

**A. Alan Blind**  
Vice President

Consolidated Edison Company of New York, Inc.  
Indian Point Station  
Broadway & Bleakley Avenue  
Buchanan, NY 10511  
Telephone (914) 734-5340  
Fax. (914) 734-5718  
blinda@coned.com

July 03, 2001

Re: Indian Point Unit Nos. 1 and 2  
Docket Nos. 50-003 and 50-247  
NL-01-087

US Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station O-P1-17  
Washington, DC 20555-0001

Subject: 10 CFR §50.59(d) Report for Indian Point Unit Nos. 1 and 2

Pursuant to 10 CFR §50.59(d)(2), enclosed please find a summary report of the changes, tests and experiments implemented at Indian Point Unit Nos. 1 and 2 between June 22, 1999 and January 3, 2001, or utilized in support of the UFSAR update. The summaries of Safety Evaluations (SEs) set forth in the report represent the changes in the facilities, changes in procedures, and tests and experiments implemented pursuant to 10 CFR §50.59. Attachment 1 lists the above mentioned SEs and also includes previously implemented SEs that were used in support of Revision 16 change requests to the Updated Final Safety Analysis Report (UFSAR) as a result of the 10CFR50.54(f) UFSAR review effort. Attachment 2 provides a summary of those SEs implemented in the period defined above. Attachment 3 is a list of acronyms used in the report.

There are no commitments contained in this correspondence.

Should you or your staff have any questions regarding this matter please contact Mr. John McCann, Manager, Nuclear Safety and Licensing, at 914-734-5074.

Sincerely,



cc: Next page

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Attachments

cc: Mr. Hubert J. Miller  
Regional Administrator-Region I  
US Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406-1498

Mr. Patrick D. Milano, Senior Project Manager  
Project Directorate I-1  
Division of Licensing Project Management  
US Nuclear Regulatory Commission  
Mail Stop 0-8-C2  
Washington, DC 20555

Mr. John L. Minns, Project Manager  
Division of Regulatory Program Management  
US Nuclear Regulatory Commission  
Mail Stop 10-D4  
Washington, DC 20555

Senior Resident Inspector  
US Nuclear Regulatory Commission  
PO Box 38  
Buchanan, NY 10511

ATTACHMENT 1

SAFETY EVALUATIONS  
SUMMARY LISTING – 50.59 REPORT

**ATTACHMENT 1  
SAFETY EVALUATIONS  
SUMMARY LISTING – 50.59 REPORT**

<b>SE No.</b>	<b>Rev. No</b>	<b>Title</b>	<b>Comments</b>
NS-2-75-023	0	Permanent Removal of the Dilution Fan	Note 1
NS-2-76-120A	0	Addition of Pressure Recorder and Alarm System to Instrument Loop 402	Note 1
NS-2-76-135	0	Modification to Circuitry Controlling Pressure Relief Valves and Containment Purge Valves	Note 1
NS-2-77-043	1	Installation of an Overpressure Protection System	Note 1
NS-2-77-091	0	Installation of a Fourth Inverter and battery System to Supply Instrument Bus No. 23	Note 1
NS-2-77-104	2	Installation of Pulsation Dampeners on Suction and Discharge of Charging Pumps	Note 1
NS-2-77-106	0	PAB Sump Pump and New Shield Wall	Note 1
NS-2-78-060	0	Use of Temporary Magnetic Filter to Purify the Water in the Refueling Water Storage Tank	Note 1
NS-2-78-135	0	Installation of New Motor Control Center (MCC) No. 28-A in Containment	Note 1
NS-2-78-169	0	Increase Stroke Time Limits for Various Motor Operated ASME Section XI Valves	Note 1
NS-2-78-190	1	Alternate Reactor Coolant Pump (RCP) Seal Injection Filter and Flow Adjustment Facilities	Note 1
NS-2-79-029	1	Construction of the Maintenance and Outage Building	Note 1
NS-2-80-093	0	Post Accident Reactor Coolant System (RCS) Sampling System	Note 1
NS-2-80-106	0	Removal of the Existing Waste Evaporator	Note 1
NS-2-80-111	0	Changed Steam Generator Sample Tap to Blowdown Lines 45, 46, 47 & 48, and Capped Off Existing Sample Lines	Note 1
NS-2-80-122	0	Improvement of the Telephone System	Note 1
NS-2-80-139	2	Provide Concrete Shield Walls and Ventilation for Sentry Sampling System at El. 80'-0" of PAB	Note 1
NS-2-81-043	0	Install New Radio/Telephone Communications Console in the IP 2 Control Room	Note 1
NS-2-81-060	0	Additional Steam Generator Blowdown Valves	Note 1
NS-2-81-120	0	Increase Stroke Time Limits for 851A(B) Safety Injection Valves	Note 1
NS-2-81-180	0	Installation of a Second Sump pump and Controls in the El. 15' Sump Pit of the PAB	Note 1
NS-2-81-194	0	Defeat Automatic Rod Withdrawal Circuit of the Automatic Rod Control System	Note 1
NS-2-82-001	3	Installation of Safety Assessment System	Note 1
NS-2-82-046	1	Replacement of Battery #21	Note 1
NS-2-82-105	0	Reconnection of Waste Evaporator Feed Pump as Liquid Waste Transfer Pump #21	Note 1
NS-2-82-107	0	Electrical Penetration Replacement	Note 1

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SE No.	Rev. No	Title	Comments
NS-2-82-129	4	Addition of Annubar Flow Probes and transmitters to be Installed in Fan Cooler Service Water System Inside Containment and Wired to Indicators	Note 1
NS-2-83-017	0	Central Control Room Ventilation Modification	Note 1
NS-2-83-064	0	Installation of Solenoid Valves on Lines #67 and #32 and an Air Operated valve on the Seal Return Filter Bypass Line #17	Note 1
NS-2-83-105	0	Pressurizer Power Operated Relief Valve Control Circuitry Modification	Note 1
NS-2-84-017	0	Reactor Trip Breaker Auto Shunt Trip Actuation	Note 1
NS-2-85-028	0	Ruggedized Fully Integral Low Pressure Rotor Program	Note 1
NS-2-85-033	1	Central Control Room HVAC Upgrade	Note 1
NS-2-85-038	0	Radiation Monitor Betterment Program Phase I	Note 1
NS-2-85-043	0	Elimination of Turbine Runback Initiation from the Overtemperature and Overpower Delta T Circuits	Note 1
NS-2-85-056	0	Circuitry Modification for Raising of Setpoint For Direct Reactor Trip on Turbine Trip above 10 percent Power	Note 1
NS-2-85-069	0	Removal of No. 22 Boric Acid Evaporator, Gas Stripper and Ion Exchange Filter	Note 1
NS-2-85-080	0	Removal of Boron Injection Tank (Phase I)	Note 1
NS-2-85-085	0	Retire Feedwater Heaters Bypass Valve FCV-150 In Place	Note 1
NS-2-85-096	0	Instrument Air System Modification	Note 1
NS-2-86-076	2	Radiation Monitoring Betterment Program – Phase II	Note 1
NS-2-86-086	1	In-House Radio System	Note 1
NS-2-86-095	0	Install Direct Inter-tie between unit 1 Station Air and Instrument Air Purification Skids	Note 1
NS-2-86-115	0	Removal of #21 Boric Acid Evaporator, #21 Gas Stripper, #21 Concentrates Holding Tank, #21 Concentrates Filters, and #21 and # 22 Concentrates Holding Tank Transfer Pump	Note 1
NS-2-86-133	0	Pressurizer heater Groups Nos. 21, 22, 23, and 24 Load Current Monitoring	Note 1
NS-2-87-050	2	IP-1 Condenser Removal and Demolition	Note 1
NS-2-87-065	0	Nitrogen Backup for PCV-1139 and HC-1118; and Manual Operation of PCV-1134 thru PCV-1137	Note 1
NS-2-87-087	2	Interim Operation Without the Primary Water Storage Tank Bladder	Note 1
NS-2-88-026	0	Anticipated Transient Without Scram (ATWS) Mitigating System Actuation Circuitry	Note 1
NS-2-88-042	0	Replacement of Battery Charger and Battery No. 22	Note 1

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<b>SE No.</b>	<b>Rev. No</b>	<b>Title</b>	<b>Comments</b>
NS-2-88-051	0	Core Exit Thermocouple Monitoring System Upgrade	Note 1
NS-2-88-078	0	Installation of Indian Point to Buchanan Microwave System	Note 1
89-077-GM	2	Installation or Replacement of 2" and Under Manual Valves or Replacement of Check Valves	Att. 2
89-144-MM	0	Low Pressure Turbine Differential Expansion "Long" Alarm/Trip Setpoint Change	Att. 2
89-231-MD	0	Replacement of Primary Make-up Water Pumps #21 and #22	Note 1
89-310-TM	0	Ecolochem Truck Make-Up to Unit 1 Condensate Storage Tank	Att. 2
90-070-MD	0	IP Spent Fuel Rerack	Note 1
90-107-MD	0	Transmitters – Replacement of Obsolete Models	Note 1
90-123-MD	2	480 Volt Non-Essential Load Isolation	Note 1
90-140-MD	0	Refueling Water Storage Tank (RWST) – Low Level Alarm Setpoint	Note 1
90-203-MM	0	High Pressure Turbine Rotor Replacement and HP Turbine Drains Modification for 3083.4 MWt Stretch Rating	Note 1
90-220-MD	0	Test in Bypass	Note 1
90-231-PR	1	DC Ground Fault Detection Equipment	Att. 2
90-234-MD	0	Radiation Monitoring Betterment Program Phase II	Note 1
90-407-MD	0	Rearrangement of 480 Volt Loads (Package 3)	Note 1
91-012-MD	0	Change Safety Injection System Relief Valve 855 Setpoint	Note 1
91-064-MM	0	Recirculation Pump Sump Renovation	Note 1
91-194-TM	0	Water Supply for the Wetting of Main Condenser Tube Sheets	Att. 2
91-226-TM	0	Purge/Pressurize Generator with Nitrogen/Carbon Dioxide/Air	Att. 2
91-242-MD	0	Rearrangement of 480 Volt Loads	Note 1
91-377-MD	0	Expansion of Public Address System to Outlying Buildings	Note 1
91-399-MD	0	Auxiliary Spray Valve 212 Actuator Replacement and Pressure Relief Function Separation	Note 1
92-010-GM	2	Generic Piping Alteration	Att. 2
92-067-DE	0	New Spare Component Cooling Water Pump Upgraded Material	Note 1
92-080-MD	0	Replacement of Reactor Cavity Level Switches and Pump	Note 1
92-089-PR	0	Jumper from NSG-102 to Degassifier Catch Tank	Att. 2
92-099-MD	1	Central Control Room Filter Replacement	Note 1

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SE No.	Rev. No	Title	Comments
92-105-MD	0	Expansion of Public Address System Inside Containment	Note 1
92-206-SP	0	Setpoint for EDG Fuel Oil Transfer Pump	Note 1
92-211-MD	1	Replace Batteries 23 and 24	Note 1
93-004-MD	0	Modernize Aging Radiation Monitoring System	Note 1
93-047-TM	0	Provide Backup Source Range Indication	Att. 2
93-061-TM	0	27 Traveling Screen Alternate Power Supply	Att. 2
93-099-MD	0	23 EDG Auxiliaries Voltage Monitoring	Note 1
93-178-MD	0	CCR Nameplate Upgrade	Att. 2
93-200-MD	0	Retirement of Pumps, Heaters, and Alarms and Controls Associated with Boron Monitor Tanks 21, 22, and 23	Note 1
93-228-GM	0	High Radiation Area Barriers	Note 1
93-255-PR	1	Removable Top Nozzle Fuel Repair Procedure	Att. 2
93-259-EV	0	RTD Filter Time Constants (Delta T and Tavg) Relaxation	Note 1
93-300-PR	0	Service Water Header Operation with RCS Less Than 350 Degrees F	Att. 2
93-314-MM	0	Primary Water Pump Discharge and Recirculation Orifice	Note 1
93-335-GM	0	Generic Power Feed, Conduit, Cable Alterations	Att. 2
94-118-MD	1	Rehabilitation of Cathodic Protection of Dock Sheet Piles	Att. 2
94-143-MD	6	Weld Channel System Upgrades	Att. 2
94-221-MD	3	IP2 Safeguards Agastat Timers Replacement	Att. 2
94-238-EV	0	Change of Maximum Concrete Temperature to 250 Degrees F	Note 1
94-361-SP	1	IP2 RETRAN Analysis for Loss of One Main Feedwater Pump	Note 1
94-378-MD	0	High Pressure Turbine Replacement	Note 1
95-001-GM	0	Stairways, Ladders, Platforms, Handrails and Fall Protection	Note 1
95-049-TM	0	Temporary Power Supplies for Refueling Outage	Att. 2
95-070-EV	0	Reload Safety Evaluation for Indian Point 2 Cycle 13	Note 1
95-089-MD	0	Main Turbine Runback	Att. 2
95-163-TM	0	Instrument Air to Station Cross Connects Inside Vapor Containment	Att. 2
95-195-SP	0	Main Turbine Runback on Rod Drop	Att. 2

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SE No.	Rev. No	Title	Comments
95-204-PR	2	Procedure A28.22, Loss of Subcooling Margin Monitor	Att. 2
95-215-TM	0	Temporary Drain Line From Refueling Canal	Att. 2
95-229-TM	0	Temporary Primary Auxiliary Building Sump Pump	Att. 2
95-275-MM	0	Proteus Alarms for Refueling Water Storage Tank Level and Residual Heat Removal Flow	Att. 2
95-366-TM	0	Core Exit Temperature Indication	Att. 2
95-375-MD	0	Add Cameras, Replace Camera Monitor Control, and Relocate SAS	Att. 2
95-414-TM	0	21 Reactor Coolant Pump "X" Vibration Probe	Att. 2
96-012-TM	0	Unmask DC Bus Trouble Alarm	Att. 2
96-067-MD	0	Fan Cooler Unit Charcoal Filter Removal	Att. 2
96-093-MD	0	FCV-625 High Flow Time Delay	Note 1
96-113-MD	2	Turbine Lube Oil/Water Separator	Note 1
96-118-PR	0	Unit 1 Spent Fuel Pool Portable Demineralizer	Att. 2
96-126-EV	0	Ground Detection Test Equipment	Att. 2
96-128-MM	0	Remove Retired Steam Generator Blowdown Sample Valves	Note 1
96-168-MD	1	Replace Hydrogen Recombiners	Att. 2
96-195-TM	0	Steam Generator Blowdown Radiation Monitor Removal from Service	Att. 2
96-200-MD	1	Eliminate Spray Additive System	Note 1
96-209-EV	0	Change to UFSAR Section 9.10, Fuel Storage Building Ventilation System	Note 1
96-228-MD	0	Replacement Service Water Pumps	Note 1
96-239-MD	0	Safety Injection Actuation Relay Replacement	Note 1
96-241-GM	0	Generic Replacement of Horizontal Centrifugal Pumps/Motor Assemblies up to 25 Horsepower for Liquid Application	Note 1
96-248-EV	0	Nitrogen Nuclear Supply	Note 1
96-249-MD	0	Main Transformers Fire Detection Replacement	Att. 2
96-253-EV	0	Hydrogen Nuclear Truck Supply	Note 1
96-256-MD	0	Central Control Room Ventilation Mode Upgrade	Note 1
96-269-MD	0	Replacement of 21, 22 and 23 Gas Stripper Feed Pumps	Note 1
96-282-GM	0	Installation or Alteration of Equipment, Structures, Piping, and Hardware	Att. 2



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SE No.	Rev. No	Title	Comments
96-294-MD	1	Install Welding Machines in PAB, 51' Elev.	Att. 2
96-295-MD	0	Relocation of Condenser Outlet Waterbox Level Alarms	Att. 2
97-008-MD	2	Auto Open of Power Operated Relief Valve Block Valves	Note 1
97-029-TM	0	Portable Demineralizer Unit to Unit 1 Condensate Storage Tank	Att. 2
97-043-TM	0	Primary Water Supply to Steam Generator Sludge Lance	Att. 2
97-044-TM	0	Vapor Containment Duraline Power Panel from weld receptacle	Att. 2
97-059-MD	0	Installation of Isolation Switches for Power Operated Relief Valves	Note 1
97-069-TM	0	Temporary Digital Metal Impact Monitoring System Multichannel Recorder	Att. 2
97-096-MD	1	IP-R-45 Condensation Removal	Att. 2
97-132-MD	0	Fuel Storage Building Supply Fans	Note 1
97-136-MM	0	NRC Generic Letter 96-06, Thermal Overpressure Compliance Modification	Note 1
97-137-TM	0	Pressurizer Safeties RCS vent Path FME Covers	Att. 2
97-138-PR	0	Elimination of Rodded ITC Measurement	Note 1
97-158-PR	1	RCP Backseat Operations with Fuel in the Reactor or During Fuel Transfer	Att. 2
97-167-TM	0	Weld Channel and Containment Penetration Pressurization System Flow Meter Spool Piece	Att. 2
97-192-TM	0	Nitrogen Purge for Hydrogen System Piping in the PAB for Relief Valve Testing	Att. 2
97-202-EV	0	Store Dummy Fuel Assembly in RCC Change Fixture	Att. 2
97-203-EV	0	Removal of Accumulator Discharge Isolation Valves from Generic Letter 89-10 Motor Operated Valve Program	Note 1
97-235-EV	0	Cycle 14 Final Reload Safety Evaluation	Note 1
97-236-PR	0	Emergency Operating Procedure Changes for '97 Refueling Outage	Note 1
97-266-MD	0	Indian Point Unit 1--CSB Sump Tank and Sump Pit Modifications	Att. 2
97-322-MM	0	Removal of PT-458B and Dead Weight Tester	Note 1
97-345-TM	2	Blank Flange for Pressure Relief Tank Side of Relief Valve 855	Att. 2
97-349-TM	0	Block Open PCV-1228 Instrument Air to Containment	Att. 2
97-366-EV	0	Change to Limiting Close Stroke Time for Containment/Purge Pressure Relief Valves	Note 1
98-007-TM	0	Flushing of the Magnetrol Level Columns	Att. 2
98-017-EV	1	Cleaning and Repair of Coatings for Various Areas Within the IP2 Containment	Att. 2

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SE No.	Rev. No	Title	Comments
98-025-TM	0	Emergency Diesel Generator Raw Water Alternate Pressure Gauge	Att. 2
98-033-TM	0	Install Mechanical Blocks in 25 Fan Cooler Unit Damper Valve	Att. 2
98-068-EV	1	Changes to the Reactor Coolant Pump Over-Speed Protection Design Bases	Att. 2
98-069-MM	1	Nitrogen Backup for PCV 1310A and 1310B	Note 1
98-126-MM	0	Modification of Excess Condensate Valve LCV-1129 Controls	Note 1
98-132-MM	0	Nuclear Instrumentation System Cables Replacement	Note 1
98-137-EV	1	Gear Change for Motor Operated Gate Valves	Note 1
98-167-MM	0	In-Line Isotopic Analyzer Modification	Note 1
98-168-PR	1	Nitrogen Back-up Accumulator to Power Operated Relief Valves and Overpressure Protection System	Att. 2
98-174-MM	0	Roof Replacement to the Aux Boiler Feed Water Building	Att. 2
98-177-EV	0	Containment Heating, Cooling and Ventilation Systems	Note 1
98-209-PR	0	Emergency Operating Procedures Changes Revision 30	Note 1
98-219-SP	0	Reactor Coolant Pump Motor Upper and Lower Bearing Oil Reservoir Level Alarm Setpoint Change	Note 1
98-231-MM	0	Fan Cooler Unit Charcoal Filter Compartment Pressure Equalization Device	Note 1
98-237-PR	0	Change to In-Service Test Procedure No. PT-V24 to Decrease Minimum Closing Time Limit of FCV-417, 427, 437, and 447	Att. 2
98-248-MD	2	Replacement of 21 & 22 B ATP Mechanical Seal, Modification to Boric Acid Tank Sample Lines, Removal of Flow Elements FE-5832 and FE-5833	Att. 2
98-274-MM	1	Chemical and Volume Control System Instrument Power supply and FT-110 Enhancements	Att. 2
98-281-MM	0	Fire Water Storage Tank Level Instrumentation Modification	Att. 2
98-289-MM	0	Relocation of Hotwell Lo Lo Level Switch LC 1233S	Att. 2
98-322-EV	0	Throttling of Service Water Strainer Outlet Valves	Att. 2
98-326-EV	0	Generic Safety Evaluation for Multiple UFSAR Change Requests	Note 1
98-334-EV	0	Setpoint Change for the Fan Cooler Unit Return Side Radiation Monitors, R-46/R-53 Temperature	Att. 2
98-362-TR	0	Temporary Repair of Leak on Hinge Pin Cover of Check Valves MPS-728 and -732	Att. 2
98-380-TM	0	Repair of the 100A DPDT Automatic Transfer Switch in Unit 1 48V DC System (Located on Wall in Central Control Room Behind Supervisory Instrument Panel Board).	Att. 2
98-384-MD	0	Replacement of Service Water Strainer Blowdown Valves	Att. 2

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<b>SE No.</b>	<b>Rev. No</b>	<b>Title</b>	<b>Comments</b>
98-394-TR	0	Temporary Repair to Valve FCV-447	Att. 2
98-409-EV	0	UFSAR Changes to Section 6.2.2.3.5 – Residual Heat Removal Heat Exchanger Main Flange Studs	Att. 2
99-015-EV	2	UFSAR Changes to Section 11.2.3, Radiation Monitoring System	Att. 2
99-019-MM	0	Replacement of Auxiliary Steam Traps for Heating Coils of Refueling Water Storage Tank & Primary Water Storage Tank	Att. 2
99-021-PR	0	Extension of Interval for Certain Fire Protection Tests	Att. 2
99-025-TM	0	Transfer of Unit #1 Annulus Moat Fluid to a Temporary Holding Tanker for Later Discharge	Att. 2
99-031-MM	1	Installation of a 3-Hour Rated Door in Fire Zone 6A (El. 80', PAB) and Removal of Radiation Monitor	Att. 2
99-035-TM	0	Boric Acid Transfer Pump Stuffing Box Pressure and Seal Temperature Readings	Att. 2
99-036-TM	0	Installation of Temporary Facility Change for FC 159A	Att. 2
99-043-EV	0	Change to UFSAR Section 6.2.3.8 and Table 6.2-14 – External Recirculation Outside Containment	Att. 2
99-044-SP	1	Radiation Monitors R-41/42 Delta-T Alarm	Att. 2
99-055-TM	0	Heat Lamps for RWST Level Enclosure	Att. 2
99-065-MM	0	NYP/CON ED Joint Effort on Water Treatment Plant	Att. 2
99-083-EV	0	Revise UFSAR Sections 6.7.1.2.8 and 9.2.2.3 to Delete Charging Pump High Speed Alarms	Att. 2
99-084-TM	0	Block Auto Containment Isolation and Evacuation Alarm Function from R41/42	Att. 2
99-091-MM	0	Replacement of Auxiliary Feedwater Control Valves	Att. 2
99-095-TM	0	Installation of Temporary Air Circulation Fans for the Central Control Room Tracer-Gas In-Leakage Air Test	Att. 2
99-106-PR	2	Central Control Room Mode 2 Unfiltered In Leakage Determination and Additional Tests	Att. 2
99-110-GM	0	Restraints Improvements for Mechanical, Electrical and Transient Equipment	Att. 2
99-111-MM	0	Replacement of Level Instrumentation for Boric Acid Storage Tanks 21 and 22	Att. 2
99-115-MM	0	21-26 Traveling Water Screen Level Probes	Att. 2
99-117-GM	0	Solenoid Valve Replacement (Generic)	Att. 2
99-122-GM	0	Generic Motor Operated Valve Modification	Att. 2
99-133-TM	0	22 RCS Hot Leg Temperature Input to Subcooling Margin Monitor - Remove from Scan	Att. 2
99-134-EV	0	Leading Edge Flowmeter Software Modification for Y2K	Att. 2
99-136-TM	0	Turbine Supervisory Instrument Auxiliary Trip Defeat Switch	Att. 2

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SE No.	Rev. No	Title	Comments
99-148-EV	0	Correction of UFSAR Section 7.7.4.1, Central Control Room Communication Facilities	Att. 2
99-153-EV	0	Correction of UFSAR Section 6.7.1.2.12, System Design and Operation for Service Water System Leakage Detection	Att. 2
99-160-EV	1	Change to UFSAR Section 7.2.2.9	Att. 2
99-167-PR	0	NIS Single Point Calibration Method	Att. 2
99-170-PR	0	Removing Feedwater Bypass Line (FCV-447L) from Service and Placing Feedwater Bypass Line (FCV-447L) in Service	Att. 2
99-173-GM	0	Installation of Ericsson DCT 1900 Personal Communication System	Att. 2
99-178-PR	0	Emergency Operating Procedure Changes Revision 31	Att. 2
99-190-MD	0	Power Operated Relief Valve Nitrogen Accumulator Upgrade	Att. 2
99-203-MD	0	Replacement of Electro-Pneumatic Controllers in Electric Tunnel	Att. 2
99-205-TM	0	Main Generator Hydrogen Cooler Vent Plug	Att. 2
99-208-TM	0	Main Generator Hydrogen Cooler #22 Vent Header with FP Water	Att. 2
99-212-PR	0	Revision 13 of PC-R19	Att. 2
99-219-PR	0	P-MT-180	Att. 2
99-221-TM	0	Contingency Alternate Power Supply to 24 Battery Charger	Att. 2
99-223-MM	0	Containment Recirculation Pumps Replacement	Att. 2
99-224-MM	0	Auxiliary Feedwater Pump 21 & 23 Blackout Timer Changes	Att. 2
99-225-TM	0	Fire Hose to Demineralizer Truck to Unit 2 Condensate Storage Tank Supply Line at CD-627	Att. 2
99-227-TM	0	RCP Lube Oil Reservoir Fill Extension	Att. 2
99-229-TM	0	Online Boost Charging of Cell 12 of 125 VDC Battery No. 24	Att. 2
99-231-MD	0	Recalibration of Degraded Voltage Relays	Att. 2
99-234-MM	0	Generator Stator Water Cooler #21A and #22B Bundle Replacement	Att. 2
99-241-TM	0	Temporary Replacement of the 480 Volt 21 Switchgear Braeaker (52/MCC4A) with MCC 210	Att. 2
99-244-TM	0	24 Control Rod Drive Mechanism Fan Back Draft Damper Removal	Att. 2
99-245-TM	0	Core Exit Thermocouples H10 and R10- Remove From Scan	Att. 2
99-250-SP	0	Delta-T Deviation Alarm Setpoint Change	Att. 2
99-251-SP	0	Tavg. Deviation Setpoint Change	Att. 2

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SE No.	Rev. No	Title	Comments
99-253-EV	0	Evaluation of Condenser Sextant Sampling without Chloride Analyzers	Att. 2
99-254-SP	0	Recalibration of Undervoltage Relay Pick-Up Voltage on 6.9 kv Busses #1, #2, #3, & #4	Att. 2
99-259-PR	0	Isolate Charging with Letdown in Service	Att. 2
99-261-EV	0	Evaluation of the 2A to 3A Tie Breaker in a Near Connected Position for UFSAR Impact	Att. 2
99-267-MD	0	Accumulator Level Setpoint Change and Removal of I/I	Att. 2
99-283-TR	0	Temporary Leak Repair of Body to Bonnet Leak on MS-1-24 Using Leak Sealant	Att. 2
99-291-MM	1	NYPA/ConEd Joint Effort on Water Treatment Plant	Att. 2
99-293-TR	0	Temporary Leak Repair for Body to Bonnet Gasket Leak on MS-1-24 using Leak Sealant	Att. 2
99-296-PR	0	Control of Heavy Loads/ Post Accident Containment Ventilation Concrete Cover Lift	Att. 2
99-297-EV	0	UFSAR Organization Chart Update	Att. 2
99-313-TM	0	Monitoring of Channel 4 Delta-T, Tavg, Overpower Delta-T, and Overtemperature Delta-T Signals	Att. 2
99-315-PR	0	Removal of Radiation Monitor R-43's Particulate High Range Requirement	Att. 2
99-316-PR	0	Repair of Reinforced Concrete Vapor Containment Wall in Electrical Penetration Tunnel	Att. 2
99-334-TM	0	Temporary Electric Space Heaters	Att. 2
99-339-MD	1	Replacement of Gas Turbine 1 Transformer	Att. 2
99-343-MM	0	Permanentization of Work Control Center Installation	Att. 2
99-347-SP	0	RCS Flow Trip Setpoint Determination	Att. 2
99-375-MM	0	IP-2 One Stop Shop Building Installation	Att. 2
00-009-TM	0	Temporary Setpoint Change RCP No. 1 Seal Return Low Flow Alarm	Att. 2
00-021-PR	0	Change Minimum Containment Temperature to 80F	Att. 2
00-022-MM	0	Hotwell Level Piping Upgrade	Att. 2
00-028-TM	0	Core Exit Thermocouples During Reduced Inventory with Bedspring Disconnected	Att. 2
00-030-TM	0	Control Rod Drive Mechanism Power Supply to Duraline Units	Att. 2
00-039-TM	0	Remove the Low Pressure Input to the Central Control Room Category Alarm from the 24, 25, 26 Service Water Headers	Att. 2
00-040-TM	0	Primary Water and Instrument Air Sources for B & C and Hydrostatic Testing	Att. 2
00-043-PR	0	Measurement of Boron-10 Area Density of Boraflex in PWR Spent Fuel Storage Racks	Att. 2
00-049-TM	0	Block the Reactor Trip to the Turbine Trip Circuit to Reset the Turbine Trips	Att. 2

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SE No.	Rev. No	Title	Comments
00-058-TM	0	Bypass SOV 1258 to Maintain LCV-1158 Open to Fill the Condenser Hotwells	Att. 2
00-072-SP	0	Nuclear Instrumentation System Source Range Set Point	Att. 2
00-073-MM	1	Indian Point Steam Generator Snubber Reduction with Replacement Series 44F Steam Generators	Att. 2
00-081-TM	1	MCC 27 Supply to EPV21 (R41, R42, R43, R44)	Att. 2
00-097-TM	0	Temporary Cable Connecting 125-V DC Power Panels 23 & 24	Att. 2
00-099-TM	0	Alternate Power Feed to 21 and 22 Spent Fuel cooling Pumps	Att. 2
00-113-TM	0	Steam Generator Secondary Side Hydrogen Purging	Att. 2
00-119-TM	0	Pressurizer Manway RCS Vent/Foreign Material Exclusion Cover	Att. 2
00-123-MD	2	Replacement of Condenser Neck Feedwater Heater Tube Bundles	Att. 2
00-124-TM	0	Primary water for Flushing, Cleaning, etc. in Fuel Service Building	Att. 2
00-125-TR	0	TOI-265, Draining Reactor Coolant System with Tube Leak in 24 S/G	Att. 2
00-126-TM	0	Jumper Hose from FP-193 to the Suction of R-51 Sample Pump at #6632	Att. 2
00-131-MD	0	Pressurizer Relief Tank and Reactor Coolant Drain Tank Vent and Sample Lines Improvement	Att. 2
00-180-TM	0	Hose from FP-800, 801 and/or 684 for Turbine Building Flush and Clean	Att. 2
00-181-MM	0	Install Steam Generator Inspection Ports	Att. 2
00-182-PR	0	Dynamic Rod Worth Measurement Technique	Att. 2
00-188-PR	0	Load Test of Turbine Hall Crane	Att. 2
00-193-EV	0	UFSAR Section 7.2.4.1.6 Change to SB-1and SB-2 Protective Barrier Description	Att. 2
00-196-PR	0	Emergency Operating Procedure Revision 33	Att. 2
00-202-MD	0	Retirement of Spent Fuel Pool Skimmer Loop	Att. 2
00-203-TM	0	Flush of the Stator Water Cooling System	Att. 2
00-221-SP	0	Pressure Requirement , Including Allowances for Normal Channel Accuracy for Placing RHR System into Service	Att. 2
00-226-MM	0	Upgrade RCP Oil Collection System	Att. 2
00-242-PR	0	Safety Assessment System Adverse Containment Conditions Flag Reset	Att. 2
00-243-PR	0	Emergency Data Display System/Emergency Response Data System	Att. 2
00-260-EV	0	RCS Refueling Boron Concentration	Att. 2
00-288-MM	0	RCP Leak-Off Low Flow Transmitters Wire Upgrade	Att. 2
00-298-MD	1	Isolation Valve Seal Water System Flow Control Upgrade	Att. 2

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<b>SE No.</b>	<b>Rev. No</b>	<b>Title</b>	<b>Comments</b>
00-299-EV	0	Changes to UFSAR 14.2.5.6 to Incorporate Results of Indian Point 2 Steam Line Break Inside Containment to Address NR-99-002 Feedline Flashing Concerns	Att. 2
00-302-EV	0	Update of IP#1 UFSAR Figure 8 and IP#2 UFSAR Section 12.1, Table 12.1-1. And Figures 12.1-1 and 12.1-2	Att. 2
00-315-TM	0	Modification of the Manipulator Gripper Assembly	Att. 2
00-330-PR	0	Integrated Safeguards Surveillance Testing	Att. 2
00-337-EV	0	Vapor Containment Liner Corrosion at Elevation 46'	Att. 2
00-340-SP	0	Increase Amptector Short Time Setpoint for Emergency Diesel Generator Output Circuit Breakers	Att. 2
00-341-EV	0	Post-Steam Generator Tube Rupture Cooldown Effect on Core Delta-T Limit	Att. 2
00-360-MM	0	Cycle 15 Core Loading with VANTAGE Fuel	Att. 2
00-369-MM	0	Drain Traps Replacement for Steam Jet Air Ejector Condensers for Secondary Side pH Control	Att. 2
00-370-MM	0	Reload Safety Evaluation Indian Point Nuclear Plant Unit 2 Cycle 15 Revision 1	Att. 2
00-378-EV	1	Removal of Remote Start Capability of the Gas Turbines from the UFSAR	Att. 2
00-379-MM	0	Removal of RCP-21, RCP-22, RCP-23, and RCP-24 Cages	Att. 2
00-385-MM	0	MCC 22 Duct Bank Modification	Att. 2
00-394-TM	0	Defeat of 480 Volt Bus Undervoltage and Degraded Voltage Trip Logic with Buses Energized	Att. 2
00-404-EV	0	Absence of Fuel Assembly Upper Alignment Pins at Core Location A-8	Att. 2
00-405-EV	0	UFSAR Organization Chart Update	Att. 2
00-406-EV	0	Steam Generator Secondary Side Foreign Objects	Att. 2
00-412-EV	0	Use of Freeze Seal for Testing Relief Valve 855	Att. 2
00-413-EV	1	Reactor Vessel Foreign Objects	Att. 2
00-416-EV	0	Change in Toxic Gas In-Leakage	Att. 2
00-436-TM	0	Removal of Isolation Valve Seal Water System Flow Indicator FI-1084	Att. 2
00-439-SP	0	Accumulator Pressure Low Alarm Setpoint Change	Att. 2
00-444-SP	0	Increase Safety Injection MOV-851A and 851B Header Swapover Time	Att. 2
00-450-EV	0	Isolation Valve Seal Water System Technical Specification Basis Clarification	Att. 2
00-458-EV	0	Change to Technical Specification Basis 4.5 and Procedure IPC-ST-R03-S	Att. 2
00-460-EV	0	Residual Heat Removal Loop Leak Detection	Att. 2

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<b>SE No.</b>	<b>Rev. No</b>	<b>Title</b>	<b>Comments</b>
00-463-PR	0	Running the Boiler Feed Pump Turbines Utilizing Auxiliary Steam	Att. 2
00-482-PR	0	Emergency Operating Procedures Revision 34	Att. 2
00-484-PR	1	Visual Weld, Liquid Penetrant, Magnetic Particle, Radiographic Examinations	Att. 2
00-502-MM	0	Transfer of Feed for Emergency Seal Oil Pump Motor	Att. 2
00-503-TR	0	Temporary Repair for Valve 731, Residual Heat Removal Pumps Suction from Loop-2 Hot Leg	Att. 2
00-519-EV	0	Replace Reactor Cavity Seal	Att. 2
00-524-MM	0	Equipment Floor Hatch Modifications	Att. 2
00-529-EV	0	Delete UFSAR Requirement to Monitor Toxic Gas (Ammonia & Chlorine)	Att. 2
00-533-PR	2	Steam Generator Team Quality Execution Procedures	Att. 2
00-534-MM	0	Original Steam Generator Storage Facility	Att. 2
00-535-PR	0	Welding Procedures (See also SE 00-510-PR)	Att. 2
00-536-MM	0	Remove Miscellaneous Electrical Interferences Inside Containment	Att. 2
00-537-TM	0	Installation of Temporary Shielding	Att. 2
00-538-TM	0	Remove Steam Generator 21-24 Supports	Att. 2
00-540-MM	0	Installation of Hatch Transfer System Inside and Outside Containment and Four Point Lift System	Att. 2
00-541-MM	0	Install Lifting Trunnion Boss for Original Steam Generators 21, 22, 23, 24	Att. 2
00-542-TM	1	Install Temporary Power Inside containment	Att. 2
00-543-MM	0	Remove Secondary Small Bore Interferences Steam Generator 21, 22, 23, 24	Att. 2
00-544-MM	0	Remove Feedwater Piping Steam Generators 21, 22,23, 24	Att. 2
00-545-MM	0	Remove Main Steam Piping Steam Generators 21, 22, 23, 24	Att. 2
00-546-MM	0	Primary Manway Cover Insert Fastener Replacement	Att. 2
00-549-MM	0	Polar Gantry Crane Structural Modifications	Att. 2
00-550-TM	0	Install Reactor Cavity Decking	Att. 2
00-551-PR	1	Raytheon NonDestructive Testing Procedures	Att. 2
00-553-MM	0	Remove Secondary Manway Platform Steam Generators 21-24	Att. 2
00-554-MM	0	Removal of Miscellaneous Structural Steel Steam Generator Cubicles 21, 22, 23, 24 and Equipment Hatch Barrel Rigging Lugs	Att. 2
00-555-MM	1	Install Temporary Reactor Coolant System Supports/ Restraints	Att. 2



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SE No.	Rev. No	Title	Comments
00-556-TM	0	Remove Miscellaneous Small Bore Interferences	Att. 2
00-557-MM	0	Perform Reactor Coolant System Pipecuts	Att. 2
00-560-EV	0	UFSAR Update to Reflect Removal of Two Containment Steam Heaters	Att. 2
00-562-MM	0	Replacement Steam Generator Secondary Manway Bolt/Stud Hole Repair	Att. 2
00-566-TM	0	Install Temporary Lifting Device	Att. 2
00-567-MM	1	Replacement Steam Generator Piping Modification	Att. 2
00-568-MM	3	Steam Generator Supports Modification	Att. 2
00-577-MM	0	Steam Generator Digital Metal Impact Monitoring System Holes	Att. 2
00-578-MM	0	Model 44F Steam Generator Primary Channel Head Drain Plug	Att. 2
00-579-PR	0	Steam Generator 21, 22, 23, 24 Transport	Att. 2
00-580-PR	0	IP2 Steam Generator Replacement Work Package 2090 Haul Route Upgrade	Att. 2
00-581-MM	0	Steam Generator Water Level Modification	Att. 2
00-582-PR	0	Remove Original Steam Generators 21-24	Att. 2
00-583-PR	0	Perform RCS Pipe Cuts	Att. 2
00-584-PR	0	Pipe End Decontamination Steam Generators 21-24	Att. 2
00-585-PR	4	Remove Misc. Electrical Interferences Inside Containment	Att. 2
00-586-EV	0	Correction of UFSAR Section 7.2.5.1.7, Low Pressurizer Pressure Trip	Att. 2
00-590-PR	0	SGR Load Test Plan for the Up/Downending Device	Att. 2
00-591-EV	0	Correction of UFSAR Section 5.2.4, Containment Ventilation Isolation	Att. 2
00-595-MM	0	Removal of Four Point Lift System	Att. 2
00-598-MD	0	Reactor Coolant System Redundant Level Measuring System at Draindown	Att. 2
00-602-MM	0	IP2 SGR Secondary Manway Platforms	Att. 2
00-603-MM	0	Coatings	Att. 2
00-604-MM	0	Install Temporary Power Inside Containment/ Remove Temporary Power Inside Containment	Att. 2
00-609-MD	1	Condensate and Main Feedwater Systems Long Loop Recirculation	Att. 2
00-610-MD	0	Steam Generator Wet Lay-up System	Att. 2
00-611-MD	0	Hotwell (Sextant) On-Line Sampling Relocation	Att. 2
00-613-MD	0	Relocation Feedwater Sampling and Cooling Upgrade	Att. 2

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<b>SE No.</b>	<b>Rev. No</b>	<b>Title</b>	<b>Comments</b>
00-615-MM	0	Remove/Install Miscellaneous Structural Interference in Steam Generator 21, 22,23,24	Att. 2
00-616-MM	0	Install/Remove Reactor Cavity Decking	Att. 2
00-617-MM	0	Removal of Hatch Transfer System Inside Containment	Att. 2
00-618-MM	0	Removal of Hatch Transfer System Outside Containment	Att. 2
00-620-MM	0	Removal of temporary Shielding	Att. 2
00-621-MM	0	Install Replacement Steam Generators 21, 22, 23, 24	Att. 2
00-622-MM	0	Replacement Steam Generator Insulation Modification	Att. 2
00-625-TM	0	Mechanical Block for Containment Isolation Valve 1728	Att. 2
00-626-TM	0	Mechanical Block for Containment Isolation Valve 1723	Att. 2
00-628-EV	0	Revision to UFSAR Segments 1858 and 2374 (Radiation Monitor R54 Alarm)	Att. 2
00-630-PR	0	Remove Temporary Lifting device	Att. 2
00-635-EV	0	Technical Specification Bases Change Request – Delete Reference to UFSAR Table 7.4-2	Att. 2
00-636-EV	0	Technical Specification Bases Change Request –Reconciliation with Technical Specification	Att. 2
00-639-EV	0	Use of Pittsburgh Corning Foamglass Insulation in Vapor Containment at 46' Elevation	Att. 2
00-646-EV	0	Transport Original Steam Generators to Original Steam Generator Storage Facility	Att. 2
00-647-MM	1	Replacement Studs for Model 44F Replacement Steam Generator Secondary Manway Closure	Att. 2
00-654-MD	0	Replacement of High Pressure Steam Dump I/P. PM-404 and Addition of Valve Volume Boosters	Att. 2
00-655-MM	0	Replacement of Relays in the Reactor Protection System Racks	Att. 2
00-657-MD	0	Replacement Steam Generator Evaluation	Att. 2
00-658-EV	0	Revision to UFSAR 9.2.2.4.5.3	Att. 2
00-670-EV	0	Temporary Application of InstaCote-ML to Portions of Reactor Cavity Floor and Walls	Att. 2
00-678-EV	0	Justification for Continued Operation for Operation Without the 10 Inch Safety Injection Nozzle	Att. 2
00-692-TM	0	Installation of Blind Flange on SI Side of Relief Valve 855	Att. 2
00-700-TM	0	RE-101 Central Control Room Radioactive Gas & Particulate Detection Trouble Alarm Removal	Att. 2
00-724-PR	0	Spent Fuel Movement with Alternative Load Measuring Instrument with Readout Capability	Att. 2
00-726-PR	0	Delete Incorrect TS Bases Statements that (1) Describe Assumptions Regarding Initial Containment Pressure and (2) Describe Containment Design Pressure of 47 psig as Peak Accident Pressure	Att. 2
00-727-PR	0	High Pressure Steam Dump Functional Test	Att. 2

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SE No.	Rev. No	Title	Comments
00-728-PR	0	23 Auxiliary Feed Water Pump Filling of 21 and 22 Steam Generators	Att. 2
00-736-MM	0	Hotwell Sextant and SGBD Alarm Conversion to Sodium	Att. 2
00-737-TR	0	Valve 1863 Temporary Repair	Att. 2
00-747-MM	0	BITL-1 and BITL-2 Relay Removal	Att. 2
00-753-TM	0	Isolation of #12 Sodium Hypochlorite Tank	Att. 2
00-761-PR	0	SAO-460, Revision 11, 10 CFR 50.59 Reviews	Att. 2
00-762-PR	0	Emergency Operating Procedure Revision 36	Att. 2
00-780-EV	0	Indian Point Unit 2 Restart Support	Att. 2
00-783-SP	0	Accumulator Pressure Low and High Alarm Setpoint Change	Att. 2
01-060-EV	0	UFSAR Change to Reflect New Vendor Supplied NPSH Required Values and Correct Design Temperature Value for the Containment Spray Pumps	Att. 2
01-072-EV	0	Changes to UFSAR Figures 5.1-14 through 5.1-16	Att. 2
01-086-EV	0	Change to UFSAR Tables 4.3-1 and 4.3-2	Att. 2
01-090-EV	0	Correction of Batching Tank Descriptions in UFSAR Section 9.2.2	Att. 2
01-108-EV	0	UFSAR Section 6.2.2.3.3 RWST Licensing and Design Basis Information Update, and RWST Technical Specification Bases for TS 3.3.A.1.a and 3.3.A.1.k	Att. 2
01-114-EV	0	UFSAR Revision to Reflect Retirement of CVCS Holdup Tank and Waste Storage Tank Area Outside Air Makeup Tempering Unit Steam Coil and Removal of Two Dampers from the Air Makeup Unit	Att. 2
01-117-EV	0	Acceptability of VC Liner Insulation at 130 Degrees F	Att. 2
01-128-EV	0	UFSAR Chapter 7 Sections to Correct/Clarify Statements Regarding Rod Control System and Turbine Trip with Reactor Trip	Att. 2
01-159-EV	0	UFSAR Updates and Clarifications for the Seal Water System, RCS Valve Seal Leakoff, Fan Cooler Condensate Equation, and Weld Channel Pressurization	Att. 2
01-191-MD	0	Evaluation of Safety Injection Nozzle with Missing Thermal Sleeve	Att. 2

Note 1: This Safety Evaluation was previously implemented, but was used in support of Revision 16 Change Requests to the Updated Final Safety Analysis Report (UFSAR). These UFSAR changes were identified during the 10CFR50.54(f) review effort.

ATTACHMENT 2  
APPROVED SAFETY EVALUATIONS

ATTACHMENT 2  
APPROVED SAFETY EVALUATIONS

**89-077-GM      R2      Installation or Replacement of 2" and Under Manual Valves or Replacement of Check Valves**

Manual and check valves 2 inches and smaller were replaced, and new valves were installed. The new valves are functionally equivalent to those replaced. The new components meet or exceed existing specifications, materials are compatible, and system functions are not changed. Seismic capabilities were verified as appropriate. No unreviewed safety question was involved.

**89-144-MM      R0      Low Pressure Turbine Differential Expansion "Long" Alarm/Trip Setpoint Change**

This modification changed the setpoints of the differential expansion rotor to allow for increased clearances that were obtained as a result of machining. The safety evaluation was clarified to indicate the setpoints for the rotor short alarm and trip, that were inadvertently reversed. This was considered editorial in nature. No unreviewed safety question was involved.

**89-310-TM      R0      Ecolochem Truck Make-Up to Indian Point Unit No. 1 Condensate Storage Tank**

This temporary modification connected a fire hose to hydrant 27 via a gated wye connection to a portable demineralizer truck. The outlet from the truck was routed via a hose to the Indian Point Unit No. 1 condensate storage tank. Any hose failure would have been quickly identified and isolated. The hose to the hydrant was isolated when not in service. Fire protection system flows and pressures were maintained even with a single failure. No unreviewed safety question was involved.

**90-231-PR      R1      DC Ground Fault Detection Equipment**

This evaluation assessed the use of ground fault detection equipment for identifying grounds in DC systems without interrupting the power supply. No unreviewed safety question was involved.

**91-194-TM      R0      Water Supply for the Wetting of Main Condenser Tube Sheets**

This temporary modification utilized the high-pressure fire protection header as a source of water for wetting the main condenser tube sheets for condenser tube cleaning. The hose was isolated when not in service. Fire protection system flows and pressures were maintained even with a single failure. No unreviewed safety question was involved.

**91-226-TM      R0      Purge/Pressurize Generator with Nitrogen/Carbon Dioxide/Air**

This temporary modification purged hydrogen from the generator with nitrogen/carbon dioxide/instrument air to allow maintenance during a generator outage. Design pressure limits were observed. No unreviewed safety question was involved.

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**92-010-GM      R2      Generic Piping Alteration**

This generic modification replaced deteriorated piping and/or modified the piping physical arrangement without changing any existing flow paths and sequences. This modification also permitted removal of piping that has been retired in place and/or is no longer used, functional, or required. The changes replaced deteriorated piping and improve operations and/or maintenance without impacting existing system performance or design criteria. Remaining modified components meet or exceed their original design criteria. No unreviewed safety question was involved.

**92-089-PR      R0      Jumper from NSG-102 to Degassifier Catch Tank**

The procedure change allowed the installation of a temporary hose connection from the unit 1 low pressure makeup pump NSG-102 directly to the Indian Point Unit No. 1 water factory degassifier catch tank to ensure an adequate supply of makeup water to the house service boiler feedwater system. The temporary connection involved non-safety related equipment and did not impact any Indian Point Unit No. 2 safety functions. No unreviewed safety question was involved.

**93-047-TM      R0      Provide Backup Source Range Indication**

This temporary modification provided backup source range indication for the contingency of a source range channel failure during core modifications. This modification was only in place during cold shutdown. No unreviewed safety question was involved.

**93-061-TM      R0      27 Traveling Screen Alternate Power Supply**

This temporary modification provided an alternate power supply from a Duraline feed to the 27 traveling screen. The temporary change was installed in the cold shutdown condition only. The traveling screen was not required to be operable, but with the temporary power supply connected, operation of the traveling screen helped maintain suction strainer differential pressure in support of service water pump operation. The design function of the traveling screen was not impacted as a result of this change. No unreviewed safety question was involved.

**93-178-MD      R0      Central Control Room Nameplate Upgrade**

This modification removed existing nameplates/labels and annunciator windows located in the central control room with new nameplates. The nameplates are not safety related and were installed such that they would remain intact during a seismic event. The replacement was considered an equivalent replacement. No unreviewed safety question was involved.

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**93-255-PR    R1    Removable Top Nozzle Fuel Repair Procedure**

Two procedures were used for removal of damaged fuel element top nozzle and replacement of a failed fuel rod with a dummy rod. Vertical and lateral stability of the new fuel elevator and movement of spent fuel in the new fuel elevator reconstitution basket were considered. No unreviewed safety question was involved.

**93-300-PR    R0    Service Water Header Operation with RCS Less Than 350 Degrees F**

This procedure change was prepared to allow the cross-connection of the service water headers with the RCS temperature less than 350 degrees F. Adequate cooling capability was maintained in this alignment for this mode of operation. Cross-connection in this mode of operation was permitted by plant technical specifications. No unreviewed safety question was involved.

**93-335-GM    R0    Generic Power Feed, Conduit, Cable Alterations**

This modification involved the generic alteration of electrical circuits for installation or deletion of power feeds that do not require a technical specification change and meet existing design criteria. This includes installation or deletion of the following: power feeds for lighting and offices; power feeds for emergency lighting; power feeds from existing sources to equipment; power feeds to general power outlets; and relocation of existing conduit, cable, and trays. The scope of this modification also included the addition and deletion of associated cables, conduits, boxes, trays, switches, breakers, and fuses. Each alteration received a design evaluation to assure the safety evaluation bases and assumptions are met. No unreviewed safety question was involved.

**94-118-MD    R1    Rehabilitation of Cathodic Protection of Dock Sheet Piles**

The cathodic protection system for the dock sheet piling was replaced to reduce the galvanic activity at the dock area. The existing anodes were either consumed or lost and did not provide the required corrosion protection. The system is classified as non-safety related, and the modification did not impact any safety related systems or components. No unreviewed safety question was involved.

**94-143-MD    R6    Weld Channel System Upgrades**

This revision to the modification permanently isolated the air supply to weld channel zone W-11 as allowed by the technical specifications when repairs are impractical. Excess leakage had been identified. Leads were lifted for the associated pressure switch. A blank cover was installed over the associated alarm in the central control room. No unreviewed safety question was involved.

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**94-221-MD    R3    Safeguards Agastat Timer Replacement**

This revision to the supported modification replaced an additional six Agastat relays with Tempo solid state timing relays. Four relays provided the time delay for stripping 480V buses and sequencing of safeguards loads following a safety injection signal with or without loss of offsite power. The other two relays provided actuation signals for MOV-851A and 851B upon a failure of safety injection pump 21 or 23. The new relays have a more precise setpoint tolerance. No setpoint values were changed, and the relays functions were unchanged. No unreviewed safety question was involved.

**95-049-TM    R0    Temporary Power Supplies for Refueling Outage**

Additional electrical power supplies were provided inside containment for the refueling outage. Cables were run only while the outage was in effect and energized only after the unit was in cold shutdown. Equipment was overload protected and compatible with ambient conditions. These feeds were used only for the outage and did not impact any cable trays or any equipment needed during cold shutdown. No unreviewed safety question was involved.

**95-089-MD    R0    Main Turbine Runback**

The turbine-generator runback on loss of one main feedwater pump was modified due to the increase in licensed maximum reactor power and other changes. A bistable was added to an existing instrument loop that measures turbine first stage pressure. The bistable replaced a pressure switch. The timers that control the runback were also readjusted. No safety-related equipment was modified. No technical specification was affected. No unreviewed safety question was involved.

**95-163-TM    R0    Instrument Air to Station Cross Connects Inside Vapor Containment**

A temporary hose was installed to provide station air to the instrument air header inside the containment during PT-R13 and B and C valve testing. This connection was only used during cold shutdown. The valves and instruments connected to the instrument Air System were not required to be operable during cold shutdown and receive equivalent air during the time this temporary hose jumper was in use. A failure of the hose would be equivalent to a loss of air event, which has been analyzed. No unreviewed safety question was involved.

**95-195-SP    R0    Main Turbine Runback on Rod Drop**

Setpoints were changed on the time delay relays for the main turbine runback caused by a rod drop signal. The time delay relays are a backup to the turbine control oil pressure to terminate a turbine runback event. The new setpoints were selected to prevent challenges to the primary system and to prevent unit trips. Analysis has shown that plant response to



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a rod drop event is acceptable with and without turbine runback. No unreviewed safety question was involved.

**95-204-PR R2 Procedure A28.22, Loss of Subcooling Margin Monitor**

The procedure change required only two operable thermocouples per channel per quadrant instead of four while maintaining the commitment of a minimum of 9 thermocouples per quadrant when both channels are combined. The change met NUREG 0737 requirements and algorithm requirements. The change was consistent with the technical specifications. No unreviewed safety question was involved.

**95-215-TM R0 Temporary Drain Line From Refueling Canal**

A temporary alternate path was provided to drain the lower refueling cavity to the containment sump. The temporary change further required the spent fuel pool to be separated from the refueling canal. Valves and hose were seismically restrained. The temporary spool piece and isolation valve manifold were seismically supported and restrained. An operator was in full time attendance to mitigate any failure modes. No unreviewed safety question was involved.

**95-229-TM R0 Temporary PAB Sump Pump**

Electrical bus maintenance required that both PAB sump pumps be temporarily deenergized. A temporary air-driven pump was installed to prevent the sump from overflowing. The air-driven pump was manually actuated, and an operator was in attendance whenever it was actuated. The operator would have mitigated an air supply failure or hose failure. The sump pumps provided no safety-related functions. No unreviewed safety question was involved.

**95-275-MM R0 Proteus Alarms for RWST Level and Residual Heat Removal Flow**

This modification provided wiring from the Proteus plant process computer to central control room annunciators to alert the operator on refueling water storage tank level, and to alert the operator of a loss of residual heat removal flow during refueling or plant shutdown. The level and loss of flow alarms are provided to enhance the operator awareness of RWST level and residual heat removal flow. No electrical systems or loads were altered. Existing cables with spare conductors were utilized for the modification. No unreviewed safety question was involved.

**95-366-TM R0 Core Exit Temperature Indication**

This modification restored redundant central control room indication of core exit temperature with the reactor shut down, the "bedspring" removed for refueling, and the primary system at reduced inventory. The modification consisted of connecting two cables (one for each channel) between the bedspring core exit thermocouple connector and the

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reactor vessel head thermocouple connector. The cable and connector assemblies used were the same material as the permanently installed cables and connectors, and there were no increases in the consequences of equipment malfunctions previously evaluated. The core exit thermocouple monitoring system is a seismically installed system, and this temporary modification did not degrade the seismic capability of the system. No unreviewed safety question was involved.

**95-375-MD      R0      Add cameras, Replace Camera Monitor Control, and Relocate Secondary Alarm Station**

This safety evaluation contains safeguards information. No unreviewed safety question was involved.

**95-414-TM      R0      21 RCP "X" Vibration Probe**

When the "X" vibration probe on RCP 21 failed it caused the "21 RCP High Vibration" alarm to continuously annunciate. In order to unmask this alarm and allow the operator to be alerted to a true vibration signal, the "X" probe was removed from service. This was accomplished in the central control room by installing a toggle switch to the defeat vertical position for 21 RCP. The "Y" probe remained in service to provide operators with vibration data on 21 RCP. With the "X" probe out of service, a supplemental log was maintained to monitor 21 RCP bearing temperatures and seal parameters. No unreviewed safety question was involved

**96-012-TM      R0      Unmask DC Bus Trouble Alarm**

This jumper was installed to defeat the 22 Battery Charger failed fan flow switch in order to unmask the 22 bus trouble alarm when one of the two redundant cooling fans were out of service. One fan provides sufficient cooling and the other fan was not used when the jumper was in place. The jumper allowed an immediate indication of an off normal condition of 22 DC bus due to other functions that would have been masked. Failure of the jumper would result in re-energizing the alarm and investigation would be initiated. This jumper did not affect the safety function of the battery charger. No unreviewed safety question was involved.

**96-067-MD      R0      Fan Cooler Unit Charcoal Filter Removal**

This modification removed the absolute HEPA filters, charcoal filters and associated fire protection and detection equipment from each of the five containment fan cooler units. The use of the revised source term methodology contained in NUREG 1465 supported this modification. Off-site doses and control room doses were maintained within regulatory limits (10CFR100 and General Design Criterion 19) without reliance on this equipment when using the NUREG 1465 source term methodology. No unreviewed safety question was involved.

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**96-118-PR      R0      Indian Point Unit No. 1 Spent Fuel Pool Portable Demineralizer**

A portable, skid-mounted demineralizer was temporarily used to purify the water in the Indian Point Unit No. 1 spent fuel pool. The demineralizer was placed next to the pool, and used minimal lengths of hose to connect to the pool. The pool water was maintained at the normal level. No system or equipment required for accident mitigation was affected. No unreviewed safety question was involved.

**96-126-EV      R0      Ground Detection Test Equipment**

A current tracer test device was used to locate grounds on DC power supply circuits and to identify the protective devices or feeds associated with AC or DC loads. The circuits involved were both safety and non-safety related. The loads due to current pulses from the test equipment were within the capabilities of the circuits that were tested, and there were no changes to the systems being tested. No unreviewed safety question was involved.

**96-168-MD      R1      Replace Hydrogen Recombiners**

The modification installed the new hydrogen recombiners but did not make them operable. Prior to operation, a license amendment was required to be issued by the NRC. Therefore, the original Hydrogen Recombiners were to remain in place and operational until the proposed license amendment is approved and implemented. No unreviewed safety question was involved.

**96-195-TM      R0      Steam Generator Blowdown Radiation Monitor Removal from Service**

This jumper allowed the steam generator blowdown radiation monitor R-49 to be removed from service without introducing any new failure modes. The change removed the high radiation auto closure feature from the blowdown valves. Daily chemist sampling and increased operator awareness ensured the requirements of NRC IE Circular 80-18 were addressed. The change occurred inside a Control Room rack that was seismically qualified and did not alter this qualification. The jumper introduced two small copper wires whose gauge and composition were compatible with the existing installation. No new electrical loads were added. No unreviewed safety question was involved.

**96-249-MD      R0      Main Transformers Fire Detection Replacement**

Fire detection systems for the main transformers, the station auxiliary transformer, and the unit auxiliary transformer were replaced. The replacement system consisted of a continuous thermistor wire secured to the deluge piping. The control panel was located in the turbine building. No changes to system functions have been made. No unreviewed safety question was involved.

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**96-282-GM      R0      Installation or Alteration of Equipment, Structures, Piping, and Hardware**

This generic modification facilitated alteration, modification, or removal of equipment, structures, piping, and hardware when: 1) there was no change in the Indian Point Unit No. 2 or Indian Point Unit No. 1 UFSAR or Technical Specifications, 2) changes complied with the existing design criteria, and 3) changes were non-Class "A" with no functional and/or physical interactions with safety-related items, and were not located in an area with Class A items. No unreviewed safety question was involved.

**96-294-MD      R1      Install Welding Machines in PAB, 51' Elevation**

This modification installed three welding machines outside the blowdown room in the piping penetration area of the PAB underneath the existing stairway. These machines were installed to facilitate welding in the vicinity. This modification greatly improved welding crew efficiencies when working in the piping penetration area by alleviating the need to run extensive amounts of leads from the PAB 80' Elev. to the 51' Elev. The modification improved setup and cleanup times and reduced safety hazards by eliminating long welding lead runs in stairwells and other plant areas frequented by plant personnel. No unreviewed safety question was involved.

**96-295-MD      R0      Relocation of Condenser Outlet Waterbox Level Alarms**

This modification removed the existing condenser outlet water box level alarm magnetrols and replaced them with magnetic level switches with a lower setpoint. This was necessitated by the retirement of the variable weir system. The lower set point eliminated a nuisance alarm. No unreviewed safety question was involved.

**96-307-TM      R0      Indian Point Unit No. 2 Sump Tank Pump Bypass**

This temporary modification routed the liquid in the PAB sump tank to the PAB sump, bypassing the sump tank pumps. This was accomplished by installing a 2" hose downstream of valve LW-4847 and routing the hose to a floor drain in the immediate vicinity. The bypass was installed to permit cleaning of the sump pump strainers. The building sump pumps discharged to the same location as the sump tank pumps. No unreviewed safety question was involved.

**97-029-TM      R0      Portable Demineralizer Unit to Indian Point Unit No. 1 Condensate Storage Tank**

A temporary supply of demineralized water to the Indian Point Unit No. 1 condensate storage tank was provided to meet the large demand for demineralized water during plant startup. The temporary supply consisted of a portable skid-mounted demineralizer and hoses. Water from the fire protection system was utilized. Flow from the fire protection system was about 80 gpm, which was less than the amount that can be removed from the

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system without adversely affecting it. The capacity of the fire protection system was more than adequate to handle fire contingencies. No unreviewed safety question was involved.

**97-043-TM      R0      Primary Water Supply to Steam Generator Sludge Lance**

A hose was connected to supply water from a service connection of the primary water system to the sludge lancing skid. This hose was used at cold shutdown, and personnel were in continuous attendance while in use. The change did not impact operability of any system. . No unreviewed safety question was involved.

**97-044-TM      R0      Vapor Containment Duraline Power Panel from Weld Receptacle**

A supply of 480 V power in the containment was provided through existing conduit and a welding receptacle to a Duraline power distribution center. The Duraline was permanently installed inside containment and seismically analyzed. The maximum load has been shown by analysis to not affect the 480 V bus. Protection for the 480 V system against an electrical fault was provided by a safety-related breaker. No unreviewed safety question was involved.

**97-069-TM      R0      Temporary Digital Metal Impact Monitoring System Multichannel Recorder**

This temporary facility change seismically installed a reel to reel multichannel recorder, a digital multi-meter, oscilloscope, phase/function generator and an Astro-Med recorder next to the Digital Metal Impact Monitoring System Cabinet. This equipment served no safety related function nor did it interface with any safety related function. No unreviewed safety question was involved

**97-096-MD      R1      IP-R-45 Condensation Removal**

The two skids that made up monitor R-45 were replaced with an in-line mounted monitor which fulfills the same monitoring functions. The new monitor experiences fewer errors because it is less susceptible to condensation build up due to its mounting arrangement and the detectors are not dependent on the volume chamber for its reading. No unreviewed safety question was involved

**97-137-TM      R0      Pressurizer Safeties RCS vent Path Foreign Material Exclusion Covers**

A wire mesh screen cover was installed on the pressurizer safety valve flange for foreign material exclusion control during safety valve removal. The analyzed vent path area was maintained. This modification was only in place during cold shutdown. No unreviewed safety question was involved.

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**97-158-PR      R1      RCP Backseat Operations with Fuel in the Reactor or During Fuel Transfer**

The temporary procedure provided steps while the RCP was on backseat (with fuel in the reactor or during fuel transfer) to direct RCP leakage to the containment sump. It also included contingency actions for excessive backseat leakage flow. The leakage that could happen if the RCP floated off its backseat was within the capability of one charging pump. Therefore, the refueling cavity level would have been maintained and no fuel would have been uncovered if stuck in the fully raised position. No unreviewed safety question was involved.

**97-167-TM      R0      Weld Channel and Containment Penetration Pressurization System Flow Meter Spool Piece Installation**

This temporary modification replaced the weld channel and containment penetration pressurization system flow meters in order to maintain pressure in the weld channel and containment penetration pressurization system and prevent moisture intrusion while the flow meters were removed for calibration. This modification was only installed during cold shutdown conditions when weld channel and containment penetration pressurization system was not required. No unreviewed safety question was involved.

**97-192-TM      R0      Nitrogen Purge for Hydrogen System Piping in the PAB for Relief Valve Testing**

This jumper installed a temporary tygon hose from a nitrogen supply to a vent connection on the hydrogen manifold in the PAB. This allowed for purging of a portion of the hydrogen system with nitrogen to provide protection for the safe removal of a relief valve. The relief valve was bench tested and re-installed. Only sparkless tools were used and the line was tested by Chemistry prior to the start of work. No unreviewed safety question was involved.

**97-202-EV      R0      Store Dummy Fuel Assembly in Rod Control Cluster Change Fixture**

PT-R8 and PT-R8A were changed to allow the Hi-Par dummy fuel assembly to be stored in the rod control cluster change fixture inside containment. This allowed testing of the fuel transfer system to commence earlier during an outage because the dummy fuel assembly did not need to be moved over the fuel transfer canal weir gate (a complex rigging process). The rod control cluster Change Fixture was designed to hold a fuel assembly containing an rod control cluster, the dummy fuel assembly was the same weight and configuration as an actual fuel assembly, and the refueling cavity liner, the rod control cluster change fixture, and the attachments to the rod control cluster change fixture are seismic class 1. No unreviewed safety question was involved.

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**97-266-MD      R0      Indian Point Unit No. 1-CSB Sump Tank and Sump Pit Modifications**

This modification provided the chemical systems building sump pit pump and the sump tank pumps with automatic controls, provided an inspection port for the sump, and provided an alternate flow path from the tank to the sump. These are non-class A components and systems. No unreviewed safety question was involved

**97-345-TM      R2      Blank Flange for Pressure Relief Tank Side of Relief Valve 855**

A blank flange was installed on the pressurizer relief tank side of relief valve 855 to allow valve 855 to be removed for maintenance while maintaining pressure boundary integrity of the pressurizer relief tank. This temporary modification was only applicable during cold shutdown conditions with the safety injection system rendered inoperable. The temporary modification did not affect the safety-related function of the system because it was only valid during cold shutdown conditions. No unreviewed safety question was involved

**97-349-TM      R0      Block Open PCV-1228 Instrument Air to Containment**

This temporary modification installed a mechanical blocking device on PCV-1228 instrument air supply to vapor containment to maintain the valve in the open position while electrical power to the valve was removed. It was necessary to remove electrical power to the valve to allow maintenance on PCV-1229 in the de-energized state. Both valves are fed by one fuse. This temporary modification was limited to cold shutdown when closure of this valve on containment isolation is not required. No unreviewed safety question was involved

**98-007-TM      R0      Flushing of the Magnetrol Level Columns**

This change involved the use of jumpers to provide a source of water for flushing the Magnetrol level columns for the condenser waterboxes. The jumpers were accomplished using a ¾-inch rubber hose, with a minimum pressure rating of 250 psig. The hose was routed from the fire protection system (connected at valve FP-800 or FP-801, as appropriate), to the condenser waterbox level columns. Any postulated hose failure would have been controlled by manually closing the supply valve. The jumper had a negligible effect on the high-pressure fire header, as the flow diverted from the header (< 120 gpm) was previously analyzed and found to be acceptable. No unreviewed safety question was involved

**98-017-EV      R1      Cleaning and Repair of Coatings for Various Areas Within the Indian Point Unit No. 2 Containment**

Various coatings within the containment were removed due to conditions of peeling and cracking and replaced with approved Level I design basis accident tested coatings. All coatings used complied with the requirements of ANSI-N5.12 as per specification FCX-98-C-001, Rev. 1. Components repainted included the polar crane, containment liner, inner

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and outer crane wall trenches, RCP concrete pedestals, steam generator concrete and steel pedestals, recirculation sump and drainage trenches, isolated inner and outer crane wall degraded areas, reactor vessel cavity pit, component cooling water piping, fan cooler units outside structural steel, and various electrical conduit. The normal function of the original and replacement coatings were to provide corrosion protection and a surface that can be decontaminated meeting DBA conditions for Indian Point Unit No. 2. The replacement coatings met the original design capability of coatings during a postulated DBA and reduced the potential for the coatings to chip or delaminate into the containment and recirculation sumps or onto their screens with subsequent interference with pumping capability. No unreviewed safety question was involved

**98-025-TM      R0      EDG Raw Water Alternate Pressure Gauge**

The EDG raw water local pressure gauges were not indicating. This jumper provided local temporary test gauges to provide pressure indication. No unreviewed safety question was involved.

**98-033-TM      R0      Install Mechanical Blocks in 25 Fan Cooler Unit Damper Valve**

This change involved the use of jumpers to mechanically block the opening of each of the containment fan cooler unit charcoal adsorber inlet and outlet dampers. This safety evaluation was used for blocking closed the 25 fan cooler unit. These jumpers protected the charcoal from paint fumes during painting in the vapor containment. Jumper installation was limited to cold shutdown operation, such that the charcoal filtration portion of the containment ventilation system was not required operable, and the safety injection defeat key switches were used to prevent actuation of the fan cooler units and dampers. If the normal outlet dampers closed and the charcoal dampers attempted to open (e.g., due to loss of control air), control room alarms would have alerted the operator to enter the appropriate alarm response procedures. The work orders prescribed post-maintenance testing to verify proper damper operation upon removal of the jumpers. No unreviewed safety question was involved

**98-068-EV      R1      Changes to the RCP Over-Speed Protection Design Bases**

This modification revised the main generator over-speed protection and the design bases of the RCP over-speed protection. Over-frequency trips were added to the turbine-generator trip relays and an inhibit was added to the circuitry for the fast transfer of 6900 V buses 1, 2, 3, and 4 from the unit auxiliary transformer to the station auxiliary transformer on over-frequency conditions. No unreviewed safety question was involved

**98-168-PR      R1      Nitrogen Back-up Accumulator to Power Operated Relief Valves and Overpressure Protection System**

These procedures and temporary modification reconfigured the normal nitrogen supply to the power operated relief valves, by aligning a safety injection accumulator to provide supplemental nitrogen to the power operated relief valve accumulators to assure sufficient



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nitrogen capacity to support the 200 power operated relief valve strokes committed in 4.3.4.2 of the UFSAR. This temporary modification was only applicable during plant conditions requiring the overpressure protection system operable. A mechanical block, via a temporary modification, is placed on a safety injection accumulator vent valve to maintain it in an open position. This aligns additional nitrogen supplies to the power operated relief valve nitrogen accumulators. The procedures provided guidance for the temporary modification and: (1) appropriate valve isolation, tagging, and restoration, (2) valve isolation capability verification, (3) check valve back-leakage, (4) power operated relief valve stroke timing verification, and (5) verification that the configuration supplies nitrogen to the power operated relief valves. No unreviewed safety question was involved

**98-174-MM      R0      Roof Replacement to the Auxiliary Boiler Feed Water Building**

This modification deals with roof repair/replacement on the auxiliary boiler feed water building. No unreviewed safety question was involved.

**98-237-PR      R0      Change to In-Service Test Procedure No. PT-V24 to Decrease Minimum Closing Time Limit of FCV-417, 427, 437, and 447.**

This procedure revision decreased the minimum time limit for the closing stroke of the feedwater regulating valves from 2 seconds for an individual valve to a dual limit of 1.5 seconds for an individual valve and 1.8 seconds average for all four valves. Accident and transient analyses established that reduced closing times do not impact the licensing basis, and a calculation indicated that resulting loads are acceptable in the feedwater header and pipelines. No unreviewed safety question was involved.

**98-248-MD      R2      Replacement of 21 Boric Acid Transfer Pump and 22 Boric Acid Transfer Pump Mechanical Seals and Modification to Boric Acid Tank Sample Lines**

This modification replaced the existing mechanical seals for both 21 & 22 boric acid transfer pumps, and replaced the same boric acid tank sample lines. Replacement of the mechanical seal on each pump required the installation of a barrier fluid tank pressurized by nitrogen that served as a heat sink for heat generated by the mechanical seal. The tank is filled with primary water that is re-circulated through the mechanical seal. The existing threaded sample lines were replaced with welded fittings/piping. The sample lines were appropriately sloped. The modification also removed the existing flow elements that were installed for Section XI testing. Ultrasonic flow meters are currently used during Section XI testing to obtain flow measurements. Failure of the seals would not have resulted in a boron dilution event. Replacement of the sample tubing increased the reliability of tank. Removal of the flow elements did not affect any accident or malfunction scenario. No unreviewed safety question was involved

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**98-274-MM     R1     Chemical and Volume Control System Instrument Power supply and FT-110 Enhancements**

This modification enhanced the chemical and volume control system in response to an INPO SOER and a corrective action report regarding an inadvertent RCS dilution event that occurred May 14, 1996. (1) Separate fuse protection was provided for FT-100 and FM-110; (2) The 118Vac power supply to central control room racks A5 and A6 were separated; and (3) a new alarm window for "Volume Control Tank Level Low-Low" was provided. This modification improved the reliability of the power supplies and removed an alarm masking condition. No unreviewed safety question was involved

**98-281-MM     R0     Fire Water Storage Tank Level Instrumentation Modification**

This modification replaced the existing fire water storage tank level instrumentation with a microwave system, replaced the central control room analog indicator with a digital indicator, replaced the heater circulating water pump impeller, and replaced the water heater differential pressure switch. These modifications provided assurance that the 300,000 gallon usable water requirement is met. No new failure modes were introduced. No unreviewed safety question was involved

**98-289-MM     R0     Relocation of Hotwell Lo Lo Level Switch LC 1233S**

Hotwell lo-lo level switch was located incorrectly. The modification to correct this was partially implemented. The setpoint database and procedures have been revised to reflect it is set 12' 6 3/4" rather 12' 0". Completion of this modification will locate the switch correctly and revise the setpoint database back to 12' 0" in the future. No new failure modes were introduced. No unreviewed safety question was involved.

**98-322-EV     R0     Throttling of Service Water Strainer Outlet Valves**

In order to ensure that the service water pumps deliver adequate flow to the fan cooler units and EDG, the strainer outlet valves have been permanently throttled to 225+/-25 gpm. This was found to be necessary because the new service water pumps deliver less flow than the old pumps. The strainer outlet valves had previously been operated in the full open position. No unreviewed safety question was involved.

**98-334-EV     R0     Setpoint Change for the Containment Fan Cooler Return Side Radiation Monitors, R-46/R-53 Temperature Switch**

This setpoint change was made to reflect the revised operating temperature for the service water system. Since the design service water inlet temperature was raised from 85°F to 95°F, it was necessary to change the temperature setpoint for the radiation monitors from 130°F to 140°F. The revised setpoint is within design manufacturer limits for these monitors and did not introduce any new failure modes. No unreviewed safety question was involved

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**98-362-TR      R0      Temporary Repair of Leak on Hinge Pin Cover of Check Valves  
MPS-728 and -732**

A small leak on the hinge pin cover of valves MPS-728 and -732 was repaired by injection of sealant. One re-pump of sealant was allowed for the temporary repair. The additional sealant did not impact the operability of the check valves or the main steam system. The injection material was compatible with the main steam system and existing components and piping. No unreviewed safety question was involved.

**98-380-TM      R0      Repair of the 100A DPDT Automatic Transfer Switch in Indian  
Point Unit No. 1 48V D.C. System (located on wall in Central  
Control Room behind supervisory instrument panel board).**

This temporary modification involved a repair of an automatic transfer switch on the Indian Point Unit No. 1 48V D.C. System (100A DPDT located on wall in the central control room behind supervisory instrument panel board). Jumper wires bolted connection from supply side of the switch to the load side of the switch to feed Indian Point Unit No. 1 48V D.C. System from the 48V D.C. Load Board No. 2. were installed. All work was performed per SE-315 "Electrical Operations and Maintenance Workmanship Standards". Rubber blanket were provided over the bolted jumper connection to prevent any inadvertent contact by maintenance personnel during repair of the Transfer Switch. The 48V D.C. System provides DC power to 13.8 k-v & 138 k-v breaker indication and controls and other Indian Point Unit No. 1 instrumentation. This control was lost during tagout of equipment and was found acceptable by Operations. Load Board No. 1 was not be available during the time a jumper was installed. In an unlikely event of a malfunction of the 48V D.C. Load Board No. 2 during this jumper installation, an automatic transfer to the 48V D.C. Load Board No. 1 would not have been available. This would have resulted in a loss of central control room breaker control and indication of the 13.8 k-v and 138 k-v lines. Local controls were. No unreviewed safety question was involved

**98-384-MD      R0      Replacement of Service Water Strainer Blowdown Valves**

This modification replaced motor operated valves SWN-617 through SWN-622 with manual throttle valves. The manual isolation valve function was restored to the service water strainer outlet valves, locking devices removed, and the valves opened fully. The new throttling valves were set and locked via test to obtain proper service water flow to the fan cooler units and EDGs. This change eliminated temporary facility change 98-222. No unreviewed safety question was involved

**98-394-TR      R0      Temporary Repair to Valve FCV-447**

This temporary repair was implemented to stop a leak in the 24 steam generator main feedwater regulator valve (FCV-447). An enclosure was provided around the bonnet and sealant was injected into the threaded allen stud, which was leaking. The sealant was not

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a foreign material exclusion concern. The valve bonnet was subsequently replaced. No unreviewed safety question was involved

**98-409-EV      R0      UFSAR Changes to Section 6.2.2.3.5 – Residual Heat Removal Heat Exchanger Main Flange Studs**

UFSAR Section 6.2.2.3.5 was revised to delete discussion that the residual heat removal heat exchangers main flange studs are provided with two nuts on each end to ensure permanent leak tightness. This safety evaluation was prepared to evaluate and justify this UFSAR change. No unreviewed safety question was involved.

**99-015-EV      R2      UFSAR Changes to Section 11.2.3, RMS**

UFSAR Section 11.2.3, radiation monitoring system was revised to compile the present inventory of radiation monitors in Indian Point Unit No. 1 and Indian Point Unit No. 2. The monitors were given categorizations of "Effluent Monitors," "Process Monitors," and "Area Monitors." No unreviewed safety question was involved

**99-019-MM      R0      Replacement of Auxiliary Steam Traps for Heating Coils of RWST & Primary Water Storage Tank**

This modification replaced two thermostatic steam traps with mechanical free-float type steam traps for the heating coils of the primary water storage tank and the RWST. No new failure modes were created. No unreviewed safety question was involved

**99-021-PR      R0      Extension of Interval for Certain Fire Protection Tests**

This change to SAO-703 provided a one-time extension for fire protection surveillance test frequencies for selected fire protection and auxiliary safe shutdown systems. No safety related functions were affected. The reliability of the fire protection and auxiliary safe shutdown equipment was evaluated using guidance from the Nuclear Electric Insurance Limited – Members' Manual. The reliability was judged to be acceptable. This change did not adversely affect the ability to achieve and maintain safe shutdown. No unreviewed safety question was involved

**99-025-TM      R0      Transfer of Unit #1 Annulus Moat Fluid to a Temporary Holding Tanker for Later Discharge**

This temporary modification installed pumps and hoses to transfer fluid from the Indian Point Unit No. 1 annulus moat inside the Indian Point Unit No. 1 containment through a PCB filtration skid to a tanker. The tanker had recirculation capabilities and level indication. The tank can be gravity drained to the normal release path after satisfactory chemistry results. No unreviewed safety question was involved.

**99-031- MM      R1      Installation of a 3-Hour Rated Fire Door In Fire Zone 6A (EI, 80', PAB) and Removal of Radiation Monitor R-8,**

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This change removed area radiation monitor R-8, located in the PAB, waste drumming storage room, at 80' elevation and the waste drumming storage room door was replaced with a manually operated, 3-hour fire rated door to provide a fire barrier between the adjacent fire zones. Exemption Number 2 of the Appendix R program which allowed use of the shield door as a fire door is no longer required. The radiation monitoring and shielding functions are no longer required because the room is no longer used for storage of radioactive waste. No unreviewed safety question was involved

**99-035-TM      R0      Boric Acid Transfer Pump Stuffing Box Pressure and Seal Temperature Readings**

This temporary modification entailed removal of the flush connection plug from the boric acid transfer pump mechanical seal and installation of a pressure gauge assembly in its place. The gauge determined the pump stuffing box pressure, which was required to support the 21 & 22 boric acid transfer pump mechanical seal replacement modification. In addition, the temporary change also entailed obtaining temperature readings of the mechanical seal. Upon completion of the data taking the system was returned to normal. The data taking entailed running the pump in its normal manner at fast and slow speeds. No unreviewed safety question was involved.

**99-036-TM      R0      Installation of Temporary Facility Change for FC 159A**

This temporary modification blocked the high/low flow common alarm for RCP #1 seal return from FC-159A to unmask other alarms on the common annunciator. The flow was not low and was monitored on a chart recorder. No unreviewed safety question was involved.

**99-043-EV      R0      Change to UFSAR Section 6.2.3.8 and Table 6.2-14 – External Recirculation Outside Containment (CR 407)**

This change modified a UFSAR table and associated text to reflect bounding values for residual heat removal system pressure and temperature during recirculation operation. The values bound UFSAR Chapter 14 analysis values but are not tied to the Chapter 14 analysis. The change represented an increase in these values from those currently specified. The change in residual heat removal system pressure and temperature provided significant margin with respect to the normal operating and design values for these parameters. The significant margin with respect to the residual heat removal system normal operating and design values continued to support the conservative nature of the assumed leakage rates for residual heat removal leakage outside containment used in the analysis. No unreviewed safety question was involved

**99-044-SP      R1      Radiation Monitors R-41/42 Delta-T Alarm**

The Delta –T alarm warning of possible increased moisture in the sample for radiation monitors R-41/42 has been programmed to suppress a nuisance alarm that occurs during

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the summer months. The heat trace setpoint temperature was also reduced. No unreviewed safety question was involved

**99-055-TM      R0      Heat Lamps for RWST Level Enclosure**

The refueling water storage tank level enclosure for LT-920 experienced thermal stratification that caused a low temperature alarm. Two heat lamps were provided for the enclosure that had no interface with the RWST. The heat was sufficient to clear the alarm but insufficient to cause deleterious effects. No unreviewed safety question was involved.

**99-065-MM      R0      NYPA/Con Edison Joint Effort on Water Treatment Plant**

The existing water factory at Indian Point Unit No. 2 was aging and required a substantial cost to maintain. The modification supported the installation of a Joint NYPA/Con Edison water treatment plant. The new the NYPA/Con Edison joint water treatment plant is located near the discharge channel, under the Indian Point Unit No. 2/Indian Point Unit No. 1 bridge and away from any Indian Point Unit No. 2 safety-related equipment. The NYPA/Con Edison joint water treatment plant is a non-safety system, the same as the Indian Point Unit No. 2 water factory it replaces. The operation of the NYPA/Con Ed joint water treatment plant has the same negligible safety-related effects on the plant as the old Indian Point Unit No. 2 water factory. Refer also to Safety Evaluation 99-291-MM. No unreviewed safety question was involved

**99-083-EV      R0      Revise UFSAR Sections 6.7.1.2.8 and 9.2.2.3 to Delete Charging Pump High Speed Alarms (CR 421)**

UFSAR Sections 6.7.1.2.8 and 9.2.2.3 were revised to replace the statements which indicate that if the charging pump reaches the high speed limit, an alarm is actuated and a second pump is manually started, with statements which indicate that if the charging pump at maximum speed is unable to maintain the required charging flow rate, a pressurizer low level alarm actuates and a second charging pump may be started. A high speed charging pump alarm was not provided, and it was determined that this alarm is not needed. No unreviewed safety question was involved

**99-084-TM      R0      Block Auto Containment Isolation and Evacuation Alarm Function from R41/42**

Radiation monitors R41 and R42 were out of service. As a result, failure of R41/42 would prevent the normal daily activity of venting containment by closing containment purge and pressure relief valves, and would energize containment isolation relays V1 and V2. Venting of containment is required to be performed whenever containment pressure reaches a set value of approx. 2psi. Failure of R41/42 would also actuate the VC Evacuation horn and alarm. Temporary facility change 99-040 was developed to preclude these automatic actions from occurring and disrupting the containment venting function. This temporary facility change blocked the automatic actions of R41 and R42. While R41 and R42 are out of service, grab samples of the containment atmosphere were obtained

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and analyzed on a daily basis per Technical Specification.. Chemistry procedure IPC-S-012-S Addenda 8.3 and 8.4 were modified to meet this requirement. No unreviewed safety question was involved.

**99-091-MM    R0    Replacement of Auxiliary Feedwater Control Valves**

This modification replaced the eight auxiliary feedwater control valves with valves of an approved design with a balanced plug to equalize pressure at the top and bottom of the plug, and reduce the force required to open or close the valve. The valve trim was also revised. The replacement valves were designed, installed, and tested per the same pertinent codes, standards and station procedures as the valves that were replaced. No unreviewed safety question was involved.

**99-095-TM    R0    Installation of Temporary Air Circulation Fans for the Central Control Room Tracer-Gas In-Leakage Air Test**

This temporary modification installed temporary recirculation fans in the central control room on the floor and above the transite ceiling. This modification was in support of the installation of temporary air recirculation fans for the central control room tracer gas in-leakage air test to ensure adequate air/gas mixture. Fans were appropriately restrained. No unreviewed safety question was involved.

**99-106-PR    R2    Central Control Room Mode 2 Unfiltered In Leakage Determination and Additional Tests**

This test collected data for air in-leakage into the central control room during system operation that mimics proposed design changes in FEX-96-11874-E. A temporary modification was installed to prevent recirculation. Tracer gas was injected inside the central control room boundary and unfiltered air leakage calculated. Limiting conditions of operation were observed during this test. No unreviewed safety question was involved

**99-110-GM    R0    Restraints Improvements for Mechanical, Electrical and Transient Equipment.**

This generic modification replaced degraded restraint parts and/or improved the design of piping restraints. Unnecessary restraints were removed and new supports were installed as required. This modification procedure included the evaluation of transient materials and interim installations. Modification Procedure MFI-01408-88M was previously approved with safety evaluation NS-2-88-008 (four revisions). Modification procedure MFI-01048-88M was revised to update the withdrawal date of the modification and to change the reference of the snubber list from Technical Specification Table 3.12-1 to test and performance procedure TP-SQ11.035. There was no change of intent to the procedure. No unreviewed safety question was involved

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**99-111-MM      R0      Replacement of Level Instrumentation for Boric Acid Storage Tanks 21 and 22**

The nitrogen bubbler level measuring system for boric acid storage tanks 21BAT and 22BAT was replaced with a non-intrusive microwave measuring system to eliminate level errors due to plugging of the instrument tubing by boric acid crystallization. The new instrument was installed on the tank manway flange cover. No new failure modes were introduced. No unreviewed safety question was involved

**99-115-MM      R0      21-26 Traveling Water Screen Level Probes**

This modification replaced the obsolete Montedoro-Whitney upstream and downstream level probes on 21 -26 travelling water screens with Druck Inc. Model PTX-1830 level probes. This was a replacement-in-kind of the non-safety related level probes. No unreviewed safety question was involved.

**99-117-GM      R0      Solenoid Valve Replacement (Generic)**

This generic modification enabled the replacement of solenoid operated valves (SOVs) throughout Indian Point Unit No. 2 with SOVs that are equivalent in function. The replacement SOVs met or exceeded the design requirements of the SOVs that were replaced. Therefore, there were no new failure modes or adverse impacts on the ability of an SOV or interfacing system to perform its function. No unreviewed safety question was involved

**99-122-GM      R0      Generic Motor Operated Valve Modification**

These modifications were improvements to motor operated valves to bring them into conformance with the requirements of NRC Generic Letters 89-10 and 96-05. No unreviewed safety question was involved

**99-133-TM      R0      22 RCS Hot Leg Temperature Input to Subcooling Margin Monitor - Remove from Scan**

This temporary modification removed RCS loop 22 input to the SAT TEMPERATURE APPROACHED ALARM scan. Only the alarm function was altered. The subcooling monitor function remained operable. No unreviewed safety question was involved

**99-134-EV      R0      Leading Edge Flowmeter Software Modification for Y2K**

Leading edge flowmeter software revision M was installed for Y2K compliance. The new software did not impact the accuracy of feedwater flow measurement. No unreviewed safety question was involved



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**99-136-TM      R0      Turbine Supervisory Instrument Auxiliary Trip Defeat Switch**

This temporary modification placed the turbine supervisory instrument auxiliary trip defeat switch in the defeat position to allow troubleshooting of the low pressure rotor differential expansion circuit. The trips defeated were not safety-related trips. The associated alarms were not defeated and the central control room operator was available to take necessary manual actions on receipt of an alarm. No unreviewed safety question was involved.

**99-148-EV      R0      Correction of UFSAR Section 7.7.4.1, "Central Control Room (CCR) Communication Facilities (CR 361)"**

UFSAR Section 7.7.4.1, "Central Control Room (CCR) Communication Facilities" was revised to correct the description of the central control room communication facilities available to the operator. Previous modifications/upgrades of the CCR communication facilities had not been described in the UFSAR. No unreviewed safety question was involved.

**99-153-EV      R0      Correction of UFSAR Section 6.7.1.2.12, System Design and Operation for Service Water System Leakage Detection (CR 390)**

UFSAR Section 6.7.1.2.12 was revised to correct the description of potential leakage from service water piping inside containment. The UFSAR was revised to delete unnecessary action of stopping the containment recirculation fans and to include the method for detecting service water leakage from cooling coils using weir level transmitters. No unreviewed safety question was involved.

**99-160-EV      R1      Change to UFSAR Section 7.2.2.9**

This activity changed UFSAR Section 7.2.2.9 to indicate the design requirements applicable to the physical separation of the reactor protection logic racks within the central control room. The safety evaluation provided the basis that the single failure criteria and IEEE-279-1968 are still met. The analysis concluded that there were no credible failure modes due to the existing wiring configuration that would prevent a protective action when required. The design basis for non-safety related circuits has been maintained. No unreviewed safety question was involved.

**99-167-PR      R0      Nuclear Instrumentation System Single Point Calibration Method**

The single point calibration method is a refined calculation methodology for generating nuclear instrumentation system power range detector axial flux differential calibration data. This new methodology eliminated the need to perturb the plant by inducing an axial xenon oscillation. Analyses performed by Westinghouse and independent calculations performed by Indian Point Unit No. 2 Reactor and Fuel Engineering personnel have demonstrated that the single point calibration method produced nuclear instrumentation

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system axial flux differential calibration data equivalent to or conservative with respect to calibration data generated using the conventional multi-point calibration method. No unreviewed safety question was involved

**99-170-PR      R0      Removing Feedwater Bypass Line (FCV-447L) from Service and Placing Feedwater Bypass Line (FCV-447L) in Service**

This temporary procedure change provided guidance for removing feedwater bypass line (FCV-447L) from service and placing it back in service to allow FCV-447L to be calibrated. Safety functions were unaffected while the bypass line was out of service. No unreviewed safety question was involved

**99-178-PR      R0      Emergency Operating Procedure Changes Revision 31**

The emergency operating procedures were revised to be consistent with the plant design basis and improve operator response to design basis accidents and beyond design basis accidents. The simulator was used to validate the time to perform the transfer to cold leg recirculation and the time for SI termination during a steam generator tube rupture. No unreviewed safety question was involved

**99-190-MD      R0      Power Operated Relief Valve Nitrogen Accumulator Upgrade**

This change increased the capacity of the nitrogen supply accumulators for power operated relief valves PCV-455C and PCV-456, in order to meet the design basis of supporting a minimum of 10 minutes of power operated relief valve operation for the overpressure protection system upon loss of normal nitrogen supply. The low-pressure setpoint was also raised to provide earlier detection of a low pressure condition. The modification is in response to LER 98-006-01 "Potential for Insufficient Capacity of Nitrogen for Overpressure Protection System". No unreviewed safety question was involved

**99-203-MD      R0      Replacement of Electro-Pneumatic Controllers in Electric Tunnel**

This modification replaced the existing electro-pneumatic temperature controllers for starting electric tunnel exhaust fans 21 and 22 with electronic units. Separation and redundancy were maintained. Pneumatic failure modes were eliminated. No unreviewed safety question was involved

**99-205-TM      R0      Main Generator Hydrogen Cooler Vent Plug**

This temporary repair installed a plumbers plug into the service water leak in the vent line from the south cooler on the main generator. This temporary repair was only in place to stop leakage into unwanted areas while permanent repairs were made. No unreviewed safety question was involved

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**99-208-TM      R0      Main Generator Hydrogen Cooler #22 Vent Header with Fire Protection Water**

This temporary modification installed a hose to the main generator hydrogen cooler #22 vent header from the fire protection system to flush mud from the system. The connection was continuously manned and was of short duration. During this time the hydrogen cooler remained in service. No unreviewed safety question was involved

**99-212-PR      R0      Revision 13 of PC-R19**

Revision 13 of procedure PC-R19 was used to re-scale the turbine first-stage pressure computers PM-412C&D and the high/low limiters PM-412G&F in accordance with calculation FIX-00046-00. The re-scaling of these devices increased the adjustment span for the high steam flow bistables to provide a means to maintain the setpoint within administrative limits, and correct setpoint deficiencies. Calibration could be performed online reducing outage time. No unreviewed safety question was involved

**99-219-PR      R0      P-MT-180**

The continuity of the reactor coolant pump underfrequency trip relays were verified in P-MT-180. The continuity of these relays had not previously adequately been demonstrated during reactor trip logic surveillance testing. The underfrequency relays leads were lifted one at a time during shutdown and then re-landed and double verified. No unreviewed safety question was involved

**99-221-TM      0      Contingency Alternate Power Supply to 24 Battery Charger**

With the plant less than 350 degrees F a contingency power supply was made available while the power supply to 24 battery charger was being supplied from the 23 EDG. This contingency was provided while an investigation into the loss of power to the 24 battery charger event was performed. Power was supplied through spare cubicle 6A on MCC-26C. This change assumed the failure of the 23 EDG and restored the plant to a less challenging condition. No unreviewed safety question was involved

**99-223-MM      R0      Containment Recirculation Pumps Replacement**

The two existing single suction recirculation pumps were replaced with dual suction pumps that require less net positive suction head. The existing motors were reused. Net positive suction head margin was increased. Increased electrical loading was found to be satisfactory. The pump and motor were considered "heavy loads". Therefore, "heavy loads" guidance from NUREG-0612 was followed. No unreviewed safety question was involved

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**99-224-MM      R0      Auxiliary Feedwater Pump 21 & 23 Blackout Timer Changes**

The modification replaced the existing electro-pneumatic type Agastat timing relay with a solid state type timing relay for auxiliary feedwater pumps #21 and 23 that performed the function of pump auto start following a Unit trip with blackout with no safety injection condition. The setpoint was changed from 12 to 20 seconds. The new relays have increased accuracy and less drift than the Agastat relays. This modification improved timer accuracy and ensured the AFW pumps will start after other pump loaded on to the diesel generator bus have reached steady state conditions. This precluded inadvertent tripping of the diesel generator breaker due to motor starting in-rush current. No unreviewed safety question was involved

**99-225-TM      R0      Fire Hose to Demineralizer Truck to Indian Point Unit No. 2  
Condensate Storage Tank Supply Line at CD-627**

In order to maintain sufficient demineralized water to units 2 and 3 during an extended outage at hot shutdown, fire protection water was diverted to a portable demineralizer, and the demineralizer output was supplied to the Indian Point Unit No. 2 condensate storage tank. The total diversion from the fire protection system was determined to be within analyzed limits that assured the fire protection system capability is maintained. No unreviewed safety question was involved

**99-227-TM      R0      RCP Lube Oil Reservoir Fill Extension**

This temporary modification provided a temporary lube oil extension hose from the 24 RCP lower bearing reservoir to a location of reduced radiation fields. The hose was seismically restrained, and administrative controls were in place to limit a possible oil spill to 1.5 gallons. A 1.5 gallon spill is less than a transient fire load. No unreviewed safety question was involved.

**99-229-TM      R0      Online Boost Charging of Cell #2 of 125 VDC Battery No. 24**

Cell #2 of the 24 battery received an individual equalizer charge while connected to the battery as allowed by IEEE Standard 450-1995 Section 4.4.2. Individual cell charging was limited to 48 hours and RCS temperature was less than 350 degrees F. No unreviewed safety question was involved.

**99-231-MD      R0      Recalibration of Degraded Voltage Relays**

This modification re-calibrated the pick-up and drop-out voltage setpoints of the ABB 27N degraded voltage relays to reduce the probability of unnecessary transfers to the onsite emergency power system. The re-calibrations were performed with the RCS temperature below 350 degrees F. Only one degraded voltage relay was removed and re-calibrated at a time. A jumper was used to place the relay in the tripped position prior to relay removal for calibration and the jumper was removed when the relay was returned to operation. No unreviewed safety question was involved.

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**99-234-MM      R0      Generator Stator Water Cooler #21A and #22B Bundle Replacement**

This modification to the stator cooling water system replaced, in the stator cooling water cooling heat exchangers, the existing CuNi tube bundles with ones fabricated from titanium; and replaced the existing carbon steel channel heads, carbon steel return heads and the associated seal mechanism with ones fabricated from titanium. In addition, this modification added tap connections for the future addition of the stator leak monitoring system. The stator leak monitoring system cannot be installed while the stator cooling water system is on-line. Prior to this modification, there were no isolatable taps to permit installation of the stator leak monitoring system. The installation of the tap connections in this modification permitted the future installation of stator leak monitoring system while the stator water cooling system is on-line. No unreviewed safety question was involved

**99-241-TM      R0      Temporary Replacement of the 480 Volt 21 Switchgear Breaker (52/MCC4A) with MCC 210**

In order to conduct testing on 480 volt switchgear breaker 52/MCC4A (a 1200 amp rated breaker) it was temporarily replaced with breaker 52/MCC10 (a 600 amp rated breaker). Loads connected to MCC-24 and MCC-24A were administratively limited to less than 400 amps. This modification was conducted with RCS temperature less than 350 degrees F. No unreviewed safety question was involved

**99-244-TM      R0      24Control Rod Drive Mechanism Fan Back Draft Damper Removal**

This change addressed the removal of a damaged back draft damper downstream of 24 control rod drive mechanism fan via a temporary facility change. The purpose of the back draft damper is to prevent reverse air flow while one fan is idle and the others are running. Attempting to start a control rod drive mechanism fan while the fan wheel is in reverse motion due to reverse air flow, could result in a high starting current draw and motor trip. To start a fan without a damper required either that the discharge be manually blocked (vapor containment entry) and once the reverse rotation is minimized or stopped, the fan is then started, or if all of the fans are secured, the fan(s) without a back draft damper is(are) started first. This temporary facility change seismically restrained or removed from containment the damaged back draft damper and required a temporary facility change to require the fans to be secured and the two fans without back draft dampers to be started first within 10 seconds of each other. Precautions regarding extended operation with fan 23 or 24 not in service were addressed in the revised operating procedure. No unreviewed safety question was involved.

**99-245-TM      R0      Core Exit Thermocouples H10 and R10- Remove From Scan**

There exists a discrepancy between channel A and B of the CETMS SAT TEMPERATURE MARGIN. Channel A reads conservative at the normal value of 25°F

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while channel B reads approximately 42°F. The discrepancy presents a problem to the central control room operators as to which is the correct value. In order to eliminate the discrepancy between channel A and B, in channel B, quadrant 3, core exit thermocouples H10 and R10 were removed from scan in accordance with AOI 28.22. This increased the standard deviation in the conservative (towards higher temperatures and lower subcooling margin readings) direction for Channel B, thereby reducing the discrepancy between Channel A and B. No unreviewed safety question was involved

**99-250-SP      R0      Delta-T Deviation Alarm Setpoint Change**

This modification revised the set point for the delta-T deviation alarm from 6 degrees F to 8 degrees F for loop 21 in order to reduce the occurrence of a nuisance alarm. The normal temperature differential for loop 21 resulted in nuisance alarms, and analysis has shown that the normal temperature differential is acceptable. The modification also declassified the delta-T deviation alarm bistables for the four loops. The bistables are isolated from the circuitry and serve only an alarm function. No unreviewed safety question was involved

**99-251-SP      R0      Tavg. Deviation Setpoint Change**

The purpose of this change was to increase the Tavg. deviation alarm setpoint for RCS loop 22. The increased deviation eliminated nuisance alarms based on the RCS loops Tavg. temperature differences. RCS loop 22 normally operates at a higher temperature. There is no automatic protective actions associated with this setpoint, except the control function to stop rod insertion. Failure of this device does not impact any safety related functions. No unreviewed safety question was involved

**99-253-EV      R0      Evaluation of Condenser Sextant Sampling without Chloride Analyzers**

The condenser sextant chloride analyzers have been removed. Alternate and /or redundant continuous on-line monitoring equipment and manual sampling is used. Procedure changes have been implemented to provide indication of salt contamination of the condenser hotwells. Equivalent levels of protection for salt water intrusion are provided. No unreviewed safety question was involved.

**99-254-SP      R0      Recalibration of Undervoltage Relay Pick-Up Voltage on 6.9 kv Busses #1, #2, #3, & #4**

This modification re-calibrated the ABB 27N under voltage relays on 6.9 kV buses #1, #2, #3, & #4 drop-out and pick-up values. The drop-out values were unchanged, however the pick-up values had not been previously specified. Relays were re-calibrated one at a time. This modification ensures that relays will not result in a reactor trip for transient voltage dips prematurely. No unreviewed safety question was involved.

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**99-259-PR      R0      Isolate Charging with Letdown in Service**

This temporary procedure change allowed the operation of a charging pump to operate with its charging line isolated while keeping letdown and seal injection in service. This change was implemented while the plant was less than 350 degrees F to allow the repair of a leak on a drain for charging pump 23. Technical specification limits were met. No unreviewed safety question was involved.

**99-261-EV      R0      Evaluation of the 2A to 3A Tie Breaker in a Near Connected Position for UFSAR Impact**

The physical condition of the 2A to 3A tie breaker was evaluated. The breaker was incapable of being racked out which is specified in the Con Edison response to generic letter 91-11 and the UFSAR to preclude inadvertent closure. The breaker is mechanically kept in a trip free condition and the control power fuses are maintained off. The breaker position is seismically restrained. No unreviewed safety question was involved

**99-267-MD      R0      Accumulator Level Setpoint Change**

This modification implemented new high and low level alarm setpoints for the safety injection accumulators based upon Technical Specification amendment 188. The new setpoints eliminated the need for current repeaters, which were removed. The widening of the setpoints and removal of the current repeaters provided additional margin to the high and low level limits. No unreviewed safety question was involved.

**99-283-TR      R0      Temporary Leak Repair of Body to Bonnet Leak on MS-1-24 Using Leak Sealant**

This temporary repair was used to correct a body to bonnet steam leak on 24 main steam isolation valve. The repair was accomplished by replacing the existing flange nuts with injection valve cap nuts, and the injection of sealant through the cap nuts. This was used to fill a void between the existing gasket and wire wrap to eliminate the leak. The amount of sealant used was controlled, and the repair did not adversely affect the ability of MS-1-24 to close as required. The materials used were compatible with the existing valve body and gasket. The seismic qualification of the system and components was unaffected. No unreviewed safety question was involved.

**99-291-MM      R1      NYPA/Con Edison Joint Effort on Water Treatment Plant (Part 2)**

The existing water factory at Indian Point Unit No. 2 was aging and required a substantial cost to maintain. The modification supported the installation of a Joint NYPA/Con Edison water treatment plant. The new the NYPA/Con Edison joint water treatment plant is located near the discharge channel, under the Indian Point Unit No. 2/Indian Point Unit No. 1 bridge and away from any Indian Point Unit No. 2 safety-related equipment. The NYPA/Con Edison joint water treatment plant is a non-safety system, the same as the

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Indian Point Unit No. 2 water factory it replaces. The operation of the NYPA/Con Edison joint water treatment plant has the same negligible safety-related effects on the plant as the old Indian Point Unit No. 2 water factory. Refer also to Safety Evaluation 99-065-MM. No unreviewed safety question was involved

**99-293-TR      R0      Temporary Leak Repair for Body to Bonnet Gasket Leak on MS-1-24 using Leak Sealant**

This temporary repair of a body to bonnet leak replaced existing flange nuts one-at-a-time on MS-1-24 with injection valve cap nuts, installed a wire wrap on the outside of the studs, and filled the void between the existing gasket and the wire wrap per procedure MMS-C-010-A. This repair was in addition to the repair made by SE 99-283-TR which did not eliminate the steam leak. No unreviewed safety question was involved.

**99-296-PR      R0      Control of Heavy Loads/Post Accident Containment Ventilation Concrete Cover Lift**

Maintenance step list #1 "Remove Cover to Perform PTR58A" was written to remove and replace the post accident containment vent system bunker cover to allow maintenance activities on equipment inside the bunker. NUREG 0612 guidance concerning "heavy loads" was followed to the maximum extent possible. No unreviewed safety question was involved.

**99-297-EV      R0      UFSAR Organization Chart Update**

Organizational changes and title changes were made. Functional reporting lines were revised however, no functional requirements were deleted. No unreviewed safety question was involved.

**99-313-TM      R0      Monitoring of Channel 4 Delta-T, Tavg, Overpower Delta-T, and Overtemperature Delta-T Signals**

A recorder was installed downstream of existing class 1E isolation devices to monitor channel 4 delta-T, Tavg, overpower delta-T, and overtemperature delta-T signals in order to monitor for abnormalities which had resulted in spurious signals. The recorder was restrained to assure no movement during a seismic event. No unreviewed safety question was involved

**99-315-PR      R0      Removal of Radiation Monitor R-43's Particulate High Range Requirement**

Test procedures PC-EM31, PR-Q83 and PT-M98 have been revised to eliminate the requirement for the R-43 plant vent radiation monitor high range particulate channel. The high range particulate channel performed no protection, control or alarm function, nor was it required to meet any technical specification or regulatory commitment. UFSAR Table 11.2-7 was revised accordingly No unreviewed safety question was involved



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**99-316-PR      R0      Repair of Reinforced Concrete Vapor Containment Wall in Electrical Penetration Tunnel**

Epoxy resin was injected into the vapor containment reinforced concrete wall to repair non-structural cracks and delaminations. Repairs were performed per Section XI of the 1992 ASME Boiler and Pressure Vessel code. Non-destructive testing (impact sounding and impact echo techniques) was used to determine the extent and depth of cracks in the wall before and after the repairs. Containment design requirements, accident analysis assumptions and accident results are unaffected by these non-structural repairs. No unreviewed safety question was involved.

**99-334-TM      R0      Temporary Electric Space Heaters**

Temporary space heaters were installed throughout the plant during cold weather conditions. The heaters were seismically restrained, not installed near combustibles, powered from normal service receptacles, and located to ensure that the heat does not adversely affect component qualification or operation. No unreviewed safety question was involved.

**99-339-MD      R1      Replacement of Gas Turbine #1 Transformer**

This modification replaced the existing gas turbine #1 transformer. During the replacement, a direct 6.9kV tie between Indian Point Unit No. 2 and Indian Point Unit No. 1 was in place to ensure an alternate 13.8 kV source. This temporary tie was removed upon completion of the replacement modification. No permanent functional changes were made. No unreviewed safety question was involved.

**99-343-MM      R0      Permanent Work Control Center Installation**

This modification made the work control center a permanent facility. The work control center was originally constructed as a temporary facility. It is located on the 53 ft. elevation of the Indian Point Unit No. 1 turbine building. It includes a fire sprinkler system whose flow rate is well within the capacity of the fire water system. The combustible loading associated with the work control center is low, as defined by the Fire Protection Program Plan. The work control center does not impact any Appendix R safe shutdown equipment. Electrical loads are powered from a Indian Point Unit No. 1 non-Class A 480 volt power supply. No unreviewed safety question was involved.

**99-347-SP      R0      RCS Flow Trip Setpoint Determination**

The RCS low flow trip setpoint was recalculated in accordance with procedure RFE-S-16.015 due to changes in power distribution and its effect on Tcold. No unreviewed safety question was involved.

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**99-375-MM      R0      IP-2 One Stop Shop Building Installation**

This modification installed a one-stop-shop facility on the 53 ft. elevation of the Indian Point Unit No. 1 turbine building. It includes a fire sprinkler system whose flow rate is well within the capacity of the fire water system. The combustible loading associated with the one-stop-shop is low, as defined by the Fire Protection Program Plan. The one-stop-shop does not impact any Appendix R safe shutdown equipment. Electrical loads are powered from a Indian Point Unit No. 1 non-Class A 480 volt power supply. No unreviewed safety question was involved

**00-009-TM      R0      Temporary Setpoint Change RCP No. 1 Seal Return Low Flow Alarm**

The setpoints associated with 23RCP and 24RCP were temporarily changed to preclude spurious alarms, which could have masked valid low and high flow alarms for the RCPs. The revised setpoint was slightly below the analyzed minimum that is indicative of a RCP seal failure. A supplemental log of 23RCP and 24RCP flow was maintained by the central control room operators, which provided adequate flow monitoring. No unreviewed safety question was involved

**00-021-PR      R0      Change Minimum Containment Temperature to 80F**

This change revised the minimum containment temperature referenced in Section 1.3.7 of the UFSAR from 90F to 80F to conform to WCAP-12945-P-A "Code Qualification Document for Best Estimate LOCA Analysis". This WCAP is a reference in Section 6.9.1.9 of the Technical Specifications. No unreviewed safety question was involved

**00-022-MM      R0      Hotwell Level Piping Upgrade**

This modification replaced hotwell level transmitter, LT-1130 and indicator LI-1130 with state of the art digital equipment. ½" tubing to LT-1130 was replaced with ¾" tubing and properly sloped. The flow sight glass and condensing pot were replaced. The condensing pot was connected using 1" pipe and 1" valve to the 2" pipe leading to the condenser. This ensures self-venting and filling. The central control room devices were mounted seismically. Hotwell level indication function was unchanged. Safety functions were unaffected. No unreviewed safety question was involved.

**00-028-TM      R0      Core Exit Thermocouples During Reduced Inventory with Bedspring Disconnected**

This temporary modification restores redundant central control room indication of core exit temperature with the reactor shut down, the "bedspring" removed for refueling, and the primary system at reduced inventory. The modification consists of connecting two cables (one for each channel) between the bedspring core exit thermocouple connector and the reactor vessel head thermocouple connector. The cable and connector assemblies used were the same material as the permanently installed cables and connectors, and there

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were no increases in the consequences of equipment malfunctions previously evaluated. The core exit thermocouple monitoring system is a seismically installed system, and this temporary modification did not degrade the seismic capability of the system. No unreviewed safety question was involved.

**00-030-TM      R0      Control Rod Drive Mechanism Power Supply to Duraline Units**

Duraline units were temporarily connected to the control rod drive cooling fan motor power supply inside the crane wall on the 95" elevation. This temporary modification was in place only when the RCS was less than 350F and the fan motor power supply was not required. Electrical protection devices for the affected MCCs were not affected by the temporary modification. Power cable was appropriately routed and restrained. No unreviewed safety question was involved

**00-039-TM      R0      Remove the Low Pressure Input to the Central Control Room Category Alarm from the 24, 25, 26 Service Water Headers**

This temporary modification removed the low pressure input to the central control room category alarm from the 24, 25, 26 service water headers during an outage of the 24, 25, and 26 service water pumps during cold shutdown. This ensured that abnormal conditions on the operating service water header would be annunciated and not masked by low pressure on the non-operational header. No unreviewed safety question was involved

**00-040-TM      R0      Primary Water and Instrument Air Sources for B & C and Hydrostatic Testing**

Temporary connections were made to primary water and instrument air for B&C and hydrostatic testing during cold shutdown. The B&C and hydrostatic test rigs were continuously manned anytime the temporary connections were in service. All the hoses, tubing and fittings used for B&C testing and hydrostatic testing were rated appropriately for the applications. The test rigs, hoses and tubing were located and adequately restrained to prevent any interaction with surrounding equipment. At the conclusion of testing, the hoses/tubing were removed and the affected primary water and instrument air vents and drains were restored to their normal configuration. The operability of the primary water and instrument air systems and systems and components that are supported by these Systems were not affected. No unreviewed safety question was involved

**00-043-PR      R0      Measurement of Boron-10 Area Density of Boraflex in Pressurized Water Reactor Spent Fuel Storage Racks**

These procedures assemble the Boron-10 area density meter and provided directions for measuring Boron-10 in the spent fuel storage racks. The weight of the equipment was much less than the weight of analyzed drops. Precautions were provided to ensure there are empty cells between the fuel and the neutron source. The effects of rinsing the equipment was evaluated. No unreviewed safety question was involved

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**00-049-TM      R0      Block the Reactor Trip to the Turbine Trip Circuit to Reset the Turbine Trips**

This temporary modification defeated the turbine trip solenoids and low auto stop oil trip relays during hot shutdown to permit turbine valve testing with the reactor trip breakers open. These trips were not required when the reactor was not critical. No unreviewed safety question was involved

**00-058-TM      R0      Bypass SOV 1258 to Maintain LCV-1158 Open to Fill the Condenser Hotwells**

A temporary bypass was installed around SOV-1258 to maintain LCV-1158 open to allow draining the condensate storage tank during cold shutdown. During normal operation, LCV-1158 would automatically close if condensate storage tank level drops below 19 ft. to prevent from dropping below the technical specification minimum. Closure of LCV-1158 isolated the tank outlet for all systems supplied condensate, except for auxiliary feedwater pump suction. During cold shutdown this condensate storage tank minimum volume requirement is not applicable. No unreviewed safety question was involved.

**00-072-SP      R0      Nuclear Instrumentation System Source Range Set Point**

The source range reactor trip setpoint was reduced from 5E5 cps to 2.3E5 cps to account for a maximum central control room temperature of 120F and to prevent setpoint instrumentation loop amplifier saturation. The risk of an inadvertent trip was increased by reducing the margin between P-6 (High Source Range Flux Trip Permissive) and the Source Range High Flux Trip, however the increase is well within the uncertainty associated with the probability of core damage frequency and is considered acceptable. The reactor startup procedure contains procedural limits and conditional instructions regarding the blocking of P-6. No unreviewed safety question was involved.

**00-073-MM      R1      Indian Point Steam Generator Snubber Reduction with Replacement Series 44F Steam Generators**

This modification disconnected/removed 16 steam generator support structure snubbers as part of the SGR. The mounting hardware was not removed and was abandoned in place. The remaining snubbers and restraints provide adequate support for all components within the RCS for all design basis conditions. The potential changes in reactor coolant loop loadings as a result of the replacement steam generators have been reconciled with the Leak Before Break criteria. No unreviewed safety question was involved.

**00-081-TM      R1      MCC27 Supply to EPV21 (R41, R42, R43, R44)**

Temporary facility change 2000-127 provided temporary power to the radiation monitors 41/42 and 43/44 from MCC 27 when MCC 26A was out of service for maintenance during cold shutdown. These radiation monitors provide inputs to the containment ventilation isolation signal to close the containment purge and pressurization relief isolation valves

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upon high radiation condition. These monitors are normally fed from safety related power supplies from MCC 26A, cubicle 1D, which is powered from the EDGs during a loss of offsite power. MCC27 normally supplies non-essential loads and is stripped from its switchgear bus upon a loss of offsite power. In the cold shutdown mode, the majority of the loads on MCC27 were de-energized so that the addition of the radiation monitors did not cause excessive bus loading. The cables were routed and supported in manner that did not affect other cables, overload cable trays or seismically challenge plant structures or supports. There were no new failure modes created by this change that could have degraded any safety-related system. A loss of offsite power would have de-energized both MCC26A and MCC27 and the intermittent loss of power to the radiation monitoring relays would have initiated the containment ventilation isolation. The difference with MCC27 is that it would have to been re-energized onto the emergency bus manually. In the cold shutdown mode, there would be sufficient time for the recovery of containment purge. No unreviewed safety question was involved.

**00-097-TM      R0      Temporary Cable Connecting 125-V DC Power Panels 23 & 24**

This temporary modification cross-connected 125VDC power panel 23 and 24 during maintenance to the associated battery chargers and plant conditions at or below hot shutdown. Cable was run to spare 100 amp circuit breakers on each panel. No unreviewed safety question was involved.

**00-099-TM      R0      Alternate Power Feed to 21 and 22 Spent Fuel cooling Pumps**

This temporary modification provided cabling for the contingency of spent fuel pool cooling pump failure during maintenance of the de-energized power supply for the non-operating spent fuel pool cooling pump to provide backup power to either spent fuel pool cooling pump. This provided additional fuel pool cooling safety margin. No unreviewed safety question was involved.

**00-113-TM      R0      Steam Generator Secondary Side Hydrogen Purging**

This temporary modification provided the means to purge hydrogen gas from the secondary side of any steam generator. Nitrogen was provided from the blowdown lines normal sparging system and venting was via a hose from the steam generator outlet steam piping to the pressurizer relief tank. No unreviewed safety question was involved

**00-119-TM      R0      Pressurizer Manway RCS Vent Foreign Material Exclusion Cover**

This temporary modification installed a pressurizer manway RCS vent/foreign material exclusion cover to support the use of nozzle dams during mid-loop operation. The required vent area was provided to prevent nozzle dam over-pressurization for plant conditions seven days after shutdown. The foreign material exclusion cover was installed prior to nozzle dam installation, and removed after nozzle dam removal. No unreviewed safety question was involved

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**00-123-MD      R2      Replacement of Condenser Neck Feedwater Heater Tube Bundles**

As part of an ongoing program to remove copper bearing alloy material from the secondary system, the six condenser neck feedwater heaters tube bundles were replaced with stainless steel tubes. In addition, the gland steam condenser was replaced with titanium tubes. The presence of copper oxide has been found to accelerate the rate of steam generator support plate corrosion. Three instrument air isolation valves were also added. The changes did not impact any safety related equipment. The equipment was located in the Turbine Building. No unreviewed safety question was involved.

**00-124-TM      R0      Primary water for Flushing, Cleaning, etc. in Fuel Service Building**

This temporary modification utilized primary water in the fuel service building for flushing, cleaning, etc. during cold shutdown. Flushing and cleaning activities were continuously manned whenever a primary water hose connection was in service. Hoses were appropriately located and restrained. Upon completion of cleaning and flushing operations the temporary modification was cleared. No unreviewed safety question was involved.

**00-125-TR      R0      TOI-265, Draining RCS with Tube Leak in 24 S/G**

Temporary operating instruction 265, "Draining RCS with Tube Leak in 24 Steam Generator" was written as an adaptation of standard operating procedure 1.2, "Draining Reactor Coolant System" with additional precautions, limitations and steps due to a known tube leak in 24 steam generator. Additions were made to check RCS boron concentration and to address possible increased inventory. No unreviewed safety question was involved.

**00-126-TM      R0      Jumper Hose from FP-193 to the Suction of R-51 Sample Pump at #6632**

This temporary modification installed a jumper hose from the high pressure fire header to the suction of the liquid waste radiation monitor R-51 to flush the liquid waste discharge line. The pressure in the fire header was maintained higher than the liquid waste system and two check valves were installed to prevent back flow. The hose was located and restrained to prevent interaction with surrounding equipment. No unreviewed safety question was involved.

**00-131-MD      R0      Pressurizer Relief Tank and Reactor Coolant Drain Tank Vent and Sample Lines Improvement**

This modification improved the venting and sampling capability of the pressurizer relief tank and reactor coolant drain tank by improving line slopes, removing low points, adding drain traps for condensate collection, installing new tubing with isolation valves, and providing a nitrogen holding tank to provide sample line purge capabilities. These changes did not affect containment isolation boundaries of the affected systems and did

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not affect the ability to process gaseous and liquid waste. No unreviewed safety question was involved.

**00-180-TM      R0      Hose from FP-800, 801 and/or 684 for Turbine Building Flush and Clean**

This temporary modification installed three hoses at turbine building fire protection valves FP-800, 801 and 684 for flushing/cleaning heat exchangers in the turbine building. Hoses and fittings were rated appropriately for the application and were located and restrained to prevent interaction with other equipment. Fire pump capacity margin was maintained. No unreviewed safety question was involved

**00-181-MM      R0      Install Steam Generator Inspection Ports**

Inspection ports were installed in the shell and tube bundle wrapper for the examination of tubes and the uppermost tube support plate in steam generators 21 and 24. A closure mechanism, designed and fabricated in accordance with ASME III Class A requirements, was provided for the shell. A mechanical plug, which was designed such that it cannot become a loose part, was provided for the wrapper. Stresses within the steam generator vessel and shell closure remained within code allowables. Foreign material exclusion controls were utilized during cutting and installation. No unreviewed safety question was involved.

**00-182-PR      R0      Dynamic Rod Worth Measurement Technique**

Procedure RFE-S-16.032, Rev. 0 incorporated the dynamic rod worth measurement technique into the reload startup physics test program. The dynamic rod worth measurement technique was developed by Westinghouse to reduce critical path testing time required for performing integral bank rod worth measurements during hot zero power physics testing following a refueling. The methodology and supporting test data are described in WCAP-13360-P-A, "Westinghouse Dynamic Rod Worth Measurement" (January 1996). The Nuclear Regulatory Commission reviewed this document and issued a safety evaluation stating the acceptability of this methodology for two, three and four loop Westinghouse plants based on: (1) use of the technique, (2) application of the evaluation criteria, and (3) application of the remedial actions described in WCAP-13360-P-A. The procedure incorporated the measurement technique, evaluation criteria, and remedial actions described in the subject WCAP. No unreviewed safety question was involved.

**00-188-PR      R0      Load Test of Turbine Hall Crane**

A load test of the turbine hall crane was conducted utilizing water bags as the test weight. The test was conducted during cold shutdown and possible water bag failure scenarios were evaluated. A dam was placed in front of the 480V switchgear room door to restrict possible accumulation of water in the switchgear room. No unreviewed safety question was involved.

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**00-193-EV      R0      UFSAR Section 7.2.4.1.6 Change to Safeguards Panels SB-1 and SB-2 Protective Barrier Description**

UFSAR Section 7.2.4.1.6 was revised to accurately reflect the protective barriers installed in safeguards panels SB-1 and SB-2 to mitigate inadvertent contact or damage to control cables, fuses, relays and switches by personnel. The previous configuration did not include 12 inch high kick plates or rubberized expanded metal covers. The revised configuration used expanded metal covers although they are not rubberized based on their location on the outside of the panels. Switch terminals were provided with plastic "panduit wireway." These barriers were determined to be functionally equivalent to the description that was provided in the UFSAR. No unreviewed safety question was involved..

**00-196-PR      R0      Emergency Operating Procedure Revision 33**

This emergency operating procedure change revised the pressure setpoint for placing residual heat removal system in service with a non-adverse containment condition from 300 psig to 370 psig. This allows residual heat removal to be placed in service while the RCPs are providing forced flow. Steps for placing auxiliary spray in service was standardized throughout the emergency operating procedures to be in agreement with the standard operating procedure. No unreviewed safety question was involved..

**00-202-MD      R0      Retirement of Spent Fuel Pool Skimmer Loop**

This modification retired the existing spent fuel pool skimmer loop in place. The spent fuel pool skimmer loop is a flow loop, consisting of skimmers, strainer, pump, piping, valves, and a filter to prevent floating debris (>1/8" diameter) from accumulating on the surface of the spent fuel pool. This is not a safety-related function and is not an operating requirement. Retirement of spent fuel pool skimmer loop has no adverse impact on the safety-related function of the spent fuel pool cooling system. The piping and components upstream of skimmer isolation valve 724A were removed and capped at the cut end. This piping interfered with the required locations for storage of spent fuel assemblies in D74 and D75. Piping and components downstream of valve 724A, including the skimmer pump, strainer, filter, and valves were retired in place. No unreviewed safety question was involved.

**00-203-TM      R0      Flush of the Stator Water Cooling System**

In order to flush the stator cooling water heat exchangers the system was separated from the electric generator and the rectifiers. The system was operated with the generator supply and discharge headers connected via a hose to allow circulation of the system within its self. The existing 5 micron filter was utilized to remove solid particles. No unreviewed safety question was involved.



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**00-221-SP      R0      Pressure Requirement , Including Allowances for Normal Channel Accuracy for Placing Residual Heat Removal System into Service**

The setpoint for the residual heat removal high pressure permissive interlock bistables were revised from 450 psig to 365 psig. This revision was necessary to ensure residual heat removal system overpressurization does not occur when uncertainties are accounted for. No unreviewed safety question was involved.

**00-226-MM      R0      Upgrade RCP Oil Collection System**

This modification upgraded the existing RCP oil collection system to capture additional leakage that has been noted during operation and potential leakage from the oil collection valves. No unreviewed safety question was involved.

**00-242-PR      R0      Safety Assessment System Adverse Containment Conditions Flag Reset**

Two safety assessment system displays have been implemented. These displays provided the operator with the ability to reset the adverse containment conditions flag. The original logic did not include logic to return the flag to normal and was made by programmers at the request of the control room staff. The revised operator screen interface installed by this modification allowed the control room staff to reset the flag directly. This was a human factors enhancement. The displays installed by this package were independent of other SAS operator interface displays. No unreviewed safety question was involved.

**00-243-PR      R0      Emergency Data Display System/Emergency Response Data System**

The emergency data display system was installed to provide data to emergency personnel in a more timely and accurate fashion. The system consists of two servers, six personal computers, six large plasma displays, and communications and local web software. One of the servers is located in the Simulator and is used to provide scenario data during planned emergency drills. The second server is located in the technical support center and is used to provide live data from the safety assessment system during an actual emergency. A manual input software interface is used by central control room personnel for parameters not monitored by the safety assessment system. The emergency response data system software was migrated from its old DOS environment to run in Windows in this system. No unreviewed safety question was involved.

**00-260-EV      R0      RCS Refueling Boron Concentration**

Under the plant conditions of RCS level of ~69.5 feet with nozzle dams installed there was a concern that the total RCS piping would not reach the boron concentration of 2000 ppm. This safety evaluation evaluated raising the boron concentration to 2080 ppm to ensure

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“dead legs” with less boron in solution transfusing to the active volume of the RCS would not result in the total boron concentration decreasing to less than 2000 ppm as required by the technical specifications. No unreviewed safety question was involved.

**00-288-MM      R0      RCP Leak-Off Low Flow Transmitters Wire Upgrade**

Shield wires, which were being used as conductors, were replaced inside and outside containment for the four RCPs seal leak off low flow instrument loops. This change was instituted to address spurious alarms in two of the loops and the potential for spurious alarms in the remaining loops. No unreviewed safety question was involved.

**00-298-MD      R1      Isolation Valve Seal Water System Flow Control Upgrade**

This modification added restrictive flow orifices into five of the isolation valve seal water system injection lines and solenoid operated valves into four of the isolation valve seal water injection lines. This was done to ensure that the isolation valve seal water system remains capable of providing adequate seal water to applicable containment penetrations following a design basis event. The flow restriction orifices limit to extend the capacity of the isolation valve seal water supply tank and ensure the injection pressure was maintained. The solenoid-operated valves isolate seal water to those containment isolation valves that close only on a containment isolation phase “B” signal and not an “A” signal. No unreviewed safety question was involved.

**00-299-EV      R0      Changes to UFSAR 14.2.5.6 to Incorporate Results of Indian Point 2 Steam Line Break Inside containment to Address NR-99-002 Feedwater Line Flashing Concerns**

This change to the Section 14.2.5.6 and Figure 14.2-7 of the UFSAR presents the results of revised steam line break analyses to address feedwater line flashing concerns. The peak containment pressure increased by 2.2 psi but is still below the containment design pressure. This did not constitute an unreviewed safety question.

**00-302-EV      R0      Update of Indian Point Unit No. 1 UFSAR Figure 8 and Indian Point Unit No. 2 UFSAR Section 12.1, Table 12.1-1. And Figures 12.1-1 and 12.1-2**

These administrative changes to the Indian Point Unit No. 1 and Indian Point Unit No. 2 UFSAR transferred organizational material from the UFSARs to the Quality Assurance Program Description in accordance with NRC Administrative Letter 95-06. No unreviewed safety question was involved.

**00-315-TM      R0      Modification of the Manipulator Gripper Assembly**

A pin from the reactor vessel upper internals was broken off and lodged in the top nozzle of the spent fuel assembly located at reactor core position A8. A spare Gripper Assembly was modified to allow it to be used to remove the spent fuel assembly. One of the guide

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pins was removed from the spare gripper assembly. The gripper was installed on the mast and the fuel assembly removed. No unreviewed safety question was involved.

**00-330-PR      R0      Integrated Safeguards Surveillance Testing**

The safeguards surveillance tests were extensively rewritten to combine the majority of required safeguards testing, reduce outage time and manpower and to incorporate Generic Letter 96-01 testing. These tests were restricted to cold shutdown conditions. The changes conformed to technical specification requirements. No unreviewed safety question was involved.

**00-337-EV      R0      Vapor Containment Liner Corrosion at Elevation 46'**

During the inspections of the liner, the moisture barrier at elevation 46' was found to be degraded in certain areas. UT readings indicated that remaining liner thickness in certain areas at or below Elevation 46' were less than the UFSAR stated values of 0.5" for the general area. Based on the UT readings of the liner, the lowest general area liner thickness was found to be 0.36". The UFSAR thickness limit for the containment liner was revised from 0.5" to 0.34". The design limit thickness was calculated based on code allowables and yield strength criterion. Since the minimum observed liner thickness of 0.36" is still greater than the conservatively determined design limit thickness of 0.34", the liner can continue to perform its safety function. To address the potential for future corrosion, chemical analysis of the corrosion by products was performed. An upper bound corrosion rate of approximately 1.1 mil/year can be conservatively anticipated. Using the 0.34" design limit liner thickness and the minimum general area liner thickness observed of 0.36", it would take approximately 18 years for the thinnest portion of the liner to reach the determined design limit thickness at elevation 46'. Corrective actions to limit future corrosion have been taken. Future inspections will assure predicted corrosion rates are not exceeded. No unreviewed safety question was involved.

**00-340-SP      R0      Increase Amptector Short Time Setpoint for EDG Output Circuit Breakers**

The short time setpoint of the EDG output circuit breakers was increased to (1) provide additional margin between the maximum calculated starting current during load sequencing and the short time trip setting, (2) move the phase to phase fault characteristic into the ST protection zone of the amptector, and (3) increase the margin of fault protection with down stream loads. The safety function of the amptector was unchanged. No unreviewed safety question was involved.

**00-341-EV      R0      Post-Steam Generator Tube Rupture Cooldown Effect on Core Delta-T Limit**

This evaluation assessed the effects of exceeding the 72 degree F core delta T limitation during the 2/15/2000 steam generator tube rupture event, confirmed the applicability of the 72 degree limit, and increased the RCS temperature range of applicability to 350

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degrees F. The post steam generator tube rupture event did not adversely affect the structural integrity of the baffle-former bolts and baffle/former region. The applicable temperature range was satisfactorily increased to 350 degrees F. No unreviewed safety question was involved.

**00-360-MM R0 Cycle 15 Core Loading with VANTAGE Fuel**

This evaluation assessed the acceptability of reloading the core with the cycle 15 reload of VANTAGE fuel. This evaluation did not assess operation. SE-00-370-MM addressed operation in addition to reload of the reactor with this core. No unreviewed safety question was involved.

**00-369-MM R0 Drain Traps Replacement for Steam Jet Air Ejector Condensers for Secondary Side pH Control**

This change replaced the drain traps for the Steam Jet Air Ejector after-condenser drain lines, and re-established the flow path from the drain traps to the main condenser. These lines have been previously cut and capped due to secondary water chemistry considerations. With the replacement of the feedwater heaters during the 2000 refueling outage, copper containing components have been removed from the secondary system, and higher pH levels are desired. This modification facilitates maintaining higher pH levels by recirculating after-condenser drainage to the condenser. No unreviewed safety question was involved.

**00-370-MM R0 Reload Safety Evaluation Indian Point Nuclear Plant Indian Point Unit No. 2 Cycle 15 Revision 1**

This change incorporated Cycle 15 core loading and operation. The cycle 15 reload core design met all applicable design criteria and ensured that pertinent licensing basis criteria were met. Adherence to applicable standards and criteria ensured that no unreviewed safety question was created. No unreviewed safety question was involved.

**00-378-EV R1 Removal of Remote Start Capability of the Gas Turbines from the UFSAR**

The descriptions of gas turbine remote start from the central control room and gas turbine "fast start" were removed from the UFSAR. The remote start and fast start features were not used for coping with a station blackout event or alternate safe shutdown event. No unreviewed safety question was involved.

**00-379-MM R0 Removal of RCP-21, RCP-22, RCP-23, and RCP-24 Cages**

Cages serving as locked high radiation area gates around RCP 21, 22, 23, and 24 were removed. Decontamination of the RCS in 1995 had reduced the dose rates, and the areas are no longer high radiation areas. Removable handrail assemblies have been provided around each access hatch. No unreviewed safety question was involved.

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**00-385-MM R0 MCC 22 Duct Bank Modification**

The underground concrete duct bank between manhole 21 and MCC 21 settled and damaged a cable and conduit embedded within it. A portion of the duct bank near MCC 21 was rebuilt and re-supported. No unreviewed safety question was involved.

**00-394-TM R0 Defeat of 480V Bus Undervoltage and Degraded Voltage Trip Logic with Buses Energized**

Fuses in cubicle 14A for bus 5A and cubicle 13A for bus 6A were replaced while the subject buses were energized. To preclude spurious starting of the EDGs and stripping of loads on undervoltage the "red stabs" on five relays in each bus were lifted/pulled. To preclude tripping the 480V bus on degraded voltage the fuses in the remote relay cabinets EPG7 for bus 5A and EPG 9 for bus 6A were pulled. This replacement took place during cold shutdown when undervoltage and degraded voltage protection is not required. This did not affect 480V bus availability or EDG manual start capability. No unreviewed safety question was involved.

**00-404-EV R0 Absence of Fuel Assembly Upper Alignment Pins at Core Location A-8**

This evaluation assessed operation with a missing alignment pin at core location A-8. Analyses indicated that, with both alignment pins absent, the functional requirements to provide necessary restraint to the fuel assemblies, and to maintain core geometry were satisfied. With the as found configuration, engagement of the remaining pin was not a concern. No unreviewed safety question was involved.

**00-405-EV R0 UFSAR Organization Chart Update**

Organizational changes were made. Functional reporting lines were revised for the Manager, Environmental Health and Safety, however, no functional requirements were deleted. No unreviewed safety question was involved.

**00-406-EV R0 Steam Generator Secondary Side Foreign Objects**

During the refueling outage for cycle 15 various foreign objects were evaluated as remaining in the steam generators for the cycle. The potential safety impact of operation for one additional operating cycle with foreign objects and tubes with potential loose parts indications. The evaluation demonstrated that the foreign objects would not have an adverse effect on the steam generator pressure boundary integrity. No unreviewed safety question was involved.

**00-412-EV R0 Use of Freeze Seal for Testing Relief Valve 855**

Safety injection relief valve 855 was isolated via 2 freeze seals on the 2 upstream legs to the valve to allow removal and testing of the relief valve. This work was conducted during cold

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shutdown conditions when safety injection was not required to be operable. The safety injection pumps were in pull-to-lock to assure the lines were not inadvertently pressurized. Pipe break, loss of freeze seal, freeze seal plug migration, and affects of the freeze seal and equipment on piping and supports were evaluated. No unreviewed safety question was involved.

**00-413-EV      R1      Reactor Vessel Foreign Objects**

This evaluation addressed the acceptability of past operation with nine retrieved foreign objects in the reactor vessel, and the acceptability of continued operation under similar conditions with a larger foreign object in the reactor vessel. Previous operation was found to be acceptable based on the retrieved objects and previous Westinghouse assessments for other plants. Continued operation, with a supplemental program of monitoring the impact of the loose part in the lower reactor vessel head plenum, was also found to be acceptable. Areas considered included: component wear, foreign object wedging and impact and flow blockage. Components considered included: reactor vessel and internals, control rod drive mechanisms, nuclear fuel, steam generators, pressurizer, RCPs, RCS piping, and instrumentation and control systems. Also considered were effects on: reactor coolant flow measurement, auxiliary systems, chemical and volume control systems, auxiliary coolant system, emergency core cooling system, containment spray system, and the reactor vessel head vent system. Continued operation with one or more foreign objects of the size indicated by the Digital Metal Impact Monitoring System does not pose an unreviewed safety question. No unreviewed safety question was involved.

**00-416-EV      R0      Change in Toxic Gas In-Leakage**

This evaluation assessed the results of test P-MT-177 that was conducted to determine the amount of unfiltered in-leakage that would enter the central control room during a toxic gas event. An analysis of chemical concentrations in the central control room with worst case in-leakage (Calculation No. FCX-00-353-00) documents that the central control room operators have greater than two minutes to don protective equipment. The NRC safety evaluation report for license amendment no. 157 states that two minutes is an acceptable time limit for donning protective equipment. No unreviewed safety question was involved.

**00-436-TM      R0      Removal of Isolation Valve Seal Water System Flow Indicator  
FI-1084**

Flow indicator FI-1084 was replaced by 3/8" diameter tubing that meet the design specification for the existing tubing while awaiting delivery of a replacement flow indicator. The only safety function for the flow indicator was pressure boundary integrity, which was maintained. No unreviewed safety question was involved.

**00-439-SP      R0      Accumulator Pressure Low Alarm Setpoint Change**

This change decreased the accumulator low-pressure alarm setpoint from 655 psig to 640 psig to increase the normal operating range for the emergency core cooling system

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accumulators. This change was consistent with license amendment no. 188, which reduced the minimum accumulator pressure limit of Technical Specification 3.3.A.1.c from 615 psig to 598 psig.

The new alarm setpoint included channel accuracy allowance to ensure that the low pressure alarm actuated prior to reaching the technical specification limit. The alarm setpoint does not affect any protection or control functions. No unreviewed safety question was involved.

**00-444-SP      R0      Increase Safety Injection MOV-851A and 851B Header Swapover Time**

This change extended the delay time for closure of MOV-851A and MOV-851B upon failure of safety injection pump 21 or 23 to start. The change also established an “as-found” and “as-left” tolerance for the time delay. Closure of one of these valves directed the flow from safety injection Pump 22 to the safety injection header with the failed safety injection Pump. This time delay change ensured that inadvertent header closure did not occur due to timer inaccuracy or uncertainty. Safety injection pump sequencing times and time for full safety injection flow are unchanged. No unreviewed safety question was involved.

**00-450-EV      R0      Isolation Valve Seal Water System Technical Specification Basis Clarification**

Section 3.3 of the technical specification bases was revised to (1) clarify that two of the three nitrogen supply flow paths to the isolation valve seal water system are required for isolation valve seal water system operability and (2) delete statement that the minimum pressure setting for the isolation valve sea water system and the weld channel and penetration pressurization system during normal operation assures that the containment design pressure of 47 psig is not exceeded. These changes provided clarification consistent with design and licensing basis requirements. There were no physical plant or operational changes made. No unreviewed safety question was involved.

**00-458-EV      R0      Change to Technical Specification Basis 4.5 and Procedure IPC-ST-R03-S**

Changes were made to technical specification basis 4.5 and test procedure IPC-ST-R03-S to test the hydrogen recombiners with a hydrogen mixture consistent with vendor recommendations. No change to the intent of the basis was made. No unreviewed safety question was involved.

**00-460-EV R0 Residual Heat Removal Loop Leak Detection**

The safety evaluation supported a revision to UFSAR Section 6.7.1.2.9 to accurately describe the Residual Heat Removal loop leakage detection devices. The UFSAR incorrectly identified the methods of detecting a Residual Heat Removal pump seal failure

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as increasing water level in the CCW surge tank and a flow monitor on the component cooling water line from the Residual Heat Removal pumps. This was changed to correctly identify the Residual Heat Removal pumps common sump alarm and the plant vent gas monitor as the methods for detecting a Residual Heat Removal pump mechanical seal failure. The safety evaluation concluded that there was no change to any plant structure, system or component, and no change to any procedures or analysis. The change did not involve an unreviewed safety question.

**00-463-PR      R0      Running the Boiler Feed Pump Turbines Utilizing Auxiliary Steam**

This test procedure supplied the boiler feed pump turbines with auxiliary steam from the house service boilers. This allowed for turbine control system and over speed testing when the nuclear steam supply system was unavailable. This procedure was developed from an approved station procedure that utilizes main steam supply to conduct the required testing. Auxiliary steam was directed via a temporary hose from an installed auxiliary steam test connection to a test connection on the steam supply to the boiler feed pumps. No unreviewed safety question was involved.

**00-482-PR      R0      Emergency Operating Procedures Revision 34**

The emergency operating procedures were revised to incorporate operator feedback, plant modifications, operating experience, and revised setpoint values. Typographical corrections and editorial improvements were also made. The changes improved operator response and recovery capability for transients and accidents within and beyond the plant design basis. No unreviewed safety question was involved.

**00-484-PR      R1      Visual Weld, Liquid Penetrant, Magnetic Particle, Radiographic Examinations**

The quality of nondestructive examination procedures was demonstrated to be equivalent to the nondestructive examination procedures used for the existing steam generators. The procedures comply with ASME and AWS requirements. No unreviewed safety question was involved.

**00-502-MM      R0      Transfer of Feed for Emergency Seal Oil Pump Motor**

The power supply for the DC emergency seal oil pump was transferred from the Class 1E Class A Indian Point Unit No. 2 battery 22 to the non-Class 1E non-Class A Indian Point Unit No. 1 battery 11. The DC emergency seal oil pump is non-Class 1E non-Class A. This increased spare capacity on battery 22 and removed an interface between Class A and non-Class A equipment. No unreviewed safety question was involved.



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**00-503-TR      R0      Temporary Repair for Valve 731, Residual Heat Removal Pumps Suction from Loop-2 Hot Leg**

A temporary repair was made to a leak at the packing gland of valve 731 (residual heat removal pumps suction from loop-2 hot leg). An axial cut in the 2 inch diameter stem that is about 12 inches long and one quarter inch wide with an average depth of about 1/16 inch was repaired by application of an epoxy coating which was hand finished after curing. A permanent repair was not considered practical due to plant conditions. The leak was below technical specifications limits, but it was not desirable to have this adverse condition due to potential excess contamination inside containment. This temporary repair did not affect the operability of valve 731, thereby allowing it to perform its intended design function. Following repair completion, post maintenance testing included MOVATS diagnostic stroke was performed. Also, when the system was re-pressurized, a visual inspection for packing leakage was conducted to verify the effectiveness of the temporary repair. No unreviewed safety question was involved.

**00-519-EV      R0      Replace Reactor Cavity Seal**

The Presray reactor vessel flange seal was replaced with an ethylene-propylene-diene-terpolymer seal. The new seal met or exceeded the design requirements for the Presray seal. Analysis and testing demonstrated the new seal was an improvement over the previous. The redesigned seal was an enhancement with respect to ease of installation and small likelihood of failure. Design margin between the two was equivalent. No unreviewed safety question was involved.

**00-524-MM      R0      Equipment Floor Hatch Modifications**

A grout floor was permanently installed at elevation 95' in the containment equipment hatch in place of the floor grating. The grout floor was necessary to properly transfer loads to the equipment hatch from the transport of the original steam generator and replacement steam generator. No safety functions were affected by this modification. The equipment hatch containment closure function was not affected. No unreviewed safety question was involved.

**00-529-EV      R0      Delete UFSAR Requirement to Monitor Toxic Gas (Ammonia & Chlorine)**

The change addressed by this safety evaluation was the deletion from the UFSAR of the requirement for monitoring toxic gas (ammonia and chlorine) in the central control room ventilation system. An analysis of chemical concentrations in the central control room following offsite chemical releases was performed. This analysis determined that as a result of a toxic gas event, ammonia in the central control room would not reach immediately dangerous to life and health levels, except for one case involving chlorine.. However, in this particular case the frequency of core damage was  $7.4 \times 10^{-9}$  per year, and this was acceptable per Regulatory Guide 1.174. No unreviewed safety question was involved.

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**00-533-PR      R2      Steam Generator Team Quality Execution Procedures**

In support of the steam generator replacement (SGR) project, this evaluation approved the use of the series 12 steam generator team quality execution procedures . These procedures established and maintained quality control of the nondestructive examination processes during the performance of the SGR in accordance with the requirements of ASME and AWS codes. The procedures ensured an equivalency to the nondestructive examination procedures used for inspection of the original steam generators. No unreviewed safety question was involved.

**00-534-MM      R0      Original Steam Generator Storage Facility**

The original steam generator storage facility was constructed on the Indian Point station non-protected area property to store the original steam generators until their removal from the site. The original steam generator storage facility was built specifically for storage of the original steam generators to maintain dose limits specified in 10CFR 20. The facility will not be used for any other purpose. No unreviewed safety question was involved.

**00-535-PR      R2      Welding Procedures**

The quality of welding procedures was demonstrated to be equivalent to the welding procedures used for the existing steam generators. The procedures complied with ASME and AWS code requirements. No unreviewed safety question was involved.

**00-536-MM      R0      Remove Miscellaneous Electrical Interferences Inside Containment**

Work package 1510 temporarily removed portions of electrical cabling and conduits that interfered with the rigging and handling of the original steam generators and replacement steam generators . Equipment affected was tagged out of service and was not required for the existing plant conditions. Following completion of the installation of the replacement steam generators the electrical cabling and conduit were restored to their original condition. No unreviewed safety question was involved.

**00-537-TM      R0      Installation of Temporary Shielding**

Work package 1040 placed temporary lead shielding and other shielding for radiation protection and to maintain doses within as-low-as-reasonably-achievable guidelines. The shielding was evaluated for effects on systems, structures and components and the temporary loadings were maintained within design allowables. Seismic capabilities were maintained during cold shutdown and refueling modes. No unreviewed safety question was involved.

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**00-538-TM      R0      Remove Steam Generator 21-24 Supports**

Work package 2520A-2520D removed and detached the steam generator supports (upper lateral supports and steam generator support pad shoe assemblies to allow the removal of the original steam generators . Portions of the upper lateral supports were removed during cold shutdown and refueling operations based on engineering evaluations to facilitate asbestos removal. Complete detachment of the supports were limited to reactor defueled conditions. Temporary adjustable shims and struts were installed to prevent lateral movement or rotation. Application of restraining forces was limited to reactor defueled conditions. No unreviewed safety question was involved.

**00-540-MM      R0      Installation of Hatch Transfer System Inside and Outside Containment and Four Point Lift System**

Work packages 1030 and 1031 installed the temporary hatch transfer system components inside and outside containment for transit of the original steam generators and replacement steam generators through the equipment hatch. The hatch transfer system consisted of a set of continuous rails used as a construction device to guide the original steam generators and replacement steam generators via low profile saddles and push-pull devices. Work package 1032 installed a four-point lift system to lift each original steam generator from the hatch transfer system outside the hatch to allow placement of the original steam generator on a transporter and the reverse order for replacement steam generator installation. These temporary installations were only in place during defueled conditions when containment integrity was not required. No unreviewed safety question was involved.

**00-541-MM      R0      Install Lifting Trunnion Boss for Original Steam Generators 21, 22, 23, 24**

Work Packages 2575A through 2575D welded a trunnion boss to each original steam generator to be used in conjunction with the temporary lifting device as an attachment point for lifting the original steam generator from its cubicle. These work packages also removed steam drum lugs to allow unimpeded movement of the original steam generators through the equipment hatch. This work was limited to the reactor defueled condition. Heavy load accidents that are applicable to the reactor defueled condition are the fuel handling accident in the fuel handling building and the fuel cask drop accident. Lifts within the Indian Point Unit No. 2 containment did not affect these accidents. No unreviewed safety question was involved.

**00-542-TM      R1      Install Temporary Power Inside containment**

Work package 1050 provided temporary power inside containment from Duraline power panels located within the Indian Point Unit No. 2 containment building and one Duraline panel outside the containment equipment hatch building (defueled condition only). Appropriate fault protection was provided. Temporary distribution equipment was

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designed to the requirements of the National Electrical Code 1999. No unreviewed safety question was involved.

**00-543-MM R0 Remove Secondary Small Bore Interferences Steam Generator 21, 22, 23, 24**

Work packages 1520A through 1520D removed secondary small bore piping for removal of the original steam generators. Equipment removed was not required for existing plant conditions and no required safety functions were affected. Safe load path requirements of NUREG-0612 were met. No unreviewed safety question was involved.

**00-544-MM R0 Remove Feedwater Piping Steam Generators 21, 22,23, 24**

Work packages 2565A through 2565D removed pipe whip restraints on original steam generators 22 and 23, installed temporary pipe supports prior to feedwater pipe severance, and cut and removed spool pieces at the original steam generator/feedwater interface and installed foreign material exclusion barriers over open piping. This work was conducted during the reactor defueled condition or during refueling with tagouts of feedwater piping ensuring containment integrity. No heavy loads handling occurred during these activities. No unreviewed safety question was involved.

**00-545-MM R0 Remove Main Steam Piping Steam Generators 21, 22, 23, 24**

Work packages 2560A through 2560D removed portions of the main steam piping attached to the original steam generators in preparation for their replacement. Equipment removed was not required for existing plant conditions and no required safety functions were affected. Safe load path requirements of NUREG-0612 were met. No unreviewed safety question was involved.

**00-546-MM R0 Primary Manway Cover Insert Fastener Replacement**

Three ¼" – 20 screws used to hold a gasket insert plate against the manway surface in each of the replacement steam generator primary manways were replaced with three ½" – 13 screw size insert fasteners. Operation of the steam generators with the threaded inserts does not adversely affect the steam generator pressure boundary or function. The modified steam generators continue to conform to ASME Code, Section III criteria. No unreviewed safety question is involved.

**00-549-MM R0 Polar Gantry Crane Structural Modifications**

Structural welding was performed on and stiffener plates were added to the polar gantry crane while it was out of service to structurally support the operation of the temporary lifting device that was installed to rig and handle the original steam generators and replacement steam generators. No heavy loads were involved in the modification. Structural performance of the polar gantry crane is at least equivalent to pre-modification performance. No unreviewed safety question was involved.

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**00-550-TM      R0      Install Reactor Cavity Decking**

Work package 1060 installed temporary reactor cavity decking to act as a protective cover for the reactor cavity during SGR activities. The decking consisted of structural steel plates designed to provide a platform for operation of mobile cranes inside containment, provide additional laydown space, prevent ingress of foreign materials into the reactor cavity and to protect the reactor cavity liner plate from damage. Loads imparted to plant structures were within allowables and decking loadings were administratively controlled. No unreviewed safety question was involved.

**00-551-PR      R1      Raytheon Nondestructive Examination Procedures**

The quality of nondestructive examination procedures was demonstrated to be equivalent to the nondestructive examination procedures used for inspecting the existing steam generators. The procedures comply with ASME and AWS requirements. No unreviewed safety question was involved.

**00-553-MM      R0      Remove Secondary Manway Platform Steam Generators 21-24**

Work packages 1535A through 1535D removed secondary platforms for the original steam generators in preparation for their replacement. Equipment removed was not required for existing plant conditions and no required safety functions were affected. No heavy loads were involved in these work packages. No unreviewed safety question was involved.

**00-554-MM      R0      Removal of Miscellaneous Structural Steel Steam Generator Cubicles 21, 22, 23, 24 and Equipment Hatch Barrel Rigging Lugs**

Work packages 1534A through 1534D removed miscellaneous structural steel from steam generator cubicles 21 – 24 in preparation for removal of the original steam generators. Equipment hatch barrel lifting lugs were also removed. Equipment removed was not required for existing plant conditions and no required safety functions were affected. No unreviewed safety question was involved.

**00-555-MM      R1      Install Temporary RCS Supports/ Restraints**

Work packages 2540A-2540D installed and 3540A-3540D removed temporary RCS supports to maintain the RCS piping secured during RCS pipe cutting, original steam generator removal, decontamination of open RCS pipe ends, RCS pipe end machining, and fitup/welding of the RCS piping to the replacement steam generators. Structures providing support were evaluated to ensure loads/forces imparted were within design allowables. Shimming and padding was used to prevent damage to the RCS piping. Active use of the restraints was limited to reactor defueled conditions. Important to safety functions of systems, structures and components were unaffected. No unreviewed safety question was involved.

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**00-556-TM      R1      Remove Miscellaneous Small Bore Interferences**

Work package 1524 removed miscellaneous small bore piping and a manipulator crane interferences to the rigging and handling activities in the containment building during the SGR project. The affected equipment was in an out of service tagged condition and not required during reactor defueled conditions. No unreviewed safety question was involved.

**00-557-MM      R0      Perform RCS Pipecuts**

Work packages 2540A-2540D severed the RCS hotleg and crossover leg piping from the original steam generators during reactor defueled conditions to allow removal of the original steam generators from their respective cubicles. No unreviewed safety question was involved.

**00-560-EV      R0      UFSAR Update to Reflect Removal of Two Containment Steam Heaters**

Two of four containment heaters (236HUR and 238HUR) have been removed previously. The amount of area space heating that can be provided in containment has been reduced. This evaluation determined that this plant configuration is acceptable. Alternate means of heating the containment space were provided by containment purge supply. The heating capability of the steam preheater in the purge supply far exceeded the capability of all four of the containment heaters. Plant technical specifications required that the containment ambient temperature was above 50 Degrees F prior to heating the reactor above cold shutdown. This can was accomplished without the two heaters that were removed from service. No unreviewed safety question was involved.

**00-562-MM      R0      Replacement Steam Generator Secondary Manway Bolt/Stud Hole Repair**

Helical-coil threaded inserts were installed to repair bolt holes in the shell of the replacement steam generators. ASME B&PV Code Case N-496-1 specifically addresses helical-coil threaded inserts and has been accepted by the NRC. The inserts used on the replacement steam generators have been evaluated in accordance with code Case N-496-1 and meet ASME Code requirements. No unreviewed safety question was involved.

**00-566-TM      R0      Install Temporary Lifting Device**

In support of the Indian Point Unit No. 2 SGR, work package 1035 provided for the installation of a temporary lifting device used for the rigging and handling evolutions required for the removal of the original steam generators and installation of the replacement steam generators. The temporary lifting device was used in conjunction with the polar gantry crane, as the rated capacity of the 175 ton polar gantry crane was not sufficient to handle all the loads associated with the removal and replacement of the steam generators. The temporary lifting device was a semi-gantry configuration supported on

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one end by the existing crane runway rails at Elevation 95'-0" and on the other end by the polar gantry crane. The temporary lifting device was considered a construction aid for use in rigging and handling of the steam generators. To assure compliance to NUREG-0612, rigging and handling of the temporary lifting device members and their assembly into position was limited to the reactor defueled condition. The implementation of work package 1035 was programmed to ensure that no effects (both interim and permanent) were experienced by structures, systems and components which would impair their capabilities to perform their important to safety functions for accident prevention and mitigation. As a result, adverse effects on important to safety equipment in a status of performing or being on standby to perform its safety function were precluded, and the important to safety functions of structures, systems and components described in the UFSAR were unaffected. No unreviewed safety question was involved.

**00-567-MM R1 Replacement Steam Generator Piping Modification**

In support of the Indian Point Unit No. 2 SGR, modification package FMX-00-52429-A provided for the reestablishment of the replacement steam generator piping connections to interfacing plant system piping (RCS, main steam, feedwater, blowdown, and steam generator shell drain). An ASME Code reconciliation evaluated the UFSAR to assure that design and implementation of this modification maintained the design and licensing basis requirements regarding welding and nondestructive examination. Installation activities were confined to plant conditions which the replacement steam generator and primary and secondary piping were not required to perform any important to safety functions. The RCS crossover leg piping horizontal and vertical rupture restraints were modified by removal of shimming material to increase the cold gaps between the piping and restraints. No unreviewed safety question was involved.

**00-568-MM R3 Steam Generator Supports Modification**

In support of the Indian Point Unit No. 2 SGR, modification package FMX-00-52429-C provided for the restoration of the steam generator supports (upper lateral supports and support pad shoe assemblies) which were temporarily removed during removal of the original steam generators. New support pad shoe assemblies were installed. The programmed reassembly of the upper lateral supports permitted reestablishment of seismic support necessary for refueling operations. Final assembly was completed prior to exiting cold shutdown conditions. Stiffener plates were also added. The design of the modified supports satisfied all design and licensing basis requirements. No unreviewed safety question was involved.

**00-577-MM R0 Steam Generator Digital Metal Impact Monitoring System Holes**

The modification installed two 0.25" diameter by 0.450" deep blind holes in the shell and channel head of the replacement steam generators. The holes allowed for the installation of the digital metal impact monitoring system accelerometers on the replacement steam generators. The installation of the holes did not impact the operability or integrity of the

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steam generators. The design function of the shell and channel head were not impacted. No unreviewed safety question was involved.

**00-578-MM R0 Model 44F Steam Generator Primary Channel Head Drain Plug**

The modification installed solid welded plugs in the channel head drain holes of the replacement steam generators. Two internal drain holes in each side of the replacement steam generator channel head were plugged. The pockets of water that were to be removed through these drain holes were removed by other means. The plugs (cylindrical rods) were comprised of alloy 600 material. The installation of the drain plugs did not impact the operability or integrity of the steam generators. The design criteria of the original assembly continued to be met. No unreviewed safety question was involved.

**00-579-PR R0 Steam Generator 21, 22, 23, 24 Transport**

In support of the Indian Point Unit No. 2SGR, work packages 3030A-D provided for the transport of the original steam generators and replacement steam generators using a self-propelled modular transporter along a designated haul route. Prior to exiting the containment structure, all original steam generator nozzles and penetrations were verified to have been sealed, and a coating which affixed any loose surface contamination was verified to be intact. Radiological doses that could result from a drop of an original steam generator outside containment were evaluated and determined to be well below regulatory limits. The haul route was evaluated separately by safety evaluation 00-580-PR. No unreviewed safety question was involved.

**00-580-PR R1 Indian Point Unit No. 2 SGR WP 2090 Haul Route Upgrade**

In support of the Indian Point Unit No. 2SGR, work package 2090 provided for the upgrade of the haul route established to accomplish transporting the original steam generators to the interim storage area and transporting the replacement steam generators to the containment building. A load test of the haul route was performed. Temporary protective measures were provided to ensure roadway integrity and preclude failure of utilities that may be impacted (gas line, drainage inlets, manholes). The interim storage area consisting of cargo containers were established for the original steam generators while awaiting completion of the permanent storage facility. Shielding and the cargo containers along with access controls ensured doses resulting from the interim storage area were in compliance with 10CFR20, 40CFR190, and Technical Specification 3.9.C. Following transport, the haul route was restored to the existing configuration. The haul route upgrades accommodated original steam generator/replacement steam generator transport without resulting in adverse effects to any Indian Point Unit No. 1 or 2 structures, systems, and components. No unreviewed safety question was involved.

**00-581-MM R0 Steam Generator Water Level Modification**

In support of the Indian Point Unit No. 2 SGR, modification package FIX-00-52429-A was performed to reconnect the replacement steam generators and their associated steam



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generator water level instrument tubing that had been disconnected to allow removal of the original steam generators . Because of orientation differences between the water level instrument taps of the original steam generators and the replacement steam generators, the reconnection entailed rerouting of portions of the upper and lower steam generator water level tubing runs. These changes were demonstrated to be equivalent to the replaced water level configuration. Administrative controls were established for containment closure when the secondary side boundary was in the breached condition during cold shutdown and refueling operations conditions while secondary side integrity was restored. Operability of the water level instrumentation was restored prior to entry into the hot shutdown condition. No unreviewed safety question was involved.

**00-582-PR      R0      Remove Original Steam Generators 21-24**

The safety evaluation justified the physical removal of the original steam generators from the Indian Point Unit No. 2 containment building to an awaiting self-propelled modular transporter located outside the containment equipment hatch. The process for removing each original steam generator was performed while the reactor was defueled. By confining the implementation of this work to the defueled condition, and ensuring that the containment was systematically isolated from the spent fuel pit and Indian Point Unit No. 1, effects on important to safety equipment in a status of performing or being on standby to perform its safety function were precluded. There were no changes to the UFSAR design basis accidents and no changes required to the UFSAR. It was concluded that in the unlikely event of a drop of a rigged and handled original steam generator no accident than any previously described in the UFSAR would occur. This conclusion was reached since the postulated offsite dose resulting from the similar event of a waste gas decay tank rupture bounded the original steam generator drop radiation dose estimations for these areas. No unreviewed safety question was involved.

**00-583-PR      R0      Perform RCS Pipe Cuts**

The safety evaluation was developed to allow the severing of the RCS hot leg and crossover leg piping from the original steam generator RCS nozzles to allow removal of the original steam generators. Prior to performing the RCS piping cuts, the hot and crossover leg RCS piping for each original steam generator were restrained by use of temporary RCS support/restraints. This package institute a two step RCS pipe cutting method to address foreign material exclusion. In addition, this safety evaluation instituted basic foreign material exclusion practices and good housekeeping to prevent equipment damage to the RCS piping and incidental effects on the containment sumps by means of strict control of materials produced by RCS pipe cutting. Analysis demonstrated that mounting of the cutting equipment on the RCS piping could be accomplished prior to installation of the temporary RCS support restraints without damaging the RCS piping. Appropriate fire protection/fire prevention controls were instituted for the hot work activity of RCS pipe cutting and lifting lug cutting to comply with plant requirements. Implementation of this activity was limited to the defueled condition. No unreviewed safety question was involved.

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**00-584-PR      R0      Pipe End Decontamination SG 21-24**

The safety evaluation was developed to radiologically decontaminate the RCS hot leg and crossover leg pipe ends that resulted from cutting the RCS piping and removing the original steam generators from their steam generator cubicles. As part of the preparation of this activity, the RCS piping was physically supported and restrained by the use of temporary RCS support/restraints. Decontamination equipment that was used was sponge blot media. These activities were limited to the defueled condition and followed strict foreign material control processes.

By confining the implementation windows of these work activities to the defueled condition, and using the specific design and implementation features described in the package, adverse effects on equipment important to safety were precluded. No important to safety functions of structures, systems or components described in the UFSAR were affected. No unreviewed safety question was involved.

**00-585-PR      R4      Remove Miscellaneous Electrical Interferences Inside Containment**

In support of the Indian Point Unit No. 2SGR, steam generator teamwork package 1510 provided for the temporary removal (or placement in a temporary storage configuration) of portions of electrical cabling and conduits which were interferences to rigging and handling of the original steam generators and replacement steam generators within the Indian Point Unit No. 2 containment building. Following completion of original steam generator/replacement steam generator rigging and handling within the Indian Point Unit No. 2 containment building, the interfering cabling and conduit were restored to their design basis original configurations by implementation of work package 3510. Temporary removal of the miscellaneous electrical interferences and their subsequent restoration by implementation of work packages 1510 and 3510 was performed during equipment tagged out-of-service status. No unreviewed safety question was involved.

**00-586-EV      R0      Correction of UFSAR Section 7.2.5.1.7, Low Pressurizer Pressure Trip**

UFSAR Section 7.2.5.1.7 was changed to correct the description for the coincident logic of the reactor trip block (P-7) for the low pressurizer pressure trip. The UFSAR previously indicated that the low pressurizer pressure trip was blocked when any of the four power range channels and two-out-of-two turbine first stage pressure channels read below approximately 10% power. The actual coincident logic for the P-7 reactor trip block occurs when three-out-of-four power range channels and two-out-of-two first-stage turbine pressure channels are below approximately 10% reactor power. No unreviewed safety question was involved.

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**00-590-PR      R0      SGR Load Test Plan for the Up/Downending Device**

In support of the Indian Point Unit No. 2 SGR, load test plan 1 provided for the testing of the up/downending device that will be employed during Indian Point Unit No. 2 rigging and handling activities. Testing of the device utilized one of the Indian Point Unit No. 2 replacement steam generators to provide the base mass necessary to place the up/downending device in a loaded condition which simulates its actual use within the Indian Point Unit No. 2 containment building during actual downending of the original steam generators and upending of the replacement steam generators. The test is designed to maintain the designated replacement steam generator properly supported at all times during performance of the test, which, along with employing safe work practices and quality controls, maintained the quality nature of the Class A replacement steam generator. This controlled testing resulted in no adverse effects to the other replacement steam generators residing in the storage facility. Upon completion of the load test, the up/downending device was removed from the replacement steam generator, and the replacement steam generator storage facility was returned to its pre-test condition. Important to safety functions of structures, systems and components described in the UFSAR were unaffected by performing this load test, which was conducted outside the IP station protected area. No unreviewed safety question was involved.

**00-591-EV      R0      Correction of UFSAR Section 5.2.4, Containment Ventilation Isolation**

UFSAR Section 5.2.4 was modified to correct the description of the methods for manual activation of the containment ventilation isolation signal. The UFSAR previously indicated that a containment ventilation isolation signal could be initiated by a manual purge duct trip. The actual control circuitry did not rely on a manual purge duct trip to cause a containment ventilation isolation signal. The methods for manually activating a containment ventilation isolation signal were by safety injection, phase A containment isolation, and containment spray signals. The UFSAR was revised to delete the manual purge duct trip as a method of manually initiating containment ventilation isolation signal and to directly identify the three methods for manually initiating a containment ventilation isolation signal. No unreviewed safety question was involved.

**00-595-MM      R0      Removal of Four Point Lift System**

In support of the Indian Point Unit No. 2 SGR, work package 5032 removed the construction aid four-point lift system that was used for rigging and handling the original steam generators and replacement steam generators in the area outside of the Indian Point Unit No. 2 equipment hatch. Work package 5032 dismantled and removed the four point lift system from its installation area. This activity was performed outside the Indian Point Unit No. 2 containment, and by virtue of its configuration, which had no interface with IP1/Indian Point Unit No. 2 structures, systems and components, there was no effect upon any structures, systems and components associated with IP1 or Indian Point Unit No. 2. The four point lift system has no effect upon the equipment hatch or the capability of the equipment hatch to operate to achieve containment closure/containment integrity.

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Accordingly, four point lift system removal was permitted during any Indian Point Unit No. 2 plant condition. Overall restoration of the ground area where the four point lift system was used was accomplished by implementation of modification package FCX-00-52429-B, "Equipment Hatch Building." As a result, adverse effects on important to safety equipment in a status of performing or being on standby to perform its safety function were precluded, and the important to safety functions of structures, systems and components described in the UFSAR were unaffected. No unreviewed safety question was involved.

**00-598-MD      R0      RCS redundant Level Measuring System at Draindown**

RCS redundant level measuring system was installed per this modification. An alternate level tap connection to pressurizer was provided which was connected to the condensing tee of level transmitter LT-459. When the RCS draindown system was not in use, valves 537B and 537C were closed and the tubing end capped, so there was no effect on RCS pressure boundary integrity or LT-459 during normal plant operation. No unreviewed safety question was involved.

**00-602-MM      R0      Indian Point Unit No. 2 SGR Secondary Manway Platforms**

In support of the Indian Point Unit No. 2 SGR, modification package FCX-00-52429-A provided for the installation of eight (8) permanent platforms to accommodate access for each of two (2) secondary manways located on each of the four (4) steam generators. The platform installation areas were located behind the biological shield walls in close proximity to those vacated by removal/demolition of the existing steam generator secondary manway platforms. The new secondary manway platforms were considered safety related and were seismically designed to maintain the current design and licensing basis. Implementation was programmed to be completed prior to Indian Point Unit No. 2 exiting the cold shutdown condition to commence unit startup. For work performed during the refueling operations and cold shutdown conditions, controls were instituted to maintain equipment and materials in a seismically safe condition. NUREG-0612 compliance during Indian Point Unit No. 2 refueling operations and cold shutdown was achieved by ensuring that no rigged items exceeded in weight the threshold limit of 2000 lbs. Rigging and handling of platforms and members during the reactor defueled conditions complied with NUREG-0612 for rigging and handling of items of any weight. The use of load path diagrams and appropriate tagouts precluded any adverse effects this rigging and handling may have had on the integrity of the fuel residing in the spent fuel pool. As a result of the above modification package FCX-00-52429-A implementation features, adverse effects on important to safety equipment were precluded. The important to safety functions of structures, systems and components described in the UFSAR were unaffected. No unreviewed safety question was involved.

**00-603-MM      R0      Coatings**

In support of the Indian Point Unit No. 2 SGR, work package 5090 provided for the correct and proper application of coatings associated with project activities. Surface preparations and applications of coatings were performed as necessary for areas affected by steam

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generator team-performed activities. Compliance with the requirements of ConEdison Specification Nos. FCX-98-C-001 and FCX-97-C-006 ensured that no important to safety accident initiation or mitigation equipment was adversely affected through the controlled surface preparations and application of coatings. As a result, the reliability of structures, systems and components to which coatings were applied remained unchanged. Adverse effects on important to safety equipment were thus precluded, and the important to safety functions of structures, systems and components described in the UFSAR were unaffected. No unreviewed safety question was involved.

**00-604-MM      R0      Install Temporary Power Inside Containment/ Remove  
Temporary Power Inside Containment**

In support of the Indian Point Unit No. 2SGR, work package 1050 provided temporary construction power inside the Indian Point Unit No. 2 containment building. Temporary tie-ins connecting dedicated SGR temporary electrical distribution equipment were made to Duraline power panels EPY 32, EPY 33, EPY 38, EPY 39, EPY 40, and EPY 51, which are located within the Indian Point Unit No. 2 containment building. During normal plant operation these six (6) panels are disconnected and are used during outages to provide temporary power service for outage activities. As is normal plant practice, these panels were themselves temporarily connected to outside-containment Duraline panel EPY 28 through containment electrical penetration H-40, which maintained the containment closure function of this penetration during plant conditions requiring the same. In addition to the 6 panels inside containment, temporary connections were permitted to be made to the above-described Duraline panel EPY 28 located outside the containment equipment hatch building. In order to have no effect on the equipment hatch required closure function during plant shutdown conditions, use of this EPY 28 panel connection for providing power inside containment was limited to the reactor defueled condition. Following completion of the SGR, the plant was returned to the normal configuration. No unreviewed safety question was involved.

**00-609-MD      R1      Condensate and Main Feedwater Systems Long Loop  
Recirculation**

UFSAR Section 10.2.6.2, and Figures 9.6-6, 10.2-5 sheet 1 and 10.2-7 were modified as a result of this modification. This modification provided a long loop flowpath for recirculating the secondary water in the condensate and feedwater systems for cleanup of impurities. The recirculation flowpath has the capability to be routed through demineralizer units and filters that reduce impurities entrained in the secondary coolant. The addition of a long loop recirculation flowpath improved the capability to clean-up secondary water. Without the capability for cleaning and polishing, impurities left in the secondary water tend to accumulate on the steam generator tube sheets, adversely affecting heat transfer, accelerate corrosion, and reduce the life of the steam generators. This modification also provided instrument air to the new long loop recirculation pressure regulator and backpressure regulator. No unreviewed safety question was involved.

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**00-610-MD      R0      Steam Generator Wet Lay-up System**

UFSAR Section 10.2.4.6 and Figures 8.2-8 and 10.2-7 were modified as a result of this modification. This modification was installed to allow for the injection of chemicals into the steam generators to provide adequate mixing of the chemicals by including enhanced recirculation capability. The system was designed to be used during outages of sufficient duration such that wet lay-up of the steam generators was required. This modification implemented industry guidelines concerning the care of steam generators. This modification also removed the old boron feed system. In order to mitigate the consequences of a postulated steam generator wet lay-up system pipe rupture in the cable penetration area, leak detection instrumentation was installed to alert the operators of the condition. The instrumentation served to comply with the approved internal flooding evaluation for the facility and correspond to the NRC SER issued on December 8, 1980. No unreviewed safety question was involved.

**00-611-MD      R0      Hotwell (Sextant) On-Line Sampling Relocation**

UFSAR Sections 9.4.2.2 and 10.2.6.4 and Figure 9.4-2 were modified as a result of this modification. This modification installed a state of the art analytical analysis of samples from the condenser hotwell. The on-line monitoring panel is used continuously during power operations. The analyzers and sampling components satisfy ASME and ASTM sampling requirements for pressure, temperature, and flow. Cooling equipment to reduce sample temperatures was also installed. Justification for the modification is that cation conductivity and sodium ion monitors in condensate are utilized as indications of cooling water leakage. No unreviewed safety question was involved.

**00-613-MD      R0      Relocation Feedwater Sampling and Cooling Upgrade**

UFSAR Figures 8.2-7 and 9.4-2 were modified as a result of this activity. This modification improved on line chemical analysis of samples from the high-pressure main feedwater system. The system is used continuously during power operations. The analyzers and sampling components satisfy ASME and ASTM sampling requirements for pressure, temperature, and flow. Specifically, the analytical instrumentation for high-pressure main feedwater sampling was upgraded to Orion oxygen scavenger analyzers for hydrazine and ABB dissolved oxygen monitors. Specific cation conductivity measurement equipment, as well as pH equipment was upgraded to a Honeywell system. The existing high-pressure main feedwater corrosion product panel was relocated to the new sample panel. This modification also upgraded the cooling systems for the heater drain tank and condensate corrosion product sample line. No unreviewed safety question was involved.

**00-615-MM      R0      Remove/Install Miscellaneous Structural Interference in Steam Generator 21, 22, 23, 24**

This safety evaluation provided for the temporary relocation/removal of miscellaneous structural interferences to rigging, handling and other activities that were necessary to remove the Indian Point Unit No. 2 original steam generators and install the replacement

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steam generators. The temporary modifications and subsequent restoration of these interferences were performed during equipment tagged out-of-service status in plant conditions when these components were not required to perform any safety functions. As a result, adverse affects on important to safety equipment in a status of performing or being on standby to perform its safety function were precluded, and the important to safety functions of structures, systems and components described in the UFSAR were unaffected. No unreviewed safety question was involved.

**00-616-MM      R0      Install/Remove Reactor Cavity Decking**

In support of the Indian Point Unit No. 2 SGR, work package 1060 installed temporary reactor cavity decking to act as a protective cover for the reactor cavity during the conduct of SGR activities. Evaluations were performed for the reactor cavity decking design that concluded that loads imparted to plant structures were within the allowable loadings for these structures. Actual loadings to the decking were administratively controlled. No unreviewed safety question was involved.

**00-617-MM      R0      Removal of Hatch Transfer System Inside Containment**

In support of the Indian Point Unit No. 2 SGR, work package 5030 removed the inside containment portion of the construction aid hatch transfer system that was used for movement of the original steam generators and the replacement steam generators through the Indian Point Unit No. 2 equipment hatch. During the dismantling of the hatch transfer system, loads imparted to structures, systems and components which provide support to this construction aid were bounded by loads analyzed for hatch transfer system installation and use, and were therefore acceptable. Work package 5030 implementation was performed during the reactor defueled condition. No unreviewed safety question was involved.

**00-618-MM      R0      Removal of Hatch Transfer System Outside Containment**

In support of the Indian Point Unit No. 2 SGR, work package 5031 removed the outside containment portion of the construction aid hatch transfer system that was used for movement of the original steam generators and the replacement steam generators through the Indian Point Unit No. 2 equipment hatch. These activities were performed outside the Indian Point Unit No. 2 containment, and had no effects upon any structures, systems and components associated with Indian Point Unit No. 1 or Indian Point Unit No. 2. No unreviewed safety question was involved.

**00-620-MM      R0      Removal of Temporary Shielding**

In support of the Indian Point Unit No. 2 SGR, work package 5040 removed the temporary lead and other shielding, and shielding support materials that were installed under work package 1040, "Install Temporary Shielding." Prior to Indian Point Unit No. 2 exiting the Cold Shutdown Condition to commence startup, Work Package 5040 removed all steam

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generator team-installed temporary shielding and associated support materials. No unreviewed safety question was involved.

**00-621-MM R0 Install Replacement Steam Generators 21, 22, 23, 24**

In support of the Indian Point Unit No. 2 SGR, work packages 3040A, 3040B, 3040C, and 3040D provided for the respective physical installation of replacement steam generators 21, 22, 23, and 24 from offloading by a self-propelled modular transporter located outside the Indian Point Unit No. 2 containment equipment hatch into the containment building for rigging of the replacement steam generators into their SG cubicles. The process for installing each replacement steam generator was performed during the Reactor Defueled Condition. It was successfully demonstrated that in the unlikely event of a drop of a rigged and handled replacement steam no accident different than any previously described in the UFSAR would occur. No unreviewed safety question was involved.

**00-622-MM R0 Replacement Steam Generator Insulation Modification**

In support of the Indian Point Unit No. 2 SGR, modification package FMX-00-52429-B provided the design and instructions for the replacement of the existing insulation of Indian Point Unit No. 2 steam generators 21, 22, 23 and 24 and portions of their associated connecting piping with NUKON<sup>®</sup> blanket insulation. The replacement insulation system met all regulatory and industry requirements for its application, and was demonstrated by design to be equivalent to the existing insulation. The replacement insulation was classified as safety related because it is required to be compatible with the post-LOCA containment environment and be seismically qualified to ensure that accident mitigation systems performing post-LOCA functions are not adversely affected. Accordingly, the NUKON<sup>®</sup> replacement insulation was tested in accordance with NRC Regulatory Guide 1.36 and determined to be acceptable for use on austenitic stainless steel surfaces without the potential for initiating stress corrosion cracking that could cause material failure and accident initiation. The thermal performance of the replacement insulation was designed to be equivalent or better than the thermal performance of the existing insulation. No unreviewed safety question was involved.

**00-625-TM R0 Mechanical Block for Containment Isolation Valve 1728**

The purpose of this change was to allow the operators the capability to pump down the containment sump while work was performed on D.C. distribution panel #22 (NP-99-08293). However, containment isolation valve 1728 would "fail closed" when #22 D.C. distribution panel is removed from service. To maintain containment sump pump capability, CIV 1728 was mechanically blocked open. This would have prevented the valve from performing its normal safety related function of closing during a containment isolation phase A signal. However, the plant was maintained in the cold shutdown mode with all reactor fuel off loaded, and therefore the containment isolation function was not required. No unreviewed safety question was involved.



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**00-626-TM      R0      Mechanical Block for Containment Isolation Valve 1723**

The purpose of this change was to allow the operators the capability to pump down the containment sump while work was being performed on D.C. distribution panel #21 (NP-99-08292). Containment Isolation Valve 1723 would have "failed closed" when #21 D.C. distribution panel was removed from service. To maintain the containment sump pump operational, containment isolation valve 1723 was mechanically blocked open. This prevented the valve from performing its normal safety related function of closing during a containment isolation phase A signal. However, the plant was in the cold shutdown mode with all reactor fuel off loaded when containment isolation valve 1723 was mechanically blocked open. Therefore, the containment isolation function was not required while the temporary facility change was in place. The temporary facility change was installed under NP -00-17767 and removed under NP-00-17768. No unreviewed safety question was involved.

**00-628-EV      R0      Revision to UFSAR Segments 1858 and 2374 (Radiation Monitor R54 Alarm)**

UFSAR Sections 11.2.3 and 11.2.3.2.12 were revised to correct the description of the annunciator location for radiation monitoring system alarms. The UFSAR previously indicated that the radiation monitors alarm in the chemical systems control room as well as the central control room. A plant modification eliminated the radiation monitor annunciators in the chemical systems control room and failed to change the UFSAR at the time. No unreviewed safety question was involved.

**00-630-PR      R0      Remove Temporary Lifting device**

In support of the Indian Point Unit No. 2 SGR, work package 5035 removed the construction aid temporary lifting device that was used for the rigging and handling the original steam generators and the replacement steam generators within the Indian Point Unit No. 2 containment. During the dismantling of the temporary lifting device, loads imparted to structures, systems and components were bounded by loads analyzed for temporary lifting device installation and use, and were therefore acceptable. To assure compliance to NUREG-0612, disassembly rigging and handling of the temporary lifting device members and their removal from the Indian Point Unit No. 2 containment were limited to the Reactor Defueled Condition. No unreviewed safety question was involved.

**00-635-EV      R0      Technical Specification Bases Change Request – Delete Reference to UFSAR Table 7.4-2**

This change deleted the reference to UFSAR Table 7.4-2 in the Technical Specification Bases for Section 2.3, "Limiting Safety System Settings, Protective Instrumentation." This change referenced a UFSAR change that provided the necessary support for removing Table 7.4-2 from the UFSAR. Since the table is no longer contained in the UFSAR, the reference to this table in the Technical Specification Bases was also removed.

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This change did not involve the modification of any plant system or change the operation of any plant system. The value for the overpower trip function used in the safety analyses is not being changed. Additionally, Chapter 14 of the UFSAR was not affected. No unreviewed safety question was involved.

**00-636-EV      R0      Technical Specification Bases Change Request –  
Reconciliation with Technical Specification Amendment 163**

This change deleted wording in the technical specification bases for Section 3.3 regarding testing of redundant components following discovery of inoperable components. The technical specification requirement was removed with technical specification amendment 163; however, the technical specification bases were inadvertently not revised at that time. This change did not involve the modification of any plant system or involve any changes to the operation of any plant system. The removal of the technical specification requirement to test redundant components following the discovery of inoperable components was determined to be acceptable in the NRC safety evaluation associated with technical specification amendment 163. No unreviewed safety question was involved.

**00-639-EV      R0      Use of Pittsburgh Corning Foamglass Insulation in Vapor  
Containment at 46' Elevation**

The evaluation was prepared in support of UFSAR changes required as a result of replacement of the existing insulation located on the vapor containment liner at elevation 46'. The replacement insulation was shown to be equivalent to the present insulation installed in this area of the vapor containment. The use of this insulation did not adversely impact the containment integrity analysis. The insulation panels were properly secured to prevent the possibility the panels may become dislodged following an accident potentially clogging the containment sumps. No unreviewed safety question was involved.

**00-646-MM      R0      Transport Original Steam Generators to Original Steam  
Generator Storage Facility**

In support of the Indian Point Unit No. 2 SGR, work package 3030E provided for the placement of the original steam generators from the original steam generator interim storage area on a self-propelled modular transporter for transport to and placement within the original steam generator storage facility. In addition to these rigging, handling, and transport activities, Work Package 3030E directed the sealing of the original steam generators within the original steam generator storage facility, dismantling of the storage stands and cribbing within the original steam generator interim storage area, and verification that the original steam generator interim storage area had been dismantled and its area appropriately restored. All work package 3030E implementation activities were performed outside of the Indian Point Unit No. 2 protected area. Engineering evaluations were performed to determine the site boundary and control room doses resulting from a worst-case postulated drop of an original steam generator outside containment during transport. These evaluations yielded acceptable results. Important to safety functions of structures, systems and components described in the UFSAR were

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unaffected by performing final original steam generator transport. No unreviewed safety question was involved.

**00-647-MM      R1      Replacement Studs for Model 44F Replacement Steam Generator Secondary Manway Closure**

This modification replaced the original bolts and washers on the replacement steam generators with studs with elongation measuring rods, nuts and spherical washers. ASME code requirements continued to be met with the replacement fasteners. The use of the replacement fasteners did not impact the ability of the secondary manway closures to maintain secondary side integrity. No unreviewed safety question was involved.

**00-654-MD      R0      Replacement of High Pressure Steam Dump I/P. PM-404 and Addition of Valve Volume Boosters**

This change replaced an obsolete I/P converter with a newer model with booster relay with increased air capacity and appropriate pressure rating to improve high pressure steam dump valve response. This decreased valve response time by allowing I/P output to more closely match controller output signals. A volume booster was added to each high pressure steam dump valve to increase positioner output capacity to the valve actuator during valve opening. A check valve was also provided as a bypass during high pressure steam dump valve closure. The increased valve opening time in response to positioner signals has no impact on existing transients analyses, since the high pressure steam dump valves are not credited to operate in response to a transient. Failure modes of the valves in the opened and closed position are presently addressed in the UFSAR. This change had no impact on the ability of safety related equipment to perform their intended function. No unreviewed safety question was involved.

**00-655-MM      R0      Replacement of Relays in the Reactor Protection System Racks**

This modification replaced sixty-four (64) existing Westinghouse Type BFD relays with new equivalent Type NBFD relays manufactured by Cutler-Hammer Division of Eaton Corporation. Westinghouse no longer manufactures these relays but has sold all manufacturing rights to Eaton Corporation. These new NBFD relays, which are slightly larger than the existing relays, are equipped with heavier coil insulation to reduce the effects of thermal aging and increase relay life expectancy. In order to accommodate the increased size of the relay this modification installed the new relays in adjacent pairs with a space in between. For three or more existing BFD relays mounted in a row, the necessary relays were shifted to adjacent spaces to permit installation. Replacement of the existing relays with the new improved NBFD control relays should increase the reliability of the reactor protection system.

The new relays are of the same identical design, operating voltage, load burden, contact configuration, contact current rating, and essentially the same physical dimensions. The coil insulation has been increased slightly to improve reliability and life expectancy. The

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new relays have been qualified to ambient environmental and seismic conditions which are greater than and envelop the ambient environmental and seismic conditions for the existing relays. These new Nbfd relays qualify as equivalent direct replacement relays for the existing bfd relays and have been qualified for a twenty-year life, continuously energized. Replacement of these relays will not have any adverse impact on the reactor protection system logic protection or reactor trip functions. No unreviewed safety question was involved.

**00-657-MD      R0      Replacement Steam Generator Evaluation**

The purpose of this safety evaluation was to validate the results of analyses and evaluations previously performed in support of the stretch power rating evaluation and the transition to VANTAGE+ fuel, and where necessary, to perform new evaluations for plant operation with new Model 44F steam generators. The replacement steam generator project was evaluated and it was concluded that it did not result in an unreviewed safety question, as defined in 10 CFR 50.59, since it does not increase the probability, occurrence or the consequences of any accident in the UFSAR. Nor has any mechanism for an accident or malfunction, which has not been previously evaluated in the UFSAR, been identified. Also, the change does not decrease the margin of safety as identified in the bases for any technical specification. No unreviewed safety question was involved.

**00-658-EV      R0      Revision to UFSAR 9.2.2.4.5.3**

This change revised the UFSAR to describe plant operation of the deborating demineralizers. There are two deborating demineralizers in the chemical and volume control system. UFSAR Section 9.2.2.4.5.3 stated that both deborating demineralizers contain anion resin. The chemical and volume control system also has a small cation demineralizer that was used to control the pH of the RCS by removing lithium as needed. Placing this cation demineralizer in service required an operator to enter the ion exchange valve gallery, which was a locked high radiation area. Due to the significant dose received by the operators, the pH control of the RCS was not always optimized. The deborating demineralizers can by design be placed in service from the central control room. It was recognized that if a deborating demineralizer was filled with cation resin, it could be used for lithium control resulting in a significant dose reduction and enhanced pH control of the RCS. One deborating demineralizer has the capacity to remove the quantity of boron required to maintain full power operation near the end of core life should the holdup tanks be full. There would be no detrimental effect on plant operation if the second deborating demineralizer were used for lithium control. No unreviewed safety question was involved.

**00-670-EV      R0      Temporary Application of InstaCote-ML to Portions of Reactor Cavity Floor and Walls**

This modification provided a temporary application of a plastic coating in order to decontaminate portions of the reactor cavity floor and walls, and provide a water tight seal in degraded areas of the cavity liner. The observed leakage during prior flood-ups for refueling has been minimal and did not represent a safety concern. The use of the coating

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was restricted to cold shutdown and refueling operation conditions, and was removed prior to plant startup. The application of the coating did not adversely affect any safety-related equipment required to be operational during these operating conditions. The coatings did not adversely affect the containment cooling system, containment purge and make-up air system, or residual heat removal system. No unreviewed safety question was involved.

**00-678-EV      R0      Justification for Continued Operation Without the 10 Inch Safety Injection Nozzle Thermal Sleeve**

This evaluation provided justification for continued operation without the thermal sleeve at the 10 inch safety injection nozzle on reactor coolant loop #23. The thermal sleeve was discovered missing during the 2000 outage. Since it was not possible to know how long the sleeve had been missing, it was assumed to be removed from initial startup. The usage factor for this nozzle without the thermal sleeve installed was evaluated by correlation to a similar plant that has had a detailed stress evaluation performed. It was concluded that operation through the next refueling outage is acceptable without the thermal sleeve installed based on an acceptable usage factor including conservative uncertainties. No unreviewed safety question was involved.

**00-692-TM      R0      Installation of Blind Flange on Safety Injection Side of Relief Valve 855**

Safety injection system relief valve 855 was required to be removed from service for maintenance and was removed from its normal location during implementation of a temporary operating instructions. In order to complete filling and venting of the system while 855 was removed from service, a blind flange was installed on the safety injection side of relief valve 855. The relief valve was removed only when the plant was in cold shutdown with RCS temperature less than 200 degrees F and maximum RCS pressure less than 450 psig. For these plant conditions, the safety injection system was not required to be operational per Technical Specification 3.3.A. The flange was removed and 855 placed back in service prior to leaving cold shutdown conditions. No unreviewed safety question was involved.

**00-700-TM      R0      RE-101 Central Control Room Radioactive Gas & Particulate Detection Trouble Alarm Removal**

The purpose for this temporary facility change was to remove from service the nuisance (spurious) alarms generated from the central control room CCR gas and particulate monitor, RE-101. These alarms annunciated several times per watch and were reset immediately. However, the spurious annunciation of these alarms created unnecessary operator burden (work around). The basis for the removal of the central control room radioactive gas and particulate trouble alarms was provided in Safety Evaluation SE 98-367-EV, Rev 1, titled, "Removal of Requirements for Radiation Monitor RE-101". Radiation monitor RE-101 was not required during normal operation and was not used during abnormal or accident conditions. No unreviewed safety question was involved.

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**00-724-PR      R0      Spent Fuel Movement with Alternative Load Measuring Instrument with Readout Capability**

A load measuring instrument with readout capability from the bridge was installed between the spent fuel bridge crane hoist and the fuel handling tool bail to monitor the weight of each fuel assembly. A plug was installed which bypassed the load cell protection features that were inoperable. Without the load cell operable, automatic underload, overload and slack cable protection would not be provided. Operator actions were used to monitor and control the load to ensure excessive loads were not applied to the fuel assemblies. It was determined that operation without the load cell did not impact operation of the spent fuel pit crane. Operator precautions and administrative controls ensured safe fuel handling operations. No unreviewed safety question was involved.

**00-726-PR      R0      Delete Incorrect Technical Specification Bases Statements that (1) Describe Assumptions Regarding Initial Containment Pressure and (2) Describe Containment Design Pressure of 47 psig as Peak Accident Pressure.**

This evaluation deleted an inaccurate Technical Specification 3.6 Bases statement that described the initial containment pressure assumed for the analysis of the containment peak pressure, and incorrectly described the containment design pressure as the peak accident pressure. The technical specification bases indicated that the containment peak pressure of 47 psig would not be exceeded if the internal pressure before a major loss of coolant accident were as much as 8 psig. Containment integrity analyses assumed 2 psig as the initial condition, and an analysis that uses 8 psig was not located. The containment design pressure is 47 psig. The deletion of this statement is supported by NRC Safety Evaluation Reports for License Amendments 148 and 149. No unreviewed safety question was involved.

**00-727-PR      R0      High Pressure Steam Dump Functional Test**

This safety evaluation evaluated the conduct of a post modification test of the high-pressure steam dump system. The modification improved the response time of the high-pressure steam dump valves. The valves regulate main steam pressure and reactor coolant temperature during plant start-up, shutdown and operating transients.

The post modification test evaluated the ability of the high-pressure steam dump system to maintain main steam pressure control. The safety evaluation concluded that the UFSAR steam line break, loss of electrical load, and excess load increase accident analysis would envelop any potential failures during the test. The test contained prerequisites and contingency actions to prevent and mitigate the consequences of high-pressure steam dump system failures during the test. No unreviewed safety question was involved.

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**00-728-PR      R0      23 Auxiliary Feed Water Pump Filling of 21 and 22 Steam Generators**

This change utilized temporary hose connections to fill 21 and 22 steam generators using 23 auxiliary feedwater pump. This feedwater pump is normally aligned to 23 and 24 steam generators, with 21 auxiliary feedwater pump aligned to 21 and 22 steam generators. This change allowed filling 21 and 22 steam generators with 21 auxiliary feedwater pump unavailable, while the reactor was in cold shutdown and the auxiliary feedwater system was not required to be available for decay heat removal. Temperatures and pressures were consistent with those of a normal filling evolution. The pressure ratings of the hose installations used were greater than the operating pressure. Postulated failure of a hose connection would not result in any adverse safety consequences based on the plant conditions during the filling evolution. No unreviewed safety question was involved.

**00-736-MM      R0      Hotwell Sextant and Steam Generator Blow Down Alarm Conversion to Sodium**

This modification converted the central control room panel 1FAF window 1-5 and FCF window 1-11 from a chloride alarm function to a sodium alarm function. The wiring associated with the steam generator blowdown chloride and sodium recorders were swapped to allow the sodium current loop to supply the central control room bistables. Also, wiring was swapped to allow the sextant sodium current loop to supply the central control room bistables. The modification also changed the setpoints consistent with EPRI guidelines. No unreviewed safety question was involved.

**00-737-TR      R0      Valve 1863 Temporary Repair**

The temporary modification repaired the damaged valve stem of valve 1863 which provides an alternate flow path for recirculation from the residual heat removal pumps to the safety injection pumps. The uppermost square portion of the valve stem was sheared off. The temporary repair restored the valve stem similar to the original configuration. The valve stem was restrained from turning. The design function of the valve to remain open was not lost. However, the closure of the valve, if necessary for testing, would require the removal of the temporary repair. The alternate recirculation flow path to be used following a design basis accident would not be lost should a passive failure occur in the safety injection piping. No unreviewed safety question was involved.

**00-747-MM      R0      BITL-1 and BITL-2 Relay Removal**

This modification removed two presently energized BITL-1 and BITL-2 engineered safety features actuation system circuitry relays that were functionally eliminated by modification MPE-85-50714 and were not being used. The energized relays were not tested. The modification electrically removed these circuits from the circuitry to eliminate a potential failure mode (short across the coil) from disabling the circuits. The modification did not adversely affect the ability of the engineered safety features actuation system from performing its intended design function. No unreviewed safety question was involved.

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**00-753-TM      R0      Isolation of #12 Sodium Hypochlorite Tank**

The proposed change resulted in the isolation of sodium hypochlorite storage tank #12 (12HT) including the bubbler system (level indication) and the administrative control of valve positions to ensure that the pressure relief path for 11HT and the system piping was maintained. The chlorination system is used to control biological fouling of the Indian Point Unit No. 2 service water and circulating water system and the Indian Point Unit No. 1 river water systems. The chlorination system does not perform any important to safety function and is classified as NA. The isolation of 12HT reduced the original design capacity of the tanks from 8000 gallons to 4000 gallons as discussed in UFSAR Section 10.2.4 and resulted in increased chemical deliveries. However, the isolation of 12HT did impact the operation of the chlorination system through the use of the remaining 11HT, and will not change the injection rate for sodium hypochlorite. Based on the above, the proposed change has no impact on the operation of any safety-related structures, systems or components. No unreviewed safety question was involved.

**00-761-PR      R0      SAO-460, Revision 11, 10 CFR 50.59 Reviews**

SAO-460, Revision 11, was a complete rewrite of SAO-460, "10 CFR 50.59 Reviews". This revision was developed to implement the new 10 CFR 50.59 rule. SAO-460, Revision 11 was consistent with NEI 96-07, R1 (industry guidance endorsed by NRC on 11/14/00 through Regulatory Guide 1.187) and the generic 50.59 procedure, forms, and resource manual provided by the Utilities Service Alliance (USA). The USA generic 50.59 procedure was modified to conform to procedural requirements, Indian Point Station unique conditions, and to impose a temporary in-line review of screens and evaluations by an assessor. Significant changes included the addition of the Applicability Determination; new criteria for determining if a 50.59 Evaluation was required; new criteria for determining if a license amendment was needed; elimination of terms such as unreviewed safety question, margin of safety, and safety; new station-wide 50.59 Training and Qualification requirements; addition of requirement to have 50.59 Screens and Evaluations reviewed by an Assessor (temporary in-line review until the quality of 50.59 Screens and Evaluations reach management's expectation); change in the responsibilities including transfer of responsibility for preparation, review, approval, and distribution of screens and evaluations from NS&L to the organization originating the proposed activity; and elimination of the Change of Scope, Safety Impact Questionnaire, Safety Impact Levels, instructions specific for Major Modifications, other modifications, Temporary Facility Changes, Temporary Repairs, procedures, and other changes, Design Memo, classification/Part 21 Determination, Station Nuclear Safety Committee Review Applicability Matrix, and old guidance. No unreviewed safety question was involved.

**00-762-PR      R0      Emergency Operating Procedure Revision 36**

Revision 36 of the emergency operating procedures were implemented to address operator actions regarding recirculation flow and recirculation spray flow, recirculation spray duration time, service water flow to the component cooling water heat exchangers,



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and procedure sequence errors for energizing lighting and MCCs from the EDGs. Setpoint changes were also incorporated. The proposed changes have no impact on plant components, and would improve operator response during and following a plant transient. No unreviewed safety question was involved.

**00-780-EV      0      Indian Point Unit No. 2 Restart Support**

This vendor safety evaluation was prepared to change various safety analyses input assumptions that were identified as part of the restart readiness review. The following is a brief summary of the key changes that were evaluated in support of restart:

- reduced residual heat removal/low head safety injection flow rates (injection recirculation, and recirculation spray)
- delayed time for opening service water valves to the component cooling water heat exchangers
- reduced minimum RWST deliverable water volume
- revised component cooling water flowrates
- revised ultimate heat sink calculation due to revised post-loss of coolant accident component cooling water flowrates
- steam generator secondary side water level operating level increase
- revised pressurizer surge line and accumulator discharge line calculations
- revised EDG load study due to various plant changes
- revised containment spray flow during the injection phase
- accumulator volume reduction
- containment liner thermal properties
- revised containment fan cooler performance due to elimination of filters
- revised initial containment air temperature from 90 Degrees F to 80 Degrees F.
- accumulator pressure change
- maximum condensate storage tank/auxiliary feedwater temperature increase

It was determined that all pertinent design and licensing basis acceptance criteria were met as a result of these changes. The functional requirements of plant system and components related to accident mitigation have not been altered. In addition, there was no effect on the radiological consequence evaluations as described in the UFSAR. No unreviewed safety question was involved.

**00-783-SP      R0      Accumulator Pressure Low and High Alarm Setpoint Change**

This change decreased accumulator pressure high alarm setpoint from 680 to 658 psig and accumulator pressure low alarm setpoint from 640 to 630 psig. The change ensured that the normal operating pressure range for the emergency core cooling system accumulators were consistent with License Amendment No. 188, Technical Specification 3.3.A.1.c. The new alarm setpoints included channel accuracy allowance to ensure that the low pressure alarm actuates prior to reaching technical specification limit of 598 psig and the high pressure alarm actuates prior to reaching technical specification limit of 685 psig. The alarm setpoint changes did not affect any protection or control functions. Thus,

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the safety-related functions of the accumulators were not affected by this setpoint change. No unreviewed safety question was involved.

**01-060-EV      R0      UFSAR Change to Reflect New Vendor Supplied Net Positive Suction Head Required Values and Correct Design Temperature Value for the Containment Spray Pumps**

This change modified UFSAR Figure 6.3-1 to reflect required net positive suction head values for the containment spray pumps based on data supplied by the pump vendor. The change represented a slight increase in the required net positive suction head from that previously specified. Additionally, a change was made to the containment spray pumps design temperature value based on information from the pump data sheet. The change in required net positive suction head was insignificant with respect to the available net positive suction head. Substantial margin was still available. The revised design temperature value was still substantially higher than the RWST design temperature and the RWST temperature assumed in the UFSAR Chapter 14 accident analyses. No unreviewed safety question was involved.

**01-072-EV      R0      Changes to UFSAR Figures 5.1-14 through 5.1-16**

UFSAR Figures 5.1-14 through 5.1-16 were changed to reflect the correct loading diagrams for the vapor containment basemat. The corrected loading diagrams were based on the original design basis calculations that documented the appropriate loading diagrams for the basemat. The changes were found to have no adverse impact on the basemat or any other structures, systems or components. No unreviewed safety question was involved.

**01-086-EV      R0      Change to UFSAR Tables 4.3-1 and 4.3-2**

The analytical report of the reactor vessel was revised based upon evaluation of the maximum primary plus secondary stress intensity ranges and the cumulative usage factors resulting from installation of the replacement steam generators. The evaluation considered the design and operating parameters, nuclear steam system suppliers design transients and design interface loads associated with the replacement steam generators. The effects of higher upper head temperatures were also evaluated. The results indicated that the stress intensity and fatigue usage factors were within the requirements of the ASME Section III code. UFSAR Tables 4.3-1 and 4.3-2 were revised to reflect the results of the evaluation. No unreviewed safety question was involved.

**01-090-EV      R0      Correction of Batching Tank Descriptions in UFSAR Section 9.2.2**

UFSAR Section 9.2.2 and 9.2.2.4.18 were changed to correct descriptions of boric acid transfer from the batching tank. Section 9.2.2 was revised to provide a description of the alignment of chemical and volume control system components for boric acid transfer and the requirement to sample following this transfer to a boric acid storage tank. Section

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9.2.2.4.18 was revised to remove an inaccurate description, since the batching tank was not used for solution storage and did not require sampling before each individual batch was transferred. No physical changes were made to the plant. The changes were consistent with operating procedures for boric acid transfer. No unreviewed safety question was involved.

**01-108-EV      R0      UFSAR Section 6.2.2.3.3 RWST Licensing and Design Basis Information Update, and RWST Technical Specification Bases for Technical Specification 3.3.A.1.a and 3.3.A.1.k**

This change updated UFSAR Section 6.2.2.3.3 and Technical Specification Bases 3.3.A.1.a and 3.3.A.1.k to include current licensing and design basis information for refueling water storage tank total inventory, inventory delivered during the post-LOCA injection phase, and during the recirculation phase. There were no changes to the safety related functions of the RWST, or RWST levels or instrumentation settings. The changes are supported by the current licensing basis for Indian Point Unit No. 2 and design basis calculations. The RWST inventory values remained conservative and bounding for accidents analyzed in UFSAR Chapter 14. No unreviewed safety question was involved.

**01-114-EV      R0      UFSAR Revision to Reflect Retirement of Chemical and Volume Control System Holdup Tank and Waste Storage Tank Area Outside Air Makeup Tempering Unit Steam Coil and Removal of Two Dampers from the Air Makeup Unit**

The previous design for the waste storage tank and chemical and volume control system hold up tank heating ventilating and air conditioning make up air tempering unit had two motor operated dampers that would open when a PAB supply fan was running and close if both PAB supply fans were off. The motor operated dampers were removed and these control logic features were deleted. The previous design also used a steam coil for tempering/heating outside air during cold weather conditions. This steam supply was cut and capped and the outside air intake was placed in the freeze protection program for zone 4, extreme cold weather conditions. No unreviewed safety question was involved.

**01-117-EV      R0      Acceptability of Vapor Containment Liner Insulation at 130 Degrees F**

The evaluation was prepared to support the required changes to UFSAR Sections 5.1.2.3 and 5.1.7 to indicate the vapor containment liner insulation is capable of performing its function under a higher operating temperature of 130 Degrees F. The UFSAR indicated that the vapor containment liner insulation was tested to resist temperatures up to 120 Degrees F. License Amendment 149 increased the maximum containment operating temperature to 130 Degrees F. Calculations were performed that demonstrated that the current liner insulation is capable of resisting the higher temperature and performing its safety function. The current vapor containment liner insulation configuration would not adversely impact the current containment integrity analyses, and would not adversely

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impact safety related equipment located within the vapor containment. No unreviewed safety question was involved.

**01-128-EV      R0      UFSAR Chapter 7 Sections to Correct/Clarify Statements Regarding Rod Control System and Turbine Trip with Reactor Trip**

The change included a correction of UFSAR Section 7.3.2.1.1 that indicated the digital rod position indication provides a direct indication of rod position. The digital rod position indication indicated the "demand" signal to the rod drives but did not directly indicate rod position. The elimination of the statement regarding direct position indication did not invalidate the conclusion that there is very little possibility that rearrangement of the control rod sequence could be made. The digital and analog system are separate systems, and each serve as backup to the other. Operating procedures required the operator to compare the digital and analog readings upon recognition of any apparent malfunction. The change also included a correction to UFSAR Section 7.3.4.5 to indicate that full load Tav<sub>g</sub> was higher (versus significantly greater) than the saturation temperature at the steam generator safety valves setpoint. The statement continues to support the need for the heat sink to remove heat stored in the reactor coolant to prevent actuation of the safety relief valves. The availability of a heat sink was not altered by this change. The change provided clarification that reflect the existing plant design and configuration. No unreviewed safety question was involved.

**01-159-EV      R0      UFSAR Updates and Clarifications for the Seal Water System, RCS Valve Seal Leakoff, Fan Cooler Condensate Equation, and Weld Channel Pressurization**

Section 6 of the UFSAR was revised as a result of the 10CFR50.54(f) review conducted for Indian Point 2. These changes included a clarification for the discussion on the high-pressure portion of the seal water system, which provided 250 psig nitrogen to seals in lines that carry post-accident recirculation water, and was in excess of those internal post-accident pressures. Updated the section discussing seal leakoff to the reactor coolant drain tank for valves in containment. Corrected a minus sign error in the equation for containment fan cooler condensate rate given a small leak in the RCS. Clarified how the weld channel pressurization system works and the setting of containment pressure switches versus incident pressure and nitrogen regulator backup supplies. No unreviewed safety question was involved.

**01-191-MD      R0      Evaluation of Safety Injection Nozzle with Missing Thermal Sleeve**

Sections 4.1.7 and 4.2.2.7 of the UFSAR describe thermal sleeves contained within the safety injection nozzle to the cold leg of the RCS. The function of this sleeve was to reduce the thermal shock to the nozzle.

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A video inspection revealed that at some point in the life of the plant the thermal sleeve on 10-RCS-2501R Line 353 became dislodged, as it was no longer in place. Nine pieces were found during the 2000 spring outage on the lower core support plate and on the bottom of the reactor vessel during a foreign object search and retrieval. These pieces were subsequently identified as being part of the thermal sleeve.

The UFSAR has been changed to reflect that Line 353 no longer has a thermal sleeve.

A detailed analysis by Westinghouse demonstrated that the fatigue usage factor and stresses for the 10 inch accumulator nozzle in line 353 still met the requirements of ASME Section III of the Boiler and Pressure Vessel Code for continued operation through the life of the plant with the thermal sleeve missing.

On this basis it was concluded that continued operation without the thermal sleeve did not result in an increase in the probability of or consequence of an accident previously evaluated. There was no increase in the possibility of an accident different than any evaluated in the UFSAR. There was no increase in the probability of or consequences of a malfunction of equipment important to safety as previously evaluated in the UFSAR. There was also no possibility of creation of a malfunction of equipment important to safety different than any evaluated in the UFSAR. There was no reduction in the margin of safety as defined in the Technical Specification. No unreviewed safety question was involved.

ATTACHMENT 3  
LIST OF ACRONYMS

Attachment 3

List of Acronyms

AMSAC	ATWS Mitigating System Actuation Circuitry
ATWS	Anticipated Transient Without Scram
ConEd	Consolidated Edison Company of New York
CR	Change Request
DC	Direct Current
EDG	Emergency Diesel Generator
HEPA	High-Efficiency Particulate Air
HRSS	High Radiation Sampling System
MCC	Motor Control Center
NRC	Nuclear Regulatory Commission
NYPA	New York Power Authority
PAB	Primary Auxiliary Building
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RMS	Radiation Monitoring System
RWST	Refueling Water Storage Tank
SGR	Steam Generator Replacement
UFSAR	Updated Final Safety Analysis Report