j.	Control Rod Drive Temperatures	65	1 in/hr// -
k.	Control Rod Drive Temperatures	72	1 in/hr// -
l.	Reactor Recirculation Winding Temperatures	20	1 in/hr//60 in/hr

	Parameter	No. of Points	Chart Speed (Normal//Fast)
m.	Reactor Vessel Temperatures	48	1 in/hr// -
n.	Reactor Recirculation MG Temperatures	20	1 in/hr//60 in/hr
o.	Turbine Bearing Metal Temperature	12	1 in/hr// -
p.	Environs Temperature Intake, Discharge, Bridge	5	1 in/hr//60 in/hr
q.	Main Turbine Bearing Metal and Oil Temperature	20	
r.	High Pressure Exhaust Reheat, Extraction and Intermed. Pressure Exhaust Pressure	20	1 in/hr// -
s.	Condensate/Feedwater, Circulating Water Temperature	18	1 in/hr// -
t.	Hot Reheat/Steam Drains, Turbine and Reactor Bldg. CCW Temperature	15	1 in/hr// -
u.	Transformer Temperatures	8	1 in/hr// -
v.	Generator Temperatures	19	1 in/hr// -

3. See II.B.3

4. See II.B.4

5. See II.B.5

6. See II.B.6

II.

D. 1. Plant Operations Logs

2. Various logs are used to collect data and status of the plant at certain periods by operations personnel. The parameters of interest and their sampling rate can be found by referring to a particular log (see attachments). In the interest of brevity, the following is only a lost of log titles:

a) Technical Specification Log Sheet

b) Transmission Line Report

c) Equipment Status

d) Control Room Alarm Sheet

e) Supplemental Drywell Readings

f) Control Rod Status Report

g) Make-up Log

h) Main Steam Isol. Valve 5% Closure Test

i) Daily Substation Tour Sheet

j) Heat Balance Calculation (Data & Analysis Sheet)

k) Control Room Turnover Checklist

l) Control Room Shutdown Log - Supplement

m) Reactor Building Tour and Turnover Checklist

n) Reactor Building Tour and Turnover Checklist - Supplement

o) Turbine Building Tour and Turnover Checklist

p) Turbine Building Tour and Turnover Checklist - Supplement

q) Liquid Release Check-off Sheet

r) Fuel Oil Transfer Form

s) Area and Effluent Radiation Monitoring

t) Environmental Data Log

u) Generation Log

v) Reactor Log

w) Miscellaneous Readings Log

3. The majority of these logs have dates and times indicating when the data should be taken. This can be used as a gauge of the parameters prior to and after the trip. Since these logs are taken regularly, most while the plant is operating, data exists for as long prior to the trip as the plant was operating. After the trip, certain data will not be taken, but other logs will continue to be filled in.

4. Each log sheet is printed up with the name of the parameter or instrument identification, and a space for the parameter value to be written in, usually across from the time it was written, or the shift.

5. Most of these logs are numbered and are filed in the plant Document Control Center.

6. These logs are taken by hand.

III. Interviews with various individuals directly and/or indirectly associated with the shutdown may be undertaken. Forms have been created for this purpose. Also, data taken immediately from the Control Room panel regarding equipment status, etc., may be used, as well as various logs.

IV. A new plant computer system is to be installed at Oyster Creek. This system will have many of the plant's Control Room indications routed to it, allowing rapid scan and storage of this information. When fully completed, there will be approximately 600 points fed into this computer. Additionally new chart recorders are scheduled to be installed in the Control Room to replace old ones. These recorders may have the capability to alarm when a particular point exceeds a preset value, and some or all may have a selector switch to allow a single point to be continuously displayed on a digital readout. Some recorders slated for changeout are:

a. Containment Spray and Torus/Drywell Temperatures

b. Isolation Condenser and EMRV Discharge Temperatures

c. Shutdown Cooling and Fuel Pool Temperatures

d. Reactor recirculation Pumps Seal Cavity Temperatures

e. Reactor Recirculation Motor Winding Temperatures

f. MG Set Fluid Coupler Bearing Temperature

g. Main Turbine Bearings Metal and Oil Temperature

h. High Pressure Turbine Exhaust, Reheat, Extraction Pressures

i. Condensate, Feedwater and Circulating Water Temperatures

j. Hot Side Reheat, Steam Drains, and Turbine and Reactor Building Closed Cooling Water Temperatures

All these recorders are the multipoint chart type

1.2 Post-Trip Review - Data and Information Capability

Status and Conformance

See 1.1

Plans and Schedules

See 1.1

2.1 Equipment Capability and Vendor Interface (RTS)

Current Status of Conformance

GPU Nuclear currently has an equipment quality classification list containing the major systems, components and structures at the plant. A quality classification list to the component level does not exist. Procedures are in effect to insure that safety grade components are installed where required. As maintenance is performed, or parts are re-ordered, each work order or purchase order is evaluated on a case-by-case basis using engineering judgment. Any hardware changes, as a result of maintenance or plant modifications, are evaluated by QC and the Group Shift Supervisor for adequacy of classification and supporting documentation before it is turned over to the plant.

No formal program has previously existed for control of updating of vendor manuals. In general, individuals with responsibility for operation or maintenance of specific equipment or systems utilized manuals kept in their possession on site. These individuals communicated directly with vendors on an as-needed basis for additional technical information. From time to time, specific technical information has been forwarded by the General Electric Co. in the form of SIL(s) and TIL(s) to the Oyster Creek Plant Engineering for distribution to responsible plant personnel for appropriate action. GPUN does not have its own independent active vendor interface program with positive feedback.

Plans and Schedules

GPUN intends to respond to this item in conjunction with the efforts of the BWR Owners Group. The required documentation relative to this item will be submitted upon completion of this effort.

The new GPUN program planned for review and update of existing vendor documentation and verification that this information is appropriately referenced or incorporated in plant instructions and procedures is described below:

1. Establish, implement and maintain a continuing program to ensure that vendor information for safety-related components is complete, current and controlled throughout the life of the plant and appropriately referenced or incorporated in plant instructions and procedures.

2. Initial tasks are to (1) conduct a technical review of vendor manuals, (2) conduct a technical review of plant procedures vs. vendor manuals.

3. Long term task is to provide an on-going program to assure continued accuracy and completness of vendor information and plant procedures.

GPUN does not plan to have its own independent active vendor interface program with positive feedback.

2.2 Equipment Classification and Vendor Interface (Safety-Related Components)

Current Status of Conformance

1.1 Engineering judgment is used on a case-by-case basis for identifying components as safety-related within systems currently classified as safety-related.

1.2 An equipment quality classification list is used by engineering personnel in determining the quality classifications for procurement of equipment and parts, for procedure classifications and engineering evaluations. The list is not computerized.

The methodology for its development and validation is not explained.

1.3 As maintenance is performed, or parts are re-ordered, each work order or purchase order is evaluated on a case-by-case basis using engineering judgment.

1.4 The management controls utilized in the verification of procedures for preparatory validation and routine use associated with safety classification are assured through the continuing quality assurance auditing process and as specifically detailed below.

. Classification of procurements are verified by QA
. Fabrication initiating documents i.e., short forms and work authorizations are independently checked by organizations other than the originator.
. Surveillance procedures and procedures relative to ITS undergo independent review by the Plant Operations Review Committee.

1.5 The criteria imposed in the procurement of ITS equipment demonstrating design verification and qualification testing is as defined in procedure 125.2, Appendix C (Guidance and Criteria for determining quality assurance/technical requirements necessary to support procurement), and procedure EP-031, Equipment and Environmental Qualifications.

1.6 The GPUN-OC equipment classification program is essentially the implementation of procedures ES-011 and 125.2 in accordance with the Operational Quality Assurance Plan.

2. No formal program has previously existed for control or updating vendor manuals. In general, individuals with responsibility for operation or maintenance of specific equipment or systems utilized manuals kept in their possession on site. These individuals communicated directly with vendors on an as-needed basis for additional technical information. From time to time, specific technical information has been forwarded by General Electric Co. in the form of SIL(s) and TILS(s) to Oyster Creek Plant Engineering for distribution to responsible plant personnel for appropriate action. GPUN does not have its own independent active vendor interface program with positive feedback.

Plans and Schedules

1.1 - 1.6 To be supplied at a later date.

2. The GPUN program planned for the Oyster Creek station for review and update of existing vendor documentation and verification that this information is appropriately referenced or incorporated in plant instructions and procedures is as follows:

a) Establish, implement and maintain a continuous program to ensure that vendor information for safety-related components is complete, current and controlled throughout the life of Oyster Creek and appropriately referenced or incorporated in plant instructions and procedures.

b) Initial tasks are to conduct a technical review of vendor manuals per procedures and then conduct a technical review of plant procedures vs. vendor manuals.

c) Long term task is to provide an on-going program to assure continued accuracy and completeness of vendor information and plant procedures.

On a GPUN Corporate level, a Task Force is functioning to assess the present status of GPUN compliance with the generic implications of the Salem event and is currently in the process of finalizing these assessments and recommendations by the Task Force for the Office of the President. In addition, the Technical Functions Division of GPUN is actively participating in both the BWR Owner's Group and INPO activities.

The tentative scheduled completion of above program is December, 1986.

3.1 Post-Maintenance Testing (RTS)

Current Status of Conformance

1. For all maintenance performed on Important to Safety Systems, post-maintenance testing must be considered. It is the responsibility of the Maintenance Job Supervisor to specify the post-maintenance testing requirements in consultation with cognizant operations and engineering personnel as deemed appropriate by the Job Supervisor. Following completion of maintenance activities, the Group Shift Supervisor is responsible to assure that post-maintenance testing adequately demonstrates the operability of equipment/systems before returning equipment to service.

   For immediate maintenance items, the Group Shift Supervisor assumes the planning and control responsibility for specifying post-maintenance testing normally performed by the Job Supervisor. In this capacity, the G.S.S. may consult with Maintenance, Rad Con, and Engineering personnel.

   In any case, the adequacy of post-maintenance testing is the responsibility of the G.S.S. The G.S.S., who holds an SRO license, uses his judgment and knowledge of plant systems to make this evaluation.

   A review of the Oyster Creek Technical Specifications indicates that post-maintenance testing is not required for Reactor Protection System components. This is considered to be a deficiency. A Technical Specification change will be submitted to add requirements for post-maintenance testing of RPS components.

   RPS surveillance test procedures test the operability of RPS equipment down to, but not including, the action initiating device. RPS components not tested are the scram valves, pilot scram valves, and rod drive mechanism. This is inconsistent with the BWR RPS logic testing design features. These procedures have not been re-reviewed as part of this response. These procedures have been reviewed by station engineering personnel, PORC and Q.A. as part of the normal procedure review and approval process.

2. NSSS vendor recommendations are addressed in the form of SIL's, TIL's, FDI's, and other product information documents which are assigned to station engineering personnel for evaluation and implementation into plant procedures. Other vendor information is not controlled as previously stated in response to item 2.2.2, thus integration of this information into plant procedures is not assured.

3. Technical Specifications do not require post-maintenance testing for RPS components. The proposed Technical Specification referenced in response to Item 3.1.1 will consider the effects of testing frequency of RPS reliability.

Plans and Schedules

1. To be supplied at a later date.

2. To be supplied at a later date.

3. To be supplied at a later date.

3.2 Post-Maintenance Testing (Safety-Related Components)

Current Status of Conformance

1. For all maintenance performed on Important to Safety Systems, post-maintenance testing must be considered. It is the responsibility of the Maintenance Job Supervisor to specify the post-maintenance testing requirements in consultation with cognizant operations and engineering personnel as deeded appropriate by the Job Supervisor. Following completion of maintenance activities, the Group Shift Supervisor is responsible to assure that post-maintenance testing adequately demonstrates the operability of equipment/systems before returning equipment to service.

   The Technical Specifications require post-maintenance operability testing on most safety-related systems. For those systems not specifically covered, a revised Tech. Spec. will be submitted to include the additional systems.

   Surveillance tests of safety-related systems demonstrates the operability of the systems to perform their design function. Not all surveillance tests exercise all the system components required to function to achieve the safety objective. However, post-maintenance testing is required to be peformed on all ITS components, as appropriately determined by the Job Supervisor and accepted by the G.S.S.

2. NSSS vendor recommendations are addressed in the form of SIL's, TIL's, FDI's, and other product information documents which are assigned to station engineering personnel for evaluation and implementation into plant procedures. Other vendor information is not controlled as previously stated in response to item 2.2.2, thus integration of this information into plant procedures is not assured.

3. The review of existing Technical Specification requiements will be conducted as part of the Tech. Spec. revisions as described in 3.2.1.

   Plans and Schedules

   1. To be supplied at a later date.

   2. To be supplied at a later date.

   3. To be supplied at a later date

4.5 Reactor Trip System Reliability

4.5.1 Justification of the adequacy of current functional tests of the scram pilot and backup scram valves will be provided.

4.5.2 On-line testing of the Reactor Trip System is currently performed.

4.5.3 The Risk Analysis Section will prepare a specification for an analysis program. It is expected that a final report will be sent to the NRC by July, 1984.