U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50-454; 50-455
License Nos:	NPF-37; NPF-66
Report No:	50-454/97024(DRP); 50-455/97024(DRP)
Licensee:	Commonwealth Edison Company
Facility:	Byron Generating Station, Units 1 and 2
Location:	4450 N. German Church Road Byron, IL 61010
Dates:	December 2, 1997 - January 12, 1998
Inspectors:	N. Hilton, Resident Inspector J. Adams, Braidwood Station Resident Inspector C. Thompson, Illinois Department of Nuclear Safety
Approved by:	Michael J. Jordan, Chief Reactor Projects Branch 3

EXECUTIVE SUMMARY

Byron Generating Station, Units 1 and 2
NRC Inspection Report No. 50-454/97024(DRP); 50-455/97024(DRP)

This inspection included aspects of licensee operations, maintenance, engineering, and plant support. The report covers a six-week period of resident inspection.

Operations

- Routine control room operations were conducted safely and conservatively. Good annunciator alarm response was observed and the operators were knowledgeable of the status of all the annunciator alarms. Operators were aware of activities that could affect the safe operation of each unit. Good communication between the unit operators and good supervisory oversight by the unit supervisors were also noted (Section O1.1).

- The housekeeping for Unit 2 was very good. Unit 2 structures, systems, and components were easily accessible to operators. General area housekeeping was good given the amount of outage activities that were in progress during the inspection period. Equipment was staged appropriately and carts properly secured. The control of outage related material was good except for two failures to control transient combustible material (Section O1.1).

- The shutdown risk program and its implementation were excellent. A detailed licensee review of the outage schedule was conducted. The licensee determined the risk level for each key safety function based on plant configuration and equipment availability and used safety system functional assessment trees (SSFATs). A core damage frequency (CDF) was included in the risk profile. The shutdown risk review board (SRRB) approved all changes to the shutdown risk models. Shutdown risk was communicated to all station personnel. Contingency plans provided additional guidance for operators and existed for most higher risk conditions (Section O8.1).

- The Plan of the Day (POD) meeting was an effective communication tool and helped identify key performance measures at the site (Section O8.2).

Maintenance/Surveillance

- Observed maintenance and surveillance activities were conducted well. Maintenance procedures were used and personnel were knowledgeable of the associated activities. Surveillance testing was performed well with proper authorizations, good procedure adherence, and effective communications and coordination (Section M1.1 and M1.2).

- Based on procedure usage, supervisory oversight, and adequate protection of Unit 2 systems, the observed Unit 1 steam generator removal and replacement activities were conducted appropriately (Section M1.3).

Engineering

- The steam generator replacement project (SGRP) lead civil engineer and civil engineering staff were actively involved in the oversight of contractor personnel and were knowledgeable of the evolutions they observed (Section E1.1).

- A process for the identification, tracking, and resolution of nonconformances for the SGRP was successfully implemented and appeared to be effective. A potential weakness existed in that operations personnel were not involved in the nonconformance report review process (Section E7.1).

Plant Support

- During the transport of an old steam generator (SG) to the old SG storage facility, a moving radiological area existed. The radiological protection (RP) technicians controlled both the number of personnel near the old SG and the distance between nonessential personnel and the old SG. Radiation Protection Supervision also ensured that the transport evolution was properly controlled (Section R1.1).

- The inspectors concluded that the methods for controlling the use of a drinking water station in a high radiation/contaminated area on December 24, 1997, created a potential problem. Although there had not been any known contamination events attributable to the manner in which the drinking water station was controlled, an individual could potentially be contaminated due to the lack of direct control by RP technicians, the general access to the water station, and the lack of personal surveys.

- The security force properly controlled the fence penetration during the transport of an old SG on December 17, 1997. Good access control of personnel leaving and returning to the protected area through the fence penetration existed. Security supervision was present. The protected area penetration was well controlled (Section S1.1).

- The increased amount of transient combustibles during the refueling outage was not always aggressively controlled. Two instances of poorly controlled combustibles were identified. A 55-gallon barrel containing oil soaked rags and 13 containers of a flammable liquid were both identified by the inspectors. Two violations of a failure to follow Byron Administrative Procedure (BAP) 1100-9, "Control, Use, and Storage of Flammable and Combustible Liquids and Aerosols," were cited (Section F1.1).

Report Details

Summary of Plant Status

Unit 1 remained shutdown for a steam generator replacement outage for the duration of the inspection period. During the period, all four old steam generators were removed, and all replacement steam generators were set in place. Welding the new steam generators in place continued at the end of the inspection period, and the containment hole was being restored.

Unit 2 operated at or near full power for the entire inspection period.

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

During the inspection period, the inspectors conducted several observations of control room activities. The inspectors routinely observed good annunciator alarm response and the operators were knowledgeable of the status of all the annunciator alarms. Operators were aware of activities that could affect the safe operation of each unit. The inspectors also observed good communication between the unit operators and good supervisory oversight by the unit supervisors. The inspectors concluded that routine control room operations were conducted safely and conservatively.

The inspectors also made routine inspections of the auxiliary and fuel handling buildings during the inspection period. Due to the steam generator replacement outage in progress on Unit 1, the inspectors focused on Unit 1 activities that potentially affected Unit 2. The inspectors considered the housekeeping for Unit 2 very good. Unit 2 structures, systems, and components were easily accessible to operators. General area housekeeping was good given the amount of outage activities that were in progress during the inspection period. The inspectors routinely observed equipment staged appropriately and carts properly secured. The inspectors considered the control of outage related material good except for two specific failures to control transient combustible material, discussed in Section F1.1.

08 Miscellaneous Operations Issues (71707)

08.1 Shutdown Risk Program

a. Inspection Scope

During the inspection period, the inspectors reviewed the licensee's shut down risk program. The review included discussions with the shutdown risk coordinator, a review of BAP 1750-6, "Shutdown Risk Program Summary," Revision 3, and a review of the licensee's shutdown risk manual for refueling outage B1R08. The inspectors also routinely observed shutdown risk postings and discussions of shutdown risk at daily briefs and meetings.

b. Observations and Findings

The licensee's shutdown risk program provided control of components and systems important to safety during unit outages. The control was provided through heightened awareness of plant status during outages, a committee review process for the scheduling of risk significant activities during an outage, and contingency plans for risk significant activities.

The inspectors routinely observed a heightened awareness of plant risk status during outages. The licensee used posters, daily outage summaries, closed circuit television, and discussions during both the operating crew brief and plan of the day meeting to emphasize the shutdown risk associated with Unit 1 activities. The inspectors found that station personnel awareness of the shutdown risk status was excellent.

The licensee used a computer program called Outage Risk Assessment Models (ORAM) to assist in the review of risk significant activities. The shutdown risk coordinator reviewed the outage schedule, identified risk significant activities, and then used the risk significant outage schedule for the outage risk profile development. Both deterministic and probabilistic approaches were included in ORAM. The deterministic portion allowed the shutdown risk coordinator to include a defense in depth concept, Technical Specification (TS) requirements, Updated Final Safety Analysis Report (UFSAR) information and engineering judgement when safety system functional assessment trees (SSFATs) were created. The licensee determined the risk level for each of seven key safety functions based on plant configuration and equipment availability and risk level was identified by color coding. Since the original outage risk profile was developed from a schedule, the actual status of equipment was compared twice daily to the expected equipment status and any discrepancies resolved. A probabilistic approach was also included. The core damage frequency (CDF) profile was created for the outage and included as an indicator of risk.

The licensee used a Shutdown Risk Review Board (SRRB) to review and approve all changes to the shutdown risk models. The SRRB also reviewed and approved risk profiles before the licensee began an equipment outage. The SRRB consisted of the shutdown risk coordinator (either a licensed operator or a person having completed license certification), at least one currently licensed operator, an outage management representative, and a qualified nuclear engineer for reactivity issues. Senior station management conducted a final review and approval of the outage risk profile.

Contingency plans were developed to mitigate challenges to key safety functions. A contingency plan was required for higher risk activities. The plans were written to use installed or temporary equipment and procedures. Typically contingency plans also included increased monitoring of affected equipment.

c. Conclusions

The inspectors concluded that the licensee's shutdown risk program and its implementation were excellent. A detailed review of the outage schedule was conducted. The licensee determined the risk level for each key safety function based on plant configuration and equipment availability using SSFATs. A CDF was included in the risk profile. The SRRB approved all changes to the risk models. Shutdown risk was

communicated to all station personnel using several methods. Contingency plans provided additional guidance for operators and existed for most yellow conditions.

O8.2 10 CFR 50.54(f) Letter Commitment Review

a. Inspection Scope

The inspectors reviewed the status of selected commitments pertaining to the licensee's March 28, 1997, response to the NRC's request for information pursuant to 10 CFR 50.54(f). The commitment numbers correspond to those used by the licensee in their response.

b. Observations and Findings

Commitment 266: "The Plan of the Day meeting is being restructured to communicate and discuss key performance measures and current issues at the site."

The inspectors periodically attended the Plan of the Day (POD) meeting. The POD was structured to communicate recent events, present plant status, and discuss planned work. Each day a presentation was made by different department representatives, discussing current issues, typically including performance measures.

c. Conclusions

The inspectors concluded that the POD was an effective communication tool and helped identify performance measures at the site.

II. Maintenance

M1 Conduct of Maintenance

M1.1 Maintenance Observations (62707)

a. Inspection Scope

The inspectors observed all or portions of activities associated with the following work requests (WR). When applicable, the inspectors also reviewed TS and the UFSAR for potential issues.

- WR 9600117057 01 Preventive Maintenance on 1A chemical and volume control (CV) pump lube oil cooler
- WR 970009549 Replace rotating assembly on 1A CV pump

b. Observations and Findings

The inspectors observed that the maintenance activities were conducted according to approved procedures and in conformance with TS. The inspectors observed maintenance supervisors and system engineers monitoring job progress. When applicable, appropriate radiation control measures were taken by maintenance personnel.

c. Conclusions

During the inspectors observations, procedures were used and maintenance personnel were knowledgeable of the associated activities. The inspectors concluded that observed maintenance activities were conducted well.

M1.2 Surveillance Observations (61726)

a. Inspection Scope

The inspectors observed the performance of all or parts of the following surveillance tests. The inspectors also reviewed plant equipment and surveillance testing activities against the UFSAR descriptions.

- 2BOS 3.1.1-21 Unit 2 Train B Solid State Protection System Bi-monthly Surveillance (Staggered)
- 2BVS 5.2.F.3-2 American Society of Mechanical Engineers (ASME) Surveillance Requirements for the Residual Heat Removal (RH) Pump
- 2BVS 7.1.5-2 Main Steam Isolation Valves Partial Stroke Test
- 2BOS 3.2.1-810 Engineered Safety Feature (ESF) Instrumentation Slave Relay Surveillance
- 1BVS 8.1.1.2f-8 1B Diesel Generator ESF Actuation Test and Non-Emergency Trip Bypass Test, and Generator Differential Trip Test

b. Observations and Findings

The inspectors noted that proper authorization was routinely obtained from the control room senior reactor operator (SRO) before the start of each surveillance test. At the completion of the surveillance test and after independent verification of system restoration, the TS action requirement was cleared. The inspectors observed the communications between operators in the control room and the auxiliary building, and observed the coordination between the nuclear station operators and nonlicensed operators. Test instruments used were verified to be calibrated as applicable. The inspectors reviewed completed surveillance tests and verified the surveillance tests met the acceptance criteria.

ASME Surveillance Requirements for the 2B Residual Heat Removal (RH) Pump

The inspectors observed the second attempt by the licensee to perform an ASME surveillance on the 2B RH pump. Due to over ranging the suction pressure gauge, the first attempt to perform the surveillance had been unsuccessful. The surveillance test required the suction gauge to read within 80 percent of full scale. During the first attempt, the gauge read greater then 80 percent of full scale due to RH system check valve leakage (discussed in Inspection Report No. 50-454/97022; 50-455/97022, Section M2.1). The licensee performed a temporary procedure change and installed an additional suction pressure test gauge. The test was repeated and test data gathered with no further problems identified.

c. Conclusions

The inspectors concluded that, based on proper authorization, good procedure adherence, effective communication and coordination, and proper verification that the surveillance test acceptance criteria were met, the observed surveillance testing was performed well.

M1.3 Steam Generator Replacement Project (50001)

a. Inspection Scope

Steam generator removal and replacement activity observations were conducted in the Unit 1 containment and spent fuel pool area. The inspector observed the general activities and the following specific work activities:

- A40232MM Containment/Equipment Hatch Removal for the Transfer of Equipment into the Containment.
- B(A/D/B/C)SG0100 Hoist SG Out of the Containment and Replace with New SGs.

b. Observations and Findings

The inspectors observed construction activities during the SG replacement outage. The inspectors observed procedures in use during work activities. The new SGs were stored according to the manufacturer's recommendations to prevent degradation during storage. The installation of temporary services (welding equipment, power supplies, and lighting) was completed as described in the procedures. The inspectors also frequently observed supervisors observing the work activity.

Work activities did not affect the operability of common systems required to support Unit 2 full power operation. During SG removal and replacement activities, the inspectors verified that safety-related equipment and systems required to be operable per TS and the UFSAR were not impaired by the activities.

c. Conclusion

Based on procedure usage, supervisory oversight, and adequate protection of Unit 2 systems, the inspectors concluded that the observed Unit 1 SG removal and replacement activities were completed appropriately.

III. Engineering

E1 Conduct of Engineering

E1.1 Steam Generator Replacement Project (SGRP) Contractor Control and Oversight

a. Inspection Scope (50001)

The inspectors observed SGRP civil engineering staff oversight of the horizontal rotation of a new SG, the lowering of two old SGs, the operation of the outside lift system, and the

transport of an old SG. The inspectors conducted interviews with the SGRP site project manager, the SG construction lead engineer, and the SGRP lead mechanical engineer. The inspectors also accompanied the SGRP lead civil engineer and civil engineering staff on field inspections.

b. Observations and Findings

From December 17 through 19, 1997, inspectors performed an assessment of licensee oversight of contractors involved in the SGRP. The inspectors were told by the SG construction lead engineer that field engineers physically monitored all major evolutions associated with the SGRP. The field engineers typically verified that the contractors followed the approved work packages, that acceptance criteria were met, and that quality control requirements were satisfied. The SGRP lead engineers for each discipline (civil, electrical, and mechanical) were also involved with problem resolution.

The inspectors accompanied the SGRP lead civil engineer and civil engineering staff on field inspections. The inspectors observed the horizontal rotation of a new SG, the lowering of two of the old SGs, the operation of the outside lift system, and the transport of an old SG. During the rotation of the new SG, the inspectors observed the SGRP lead civil engineer review the work package. The engineer also verified that the work package documentation reflected the physical condition of the SG, verified quality control requirements had been completed, and discussed the status of the job with the responsible foreman.

The inspectors accompanied the SGRP lead civil engineer and civil engineering staff as they observed the lowering of the two old SGs. The lowering of each SG from the runway to the transport vehicle by the outside lift system was performed without problems. Prior to the transport of each SG to the old SG storage facility, the SGRP lead civil engineer verified that all prerequisites were completed. The transport of the SGs to the old SG storage facility also was performed without any problems.

c. Conclusions

The inspectors concluded that the licensee's oversight of contractors during the horizontal rotation of a new SG, the lowering of two old SGs, the operation of the outside lift system, and the transport of an old SG was effective. The SGRP lead civil engineer and civil engineering staff were actively involved in the oversight of contractor personnel and were knowledgeable of the evolutions.

E7 Quality Assurance in Engineering Activities

E7.1 Identification, Tracking, and Resolution of SGRP Nonconformances

a. Inspection Scope (50001)

The inspectors conducted interviews with the SG construction lead engineer and the SGRP lead mechanical engineer to discuss the process for identification, tracking, and resolution of nonconformances. The inspectors reviewed NSWP-A-15, "ComEd Nuclear Division Integrated Reporting Program," Revision 1; Construction Procedure CP-7, "Byron/Braidwood Power Stations SG Replacement Project Deviation Control,"

Revision 2; and "Bechtel Engineering Department Project Instruction for Nonconformance Reports," Revision 0.

b. Observations and Findings

The inspectors discussed the process for identifying, tracking, and resolving nonconformances with the SG construction lead engineer and the SGRP lead mechanical engineer. The inspectors were told that identification and the disposition of nonconformances were accomplished by a nonconformance report (NCR). The NCR was reviewed by the contractor's quality control personnel and project engineering personnel with copies of the NCR provided to ComEd SGRP site quality verification (SQV) and ComEd SGRP engineering groups. The licensee's problem identification forms (PIFs) were not used unless the nonconformance was outside the scope of the contractor's work.

c. Conclusions

The inspectors concluded that a process for the identification, tracking, and resolution of nonconformances for the SGRP was successfully implemented and appeared to be effective. A potential weakness existed in that operations personnel were not involved in the nonconformance report review process.

IV. Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 Radiological Control of Old SG During Transport (71750, 50001)

The inspectors observed the removal of an old SG from the Unit 1 containment on December 17, 1997. While the old SGs were lowered to the ground and during transport to the old SG storage facility, a moving radiological area existed. The licensee ensured the entire SG was encapsulated with an extra coating to prevent any possible spread of contamination. The radiological protection (RP) technicians also controlled both the number of personnel near the old SG and the distance between nonessential personnel and the old SG. Active participation by RP supervision was also noted by the inspectors. The inspectors concluded that the transport evolution was properly controlled.

R1.2 Control of Drinking Water Inside a Radiologically Posted Area (71750, 50001)

a. Inspection Scope

On December 24, 1997, during a routine inspection of the auxiliary and fuel handling buildings, the inspectors noted a 5-gallon water fountain inside the radiologically posted area (RPA). The inspectors reviewed Byron Radiation Protection Procedure (BRP) 5000-7, "Unescorted Access to and Conduct in Radiologically Posted Areas," Revision 7, and Station Policy 12, "Drinking Water in the RPA," Revision 2.

b. Observations and Findings

The inspectors observed that the drinking fountain was placed such that a person coming out of the Unit 1 containment could obtain a drink of water while still in an area posted as a high radiation area (HRA) and contaminated area. A hole was cut in the plexiglass boundary of the HRA, and the water bottle was located in the RPA such that the spigot penetrated into the HRA and contaminated area. A procedure was posted on the bottle indicating that to get a drink, a worker should remove an outer glove, take a paper cup, get a drink, and then crush the cup and place it in a potentially clean trash barrel. No personnel were in the HRA, and the inspectors did not identify any RP personnel in the immediate area of the water bottle.

The inspectors discussed the availability of drinking water in the RPA with the Radiation Protection Manager (RPM). The RPM stated that the purpose of having water available was to prevent heat stress and that the water was controlled by RP personnel as stated in the station policy. On December 24, 1997, the inspectors noted that the water station was not directly controlled. The inspectors also noted that no method to perform a hand contamination survey, or frisk, before using the drinking water station existed; however, RP personnel routinely surveyed the area for contamination, and no personnel contamination events occurred related to drinking the water.

Following the inspectors' observations, the licensee stated the controls for the use of the drinking water facility were improved. Changes included posting the water bottle for heat stress relief use only and requiring that RP personnel only dispense the water. The licensee also moved the water bottle such that it was under direct RP personnel control. The inspectors considered the improvements appropriate.

c. Conclusions

The inspectors concluded that the methods for controlling the use of a drinking water station in a high radiation/contaminated area on December 24, 1997, created a potential problem. Although there had not been any known contamination events attributable to the manner in which the drinking water stations was controlled, an individual could potentially be contaminated due to the lack of direct control by RP technicians, the general access to the water station, and the lack of personal surveys.

S1 Conduct of Security and Safeguards Activities (71750, 50001)

S1.1 Removal of Old SG from Protected Area

The inspectors observed the removal of an old steam generator from the protected area on December 17, 1997. The inspectors observed the security control of the fence penetration and access control of personnel leaving and returning to the protected area through the fence penetration. Security supervision was present. The inspectors considered the penetration well controlled.

F1 Control of Fire Protection Activities (71750)

F1.1 Transient Combustible Material Control

a. Inspection Scope

During routine inspections of the auxiliary building, the inspectors observed the licensee's control of combustible material. The inspectors also reviewed BAP 1100-9, "Control, Use, and Storage of Flammable and Combustible Liquids and Aerosols," Revision 4.

b. Observations and Findings

On December 3, 1997, the inspectors observed mechanical maintenance personnel performing planned maintenance on the 1A chemical and volume control (CV) pump. The inspectors noted a 55-gallon barrel located outside the CV pump room that contained oil soaked rags. The inspectors also observed the mechanics working on the 1A CV pump using the 55-gallon barrel as storage for oil soaked rags.

During the review of BAP 1100-9, the inspectors noted that paragraph C.6.c stated that flammable/combustible liquid soaked rags . . . shall be disposed of by using an approved waste can with a self closing lid. The inspectors identified the discrepancy to the Fire Marshall and the 55-gallon barrel was removed and replaced with an appropriate self-closing lid container. The Fire Marshall also stated that the 55-gallon barrel was not an approved container. The inspectors concluded that the use of a 55-gallon barrel to store oil soaked rags was a failure to follow BAP 1100-9 and a violation of TS 6.8.1 as described in that attached Notice of Violation (50-454/455-97024-01(DRP)).

On December 8, 1997, the inspectors identified 13 containers of Carboline staged near the Unit 2 fuel transfer canal control panel. The inspectors noted that the buckets were labeled as flammable. The inspectors did not notice a Transient Fire Load tag and confirmed that a Transient Fire Load Permit had not been issued. After the inspectors identified the discrepancy to the operating crew, a Transient Fire Load Permit was prepared.

Byron Administrative Procedure 1100-9, paragraph C.2.a stated that all flammable and combustible liquid containers transported into plant areas which will be left unattended shall have prior authorization by the Station Fire Marshal/designee. Authorization shall be accomplished by completing a Transient Fire Load Permit and submitting it to the Station Fire Marshal/designee for approval. An approved Transient Fire Load tag will then be issued upon Fire Marshal approval. The inspectors concluded that the failure to obtain a Transient Fire Load Permit was a failure to follow BAP 1100-9 and a violation of TS 6.8.1 (50-454/455-97024-02(DRP)).

c. Conclusions

The inspectors concluded that the licensee did not always aggressively control the increased amount of transient combustibles during the refueling outage. Two independent cases of poorly controlled combustibles were identified by the inspectors during the inspection period. On separate occasions, a 55-gallon barrel of oil soaked

rags and 13 containers of a flammable liquid were observed. Two violations for failure to follow a procedure were cited.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on January 12, 1998. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

K. Kofron, Byron Station Manager
J. Bauer, Health Physics Supervisor
D. Brindle, Regulatory Assurance Supervisor
E. Campbell, Maintenance Superintendent
T. Gierich, Operations Manager
B. Israel, Site Quality Verification Supervisor
T. Schuster, Manager of Quality & Safety Assessment
M. Snow, Work Control Superintendent
B. Kouba, Engineering Manager

INSPECTION PROCEDURES USED

IP 50001: Steam Generator Replacement Inspection
IP 61726: Surveillance Observations
IP 62707: Maintenance Observations
IP 71707: Plant Operations
IP 71750: Plant Support

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-454/455-97024-01	VIO	Oil soaked rags found in a 55-gallon barrel without a self closing lid.
50-454/455-97024-02	VIO	Failure to obtain a Transient Fire Load Permit.

Closed

None

LIST OF ACRONYMS USED

ASME	American Society of Mechanical Engineers
BAP	Byron Administrative Procedure
BMP	Byron Mechanical Maintenance Procedure
BOP	Byron Operating Procedure
BRP	Byron Radiation Protection Procedure
CDF	Core Damage Frequency
CV	Chemical and Volume Control
DG	Diesel Generator
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
ECCS	Emergency Core Cooling System
ECN	Equipment Component Number
ESF	Engineered Safety Feature
FME	Foreign Material Exclusion
HLA	Heightened Level of Awareness
HRA	High Radiation Area
LCO	Limiting Condition for Operation
LCOAR	Limiting Condition for Operation Action Requirement
LER	Licensee Event Report
MHS	Material Handling System
NCR	Nonconformance Report
NSO	Nuclear Station Operator
NSWP	Nuclear Station Work Procedure
OOS	Out-of-Service
ORAM	Outage Risk Assessment Models
PDR	Public Document Room
PIF	Problem Identification Form
POD	Plan of the Day
PSIG	Pounds per Square Inch Gage
RCS	Reactor Coolant System
RH	Residual Heat Removal
RP	Radiological Protection
RPA	Radiologically Posted Area
RPM	Radiation Protection Manager
SFP	Spent Fuel Pool
SG	Steam Generator
SGR	Steam Generator Replacement
SGRP	Steam Generator Replacement Project
SPP	Special Plant Procedure
SQV	Site Quality Verification
SRO	Senior Reactor Operator
SRRB	Shutdown Risk Review Board
SSFAT	Safety System Functional Assessment Trees
SSPS	Solid State Protection System
SX	Essential Service Water System
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WR	Work Request