

S-99 Reports

In accordance with regulatory standard entitled S-99 Reporting Requirements for Operating Nuclear Power Plants, power reactors operating in Canada must issue formal reports to the Canadian Nuclear Safety Commission (CNSC) on events defined in the S-99 regulatory standard.

The following is a list of S-99 event reports* that were generated for Pickering operations in 2010, excluding those containing confidential or security-related information. Ontario Power Generation provides an update to this list on a quarterly basis.

Questions? For more information on the Event Reports listed, Event Reports from prior years or other reports on OPG's operations, contact **Jacque Hoornweg, Vice President, Public Affairs** at 416-592-6806.

Pickering A Nuclear Generating Station 2010 S-99 Reporting

Event Number	S-99 Report Title
1st Quarter	
P-2009-26853	Safety Problem Discovered: Low Levels on Two Liquid Zones Following Fuelling
P-2010-00107	System Unavailability: Maintenance Performed on Emergency High Pressure Service Water Pump Strainer While Backup Pump Out of Service
P-2010-00180	Release to the Environment: Loss of Refrigerant from the Service Wing Chiller
P-2010-00247	Research Findings: Potential Impact of Re-Evaluated pH Evolution Following a Loss of Coolant Accident
P-2010-00251	Non-Compliance with License Condition: Storage of Combustible Radiation Protective Equipment Under Safety System Equipment and Cables
P-2010-00552	System Unavailability: Control Valve Failed to Operate as Required
P-2010-00728	Reactor Trip From Low Power: Reactor Trip During SDSE Testing
P-2010-00986	Safety Problem Discovered: Pickering A Unit 4 Reactor Building Air In-Leakage
P-2010-01370	Non Compliance to License Condition: Incorrect Rupture Disk Installed
P-2010-01509	Non-Compliance to License Condition: Unposted Radiation Hazard in Zone 2 Laydown Area
P-2010-01763	Safety Problem Discovered: Low Levels on Two Liquid Zones Following Fuelling
P-2010-01885	Non-Compliance to License Condition: Unposted Radiation Hazard in Unit 3 RAB 254' Elevation
P-2010-01890	Pressure Boundary: Relief Valve on Nitrogen Addition System Discovered Undersized

Event Number	S-99 Report Title
P-2010-02298	Non-Compliance to License Condition: Fire Extinguisher Not Mounted on a Wall
P-2010-02458	System Unavailability: Class I Ventilating Units Found Out of Service
P-2010-02509	Environmental Release: Daily Average Station Differential Temperature Limit of 11°C Exceeded
P-2010-03014	Activation of Containment System: Unit 4 Spurious Box-Up During Moderator Cover Gas Purge
P-2010-03448	Pressure Boundary Degradation: Pickering A Fire Header Rupture North of U2 Turbine Hall
P-2010-04161	Reactor Trip: Unit 1 Reactor Trip at Low Power
P-2010-04901	Missed Test: Regulatory LPM, Unit 1 P-067 Test Went Late
P-2010-04902	Missed Test: Regulatory LPM, Unit 4 P-067 Test Went Late
P-2010-04991	Safety Problem Discovered: Boiler 8 Reheat Return Nozzle Cracked Weld
P-2010-05786	Safety Problem Discovered: Combustible Material Near Screen 3 Fire Safe Shutdown Analysis Zones.
P-2010-05901	Research Findings: Power Operated Valve (POV) Program Uncertainty Values Based On Incorrect Assumptions
P-2010-06214	Non-Compliance to ASME Requirements: Relief Device Discovered With Insufficient Administrative Controls
P-2010-06650	System Unavailability: Brief Loss of Monitoring of Heat Transport D2O Storage Tank Level
2nd Quarter	
P-2010-06564	Non-Compliance to License Condition: Inadvertent Removal of Two Standby Generators from Service
P-2010-07514	Non Compliance with License Condition: Ion Exchange Clean Up and Sulzer Fire Extinguishers not Stored in /Accordance to National Fire Code
P-2010-07329	Non-Compliance to License Condition: Prior Written Notification of Procedure Change Not Provided as per License Condition
P-2010-08040	Reactor Trip: Unit 1 Reactor Trip on SDSE (Heat Transport System Low Pressure During Cool down (Low Power)
P-2010-08619	Non-Compliance to License Condition: Un-posted Radiation Hazard
P-2010-09596	Non Compliance to License Condition: Fire Panels Found Unlocked
P-2010-09617	Non Compliance to License Condition: RPR Non-Compliance, Worker Consumed Small Amount of Beverage in Unzoned Area
P-2010-09707	Non-Compliance with License Condition: Boiler Reheat Return Nozzle Weld Found Not Meeting ASME Code Requirements
P-2010-09992	System Unavailability: Unit 034 Emergency Transfer Scheme Operability Impacted by Unit 3 Class II

Event Number	S-99 Report Title
	Power Supply Alignment
P-2010-10494	Seismic Equipment Not Clear of Path Per Requirements
P-2010-10906	Combustible Material Placed Outside Space Allocation for Transient Material (SATM) Perimeter in Screen 3 Area
P-2010-11407	Non Compliance to License Condition: No Conditional Transfer Permit for On-site Movement (Transfer) of Vacuum Building Silt Separators
P-2010-11544	Non-Compliance to License Condition: Unapproved Modification, Fuses Found Not Installed on Ground Fault Detection Line for SDSE Channels "H" and "J"
P-2010-08879	Vacuum Building Seepage
P-2010-12171	Non-Compliance to License Condition: Emergency Exit Door Stuck Closed
P-2010-12647	Non-Compliance to License Condition: System Returned to Service After Maintenance without Performing the Pressure Test
P-2010-12738	Declaration of a Station Emergency due to Spurious Activation of IPRV3 Logic
P-2010-12743	System Unavailability: Potential Impairments to Special Safety Systems due to Spurious IPRV Opening
P-2010-12865	Non-Compliance to License Condition: National Fire Code Non-Compliance, U4 MOT/GST Suppression and Detection Unavailable Without Compensatory Measures in Place
P-2010-12452	Unsecured Material Stored in Seismic Area
P-2010-13251	Release to the Environment: Small Amount of Oily Water Released to the Environment
P-2010-13251	Release to the Environment: Small Amount of Oily Water Released to the Environment
P-2010-13705	Missed Test: C-006 (Ventilation System Box-up via Stack Monitors Test) not Completed Within Specified Time Frame
P-2010-13708	Missed Test: P-071 (Emergency High Pressure Service Water Pumps Functional Test) not Completed within Specified Time Frame
P-2010-14175	System Unavailability: High Pressure Service Water Unavailable due to both Strainers Out of Service
P-2010-14163	Non-compliance to License Condition: Relief Valve Not Tested Before Due Date
P-2010-14161	Non-compliance to License Condition: Relief Valve Not Tested Before Due Date
P-2010-14381	Non-compliance to License Condition: Loss of Power to Service Wing Public Address Amplifiers
P-2010-14597	TOE Initiated on Vacuum Building Mission Time Due to In-leakage to Emergency Storage Water System
P-2010-14495	System Unavailability: High Pressure Service Water Unavailable due to Both Strainers Out of Service

Event Number	S-99 Report Title
P-2010-14664	Radiant Heat Shield Potentially Compromised by Abandoned Hose
P-2010-14783	Missed Test: C-003 (Negative Pressure Containment System) not Completed Within Specified Time Frame
P-2010-14910	TOE Raised on Unit 4 Low Pressure Service Water Extent of Condition
P-2010-15470	Research Findings: D931 Outage Surveillance Pressure Tube D3Q13 Radial and Axial DHCR
P-2010-14807	System Unavailability: Level 2 Impairment of Negative Pressure Containment System due to a Failed NA44-SRS-C-004 Test
P-2010-15164	Seismic Event at Pickering
3rd Quarter	
P-2010-15753	Activation of Containment System: Unit 4 Containment Box-Up During Annulus Gas Purge
P-2010-15956	Missed Test: SDSA Manual Trip Test on Channel F Not Completed By its Due Date
P-2010-11925	Reduction Below Defined Specifications: Boiler Very High Level Alarm Unit Drifted High
P-2010-16416	Missed Test: SE-007 (High Neutron Power Trip) and SE-003 (High Log N Rate Trip Via Shutter Test) Tests on Channel G went Late Without a Deferral in Place
P-2010-16861	System Unavailability: Back Up Instrument Air Supply to Airlock Seals Exceeding Leakage Rate Limit
P-2010-16850	Release to the Environment: Small Amount of Sewage Escaped into Inactive Drainage
P-2010-16859	Reactor Trip: SDSA Start Up Instrumentation Trip on High Counts Following Moderator Dump
P-2010-16832	Reactor Trip: Manual Trip Due to Dual Moderator Cover Gas Compressor Failure
P-2010-16789	Reactor Trip: Manual Trip due to Unexpected Moderator Control Valve Response
P-2010-17168	Release to the Environment: Small amount of Sewage Escaped into Inactive Drainage
P-2010-17271	Release to the Environment: Approximately 100L Sewage Escaped into Inactive Drainage
P-2010-17230	Missed Test: E-018 (ECI Vault Recovery Valves Test) Not Completed Within Specified Time Frame
P-2010-17479	Reactor Trip: Unit 4 Manually Tripped as Part of Shutdown Sequence
P-2010-17706	Non-Compliance to License Condition: Late Submission (by a few days) of Event Report to CNSC
P-2010-17774	Non-compliance to License Condition: Below Minimum Complement for CRSOS Position for 30 Minutes
P-2010-17860	Non-Compliance to License Condition: OP&P 50.1 Non Compliance Electrical Protection Unavailable for 1 Hour
P-2010-17838	Missed Tests: Unit 1 Shut Off Rod Partial Drop Test, Shut Off Rod Drive MCC Test and the Calandria Inlet Valve Closure Test Went Late Without a Deferral in Place
P-2010-17925	Discovery Issue Resolution Process Raised due to Auxiliary Irradiated Fuel Bay Water Temperature

Event Number	S-99 Report Title
	Exceeds Operational Limit
P-2010-18381	Release to the Environment: Fuel Oil Spill (Approximately 2 Litres)
P-2010-18343	Missed Test: Unit 1 Calandria Outlet Valves Closing Test Not Completed Within Specified Time
P-2010-18571	Loss of Lighting in Irradiated Fuel Bay
P-2010-18530	Reactor Trip: Partial Loss of Class IV Power due to Class IV Tie Breaker not Closing
P-2010-19117	Activation of Containment System: Unit 4 Box-Up During Moderator Cover Gas Venting
P-2010-15728	Non Compliance to License Condition: Sprinkler System Out of Service
P-2010-19599	System Unavailability: Back Up Instrument Air Supply to Airlock Seals Exceeding Leakage Rate Limit
P-2010-20343	System Unavailability: BUJA unavailability to Unit 1 bulkhead bypass valves MV1 and MV2
P-2010-21572	Technical Operability Evaluation Raised on Class II Supply Breaker Functionality in the Event of a Main Steam Line Break
4th Quarter	
P-2010-22567	Research Findings: Pressure Tube at High Hydrogen Concentration - Burst Test Results
P-2010-22251	Missed Test: Licensing Preventing Maintenance of SDSE and Timer Replacement Exceeded Late Date Without an Approved Deferral
P-2010-22786	Misuse of Equipment: Hand and Foot Monitor Discovered Damaged
P-2010-18114	System Unavailability: Does Not Meet Design Intent Impairment of Emergency Low Pressure Water System due to Isolation for 1-71310-V407 Repair
P-2010-23818	Environmental Release: Small Quantity of Sewage Spilled into the Environment
P-2010-24811	System Unavailability: Unit 4 Emergency Low Pressure Service Water System Does Not Meet Design Intent Impairment Declared
P-2010-24613	Configuration of Divider Plates in Unit 4 Boiler 2 Inconsistent with Supporting Stress Analyses
P-2010-24812	Cracks found on Class I Batteries, Near the Posts
P-2010-24972	Impact on Vacuum Building Re-pressurization Time due to Connections between Dried and Ventilated Areas of a Reactor Building during Unit Outages
P-2010-25206	System Unavailable: Auxiliary Boiler Feed System Unavailable
P-2010-25651	Non-Compliance to License Condition: Design Pressure of Installed Components do not Align with Approved System Classification List and Flow Diagram
P-2010-25339	System Unavailability: Site Electrical System Bus Unavailable
P-2010-26989	System Unavailability: Two Emergency Low Pressure Service Water Strainers Plugged due to Algae

Event Number	S-99 Report Title
	Run
P-2010-26944	System Unavailability: Back Up Instrument Air Supply to 1-43230-CV206 Unavailable
P-2010-27814	Non-Compliance with License Condition: Relief Valve not Tested per Requirements of Pressure Boundary Program
P-2010-27001	Reactor Trip: U4 Reactor Trip per Overall Unit Manual to achieve GSS
P-2010-28316	System Unavailable: Site Electrical System Does Not Meet Design Intent Impairment due to Low Demineralised Water on Pickering A and B Site.
P-2010-28873	Safety Problem Discovered: Operability Concern Raised with Regards to Seismic Qualification Requirements of 0-71310-MV459

Pickering B Nuclear Generating Station 2010 S-99 Reporting

Event Number	S-99 Report Title
1st Quarter	
P-2009-30610	System Unavailability: Level 2 Impairment of SDS 2 for Approximately 4 Seconds
P-2009-30677	System Unavailability: Level 2 Impairment of Emergency Coolant Injection System Due to Defective Heater (ECI System Remained Available)
P-2010-00423	Non-Compliance with Licensee Produced Documents: Unposted Hazard Greater Than 2.5 mrem/h Found in Resin Slurry Area
P-2010-00573	Non-Compliance with Licensee Produced Documents: Personnel Found Chewing Gum in Zone 2
P-2010-00828	System Unavailability: Emergency Low Pressure Service Water Pump Unavailable
P-2010-01194	Non-Compliance to National Fire Code: Fire Door Latch Broken
P-2010-01676	Safety Problem Discovered: Unsecured Materials Stored in a Seismically Qualified Area
P-2010-02078	System Unavailability: Emergency Coolant Injection Heat Trace Alarmed on Low Temperature
P-2010-02751	Non-Compliance to License Condition: Non Compliance with ASME 331.1
P-2010-02984	Missed Test: Licensing test not fully Completed by the Regulatory Due Date
P-2010-03288	System Unavailability: Control Valve 5-71340-CV510 Failed to Open when Handswitch Selected Open
P-2010-03626	Missed Test: Environmental Sampler not Calibrated in Accordance with Licensed pre defined
P-2010-04920	Safety Problem Discovered: Potential Increased Risk of Loss of Regulation Due to Dummy Signal Manipulation

Event Number	S-99 Report Title
P-2010-05001	Non-Compliance to License Condition: Operational Pressure Test Not Performed in Accordance with code requirements
P-2010-05068	Safety Problem Discovered: Incorrect Control Cable Routing During Installation Introduces Potential Common Mode Failure
P-2010-05391	Environmental Release: Daily Average Station Delta T Limits Exceeded on Two Occasions
P-2010-05554	Non Compliance to License Condition: Pickering B Supervising Nuclear Operator Below Minimum Complement
P-2010-05611	Environmental Release: Daily Average Limit for Total Suspended Solids Exceeded Certificate of Approval Limit
P-2010-05922	Research Findings: Power Operated Valve Program Uncertainty Values Based On Incorrect Assumptions
2nd Quarter	
P-2010-05457	Non-Compliance to License Condition: Incorrect Safe Stating of Reactor Regulating System Component Prior to Maintenance
P-2010-07334	Non-Compliance to License Condition: Prior Written Notification of Procedure Change Not Provided as per License Condition
P-2010-06983	Non-Compliance to License Condition: Shutdown System 1 (SDS1) Returned to Service with Non Approved SDS1 Temperature Transmitter Installed
P-2010-08385	Carts and Tool Boxes Found Not Secured in a Seismic Area
P-2010-09285	TOE Initiated: Undersized Restriction Orifices on Emergency Water Supply (EWS) System
P-2010-08810	Equipment Found Not Tied Down in a Seismic Area
P-2010-09602	Non Compliance to License Condition: Fire Panels Found Unlocked
P-2010-11595	Potential Delay in Establishing Emergency Water Supply System Makeup to Boilers and Heat Transport System
P-2010-07924	TOE Initiated on Emergency Water Supply (EWS) System
P-2010-12740	System Unavailability: Potential Impairments to Special Safety Systems due to Spurious IPRV Opening
P-2010-12747	System Unavailability: Site Electrical System Single Unit Configuration Due to U5 Box-up on Spurious IPRV Operation
P-2010-13811	System Unavailability: Auxiliary Boiler Feed Pump Unavailable Due to Leak in Heater Relief Valve System
P-2010-13930	Environmental Release: Daily Average Station Delta T Limits Exceeded

Event Number	S-99 Report Title
P-2010-14352	Missed Test: RCW Pump Duty Swap Not Completed by Regulatory Due Date
P-2010-13986	Missed Test: Licensed PM, Overhaul and Test Class IV 4KV Tie Breaker not Completed Within Specified Time Frame
P-2010-15468	Research Findings: D931 Outage Surveillance Pressure Tube D3Q13 Radial and Axial DHCR
P-2010-15342	Emergency Lighting on Seismic Route Not Functioning
3rd Quarter	
P-2010-15469	Potential Environmental Action Level Exceedance
P-2010-16196	Whole Body Monitor Discovered Damaged
P-2010-16626	Release to the Environment: Small Amount of Water from ECI Storage Tank Released to the Environment
P-2010-17119	Reactor Trip: Unit 8 Trip During Post LOCA Isolation Test
P-2010-17204	System Unavailability: 1 Minute Level 2 Impairment of ECI
P-2010-17225	System Unavailability: Level 2 Impairment of ECI Flow Path (short duration, Inadequate Gap between FM Bridge and FM Vault Floor)
P-2010-17388	System Unavailability: Unit 8 Emergency High Pressure Service Water Pumps Unavailable
P-2010-18859	System Unavailability: Emergency Low Pressure Service Water Does Not Meet Design Intent Impairment
P-2010-18669	ECI Recovery Relays Potentially Degraded(TOE Raised)
P-2010-19126	External Event: Unit 6 Manually Shutdown Due to An Algae Run
P-2010-18974	Missed Test: Fixed Gaseous Process Monitoring – Stack Monitor QA Testing (P-060) Not Completed Within Specified Time Frame
P-2010-19297	Environmental Release: Daily Average Station Differential Temperature Limit Exceeded
P-2010-19392	Non-compliance to License Condition: Pickering B fell Below Minimum Complement for 1 Hour
P-2010-19534	Environmental Release: Daily Average DT Exceeded
P-2010-19817	Environmental Release: Daily Average DT Exceeded
P-2010-20204	TOE Initiated on Make-up Flow from ESWT to the Moderator
P-2010-20071	System Unavailable: Do Not Meet Design Intent Impairment of Negative Pressure Containment due to Potential Unavailability of Filtered Air Discharge System
P-2010-21826	Technical Operability Evaluation Raised due to Emergency Water System Instrument Line Leaks

4th Quarter	
P-2010-22548	Research Findings: Pressure Tube at High Hydrogen Concentration - Burst Test Results
P-2010-21966	Unit 7 Boiler Insulation Blankets Peeling Causing Possible Issues with ECI Flow Path
P-2010-22757	Missed Test: EPS 125V DC Distribution Bus Transfer Test Went Late Without an Approved Deferral in Place
P-2010-22919	Pressure Boundary Degradation: Wall Loss on Feeder A10E Below Minimum Code Requirements
P-2010-22066	Impact on Vacuum Building Repressurization Time due to Connections between Dried and Ventilated Areas of a Reactor Building During Unit Outages
P-2010-24789	Safety Problem Discovered: Unit 5 Main Control Room Annunciation CRTs Froze Preventing Annunciation Updates from being Displayed.
P-2010-25347	SRS Unavailability: Unit 7 EWS Does Not Meet Design Intent due to Check Valve Degradation
P-2010-25555	SRS Unavailability: RB Ventilation Fans Unavailable Resulting in a Level 2 Impairment of Containment
P-2010-25509	Non-Compliance to License Condition: Primary Heat Sink Unavailable as per OP&Ps 33.2
P-2010-25338	System Unavailability: Site Electrical System Bus Unavailable
P-2010-22276	System Unavailability: Emergency High Pressure Service Water Declared Unavailable on Unit 7
P-2010-26605	System Unavailability: 8-71310-CV583 Failure Causes Unit 8 ELPSW Unavailability
P-2010-25743	Non-Compliance to License Condition: PB Welder's Qualification Expired (CSA N285.0-08 Non Compliance)
P-2010-27629	Missed Test: E-32 Test Went Late Without an Approved Deferral in Place
P-2010-28066	System Unavailability: 058-33350-HTR26-3 HPECI Heatrace trouble B System Alarms - Level 2 Impairment
P-2010-28319	System Unavailable: Site Electrical System Does Not Meet Design Intent Impairment Due to Low Demineralised Water on Pickering A and B Site.
P-2010-29204	Annual PMID 18404-03 for Pickering B SG Foam Fire Protection Checks not completed

*This list is for events reportable under section 6.3 of the S-99 regulatory standard, including immediate and next business day reportable events. In accordance with S-99, additional reporting is required on a quarterly and annual basis.