December 22, 2005

Mr. Fred R. Dacimo
Site Vice President
Entergy Nuclear Operations, Inc.
Indian Point Energy Center
295 Broadway, Suite 1
P.O. Box 249
Buchanan, NY 10511-0249

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT 3 - NRC SAFETY SYSTEM DESIGN AND PERFORMANCE CAPABILITY INSPECTION REPORT 05000286/2005009

Dear Mr. Dacimo:

On November 18, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed a safety system design and performance capability team inspection at Indian Point Nuclear Generating Unit 3 (IP3). The enclosed report documents the inspection findings, which were discussed on November 18, 2005, with you and members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspection team reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of the inspection, no findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Lawrence T. Doerflein, Chief
Engineering Branch 2
Division of Reactor Safety

Docket No. 50-286
License No. DPR-64

Enclosure: NRC Inspection Report 05000286/2005009
w/Attachment: Supplemental Information

cc w/encl:
G. J. Taylor, Chief Executive Officer, Entergy Operations, Inc.
M. R. Kansler, President - Entergy Nuclear Operations, Inc.
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Public Citizen's Critical Mass Energy Project
M. Mariotte, Nuclear Information & Resources Service
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Congresswoman Nita Lowey
Senator Hillary Rodham Clinton
Senator Charles Schumer
J. Riccio, Greenpeace
A. Matthiessen, Executive Director, Riverkeeper, Inc.
M. Kaplowitz, Chairman of County Environment & Health Committee
A. Reynolds, Environmental Advocates
M. Jacobs, Director, Longview School
D. Katz, Executive Director, Citizens Awareness Network

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OFFICE	RI/DRS		RI/DRS		RI/DRS			
NAME	SPindale/*SMP*		BMcDermott/*DEJ for*		LDoerflein/*LTD*			
DATE	12/08/05		12/12/05		12/22/05			

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.	50-286
License No.	DPR-64
Report No.	05000286/2005009
Licensee:	Entergy Nuclear Northeast
Facility:	Indian Point Nuclear Generating Unit 3
Location:	295 Broadway, Suite 3 Buchanan, NY 10511-0308
Dates:	October 31, 2005 - November 18, 2005
Inspectors:	S. Pindale, Senior Reactor Inspector (Team Leader) K. Diederich, Reactor Inspector J. Krafty, Reactor Inspector J. Kulp, Reactor Inspector T. Sicola, Reactor Inspector J. Chiloyan, NRC Contractor
Approved by:	Lawrence T. Doerflein, Chief Engineering Branch 2 Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000286/2005009; 10/31/05 - 11/18/05; Indian Point Nuclear Generating Unit 3; Engineering Team Inspection.

This inspection was conducted by five inspectors from the NRC's Region I Office and an NRC contractor. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Mitigating Systems and Barrier Integrity

1R21 Safety System Design and Performance Capability (SSD&PC) (IP 71111.21)

1. Inspection Basis

The NRC team performed an inspection to verify that the selected safety systems would achieve their design and performance capability. The inspection effort reviewed the licensee's programs and methods for monitoring the capability of selected safety systems to perform the current design basis functions. The scope of the team's inspection also included non safety-related structures, systems and components that provided functions required to support the selected system's safety functions.

The systems reviewed during this inspection were selected by the inspection team using information from the licensee's and NRC's probabilistic risk analysis models. The models were used to identify the most risk significant systems, structures, and components in the mitigating system and barrier integrity cornerstones. The team also used deterministic criteria in the selection process by considering previous SSD&PC sample selection, recent inspection history, site problem history, and operational experience. The two systems selected for review were:

- High Head Safety Injection (HHSI) System
- Component Cooling Water (CCW) System

The inspection included review and examination of support systems, such as electrical power, instrumentation, and related structures and components. The team assessed the adequacy of calculations, analyses, engineering processes, and engineering and operating practices that were used by the licensee to support the performance of the selected safety systems and associated support systems during normal, abnormal, and accident conditions. Acceptance criteria utilized by the NRC inspection team included NRC regulations, the technical specifications, applicable sections of the Updated Final Safety Analysis Report (UFSAR), applicable industry codes and standards, as well as industry initiatives implemented by the licensee's programs. The team also assessed the licensee's ability to monitor the system for age related degradation that could result in the system failing to fulfill its design requirement. A complete list of documents reviewed is included in the attachment to this report.

2. System Needs

a. Inspection Scope

The team inspected the following attributes of the two systems and associated support systems: Process Medium, Energy Sources, Controls, Operator Actions, and Heat Removal. The inspectors verified the above attributes met the requirements and design basis specifications identified in the UFSAR, technical specifications, licensee

commitments, design basis documents, vendor technical manuals and plant drawings. A complete list of documents reviewed is included in the attachment. The attributes were verified to meet system requirements as described below:

Process Medium. The team verified that the HHSI and CCW systems would supply the required flow rate and pressure during transients and design basis events, and that sufficient water sources were available to meet requirements.

Energy Sources. The team verified that electric power, control power and air supplies for the HHSI and CCW systems would be available during postulated design basis events; and were adequate to energize/actuate the associated equipment.

Controls. The team reviewed the automatic and manual controls for the HHSI and CCW systems to assure that the automatic and manual control functions would be available for initiation, control and shutdown actions. Additionally, a review of alarms and indicators was performed to ensure that operator actions could be accomplished in accordance with the design assumptions.

Operator Actions. The team reviewed normal, abnormal and emergency operating procedures associated with the HHSI and CCW systems to verify that selected operator actions assumed in the design bases could be completed. The team placed particular focus on those operator actions that were risk significant as identified in licensee and NRC risk documents. Additionally, the team verified that operators were able to manually initiate the systems, monitor components and system indications, automatically or manually control system functions, and shutdown the selected systems.

Heat Removal. The team verified that room ventilation systems provided sufficient heat removal capability for the HHSI and CCW systems to maintain acceptable environmental conditions in the room. Additionally, the team verified temperature rise on system components due heat generated by the system was limited such that component temperature qualification was not exceeded.

b. Findings

No findings of significance were identified.

3. System Condition and Capability

a. Inspection Scope

The team inspected the following attributes of the HHSI and CCW systems and associated support systems: Installed Configuration, Operation, Design, and Testing. The inspectors verified the above attributes met the requirements and design basis specifications identified in the UFSAR, technical specifications, licensee commitments, design basis documents, vendor technical manuals, calculations and plant drawings. A

complete list of documents reviewed is included in the attachment to this report. The attributes were verified to meet system requirements as described below:

Installed Configuration. The team confirmed that the installed configuration of the HHSI and CCW systems were in agreement with design basis assumptions by performing detailed system walkdowns of accessible portions of the systems. The walkdowns focused on the installation and configuration of piping and instruments; component material condition; licensee identified deficiencies; the placement of protective barriers; the susceptibility to flooding, fire, or other environmental concerns; physical separation of redundant trains; and provisions for seismic and other pressure transient concerns. The team compared their observations of the currently installed configuration of the systems with the design and licensing bases to assure that the system would be capable of functioning during plant transients or accident conditions. Additionally, the team determined if the licensee had identified system deficiencies and entered them into the corrective action program.

Operation. The team performed a procedure walk-through of selected manual operator actions to confirm that the operators had the ability, access and tools necessary to accomplish actions credited in the design basis. The team verified that the performance of operations procedures was consistent with the design and licensing bases.

Design. The team reviewed the mechanical, electrical, and instrumentation design of the HHSI and CCW systems to verify that the systems and subsystems would function as required under design conditions. This included a review of the design basis, design changes, design assumptions, calculations, boundary conditions, and models as well as a review of selected modification packages. Instrumentation was reviewed to verify appropriateness of applications and setpoints based on the required equipment function. Additionally, the inspectors performed limited independent calculations and analyses in several areas to verify the appropriateness of the design values.

Testing. The team reviewed records of selected periodic testing including In-Service Testing, post maintenance tests and calibration procedures. The team verified that the results obtained by system and component testing adequately demonstrated that the systems met operability requirements. The test results were compared against system calculations, drawings, and procedures. Test results were also reviewed to ensure automatic initiations occurred within required times and that testing was consistent with design basis information.

b. Findings

No findings of significance were identified.

4. System Components

a. Inspection Scope

The team selected several risk significant components in the HHSI and CCW systems to ensure equipment at the component level met design requirements. The components selected for detailed review included:

- Refueling Water Storage Tank (RWST);
- RWST Level Control/Indication System;
- HHSI suction, minimum flow, and recirculation valves (from containment sump);
- CCW pumps and heat exchangers.

The team inspected the following attributes of the HHSI and CCW components: Component Degradation, Environmental Qualification, Equipment Protection, Input/Output, and Operating Experience. The team verified the above attributes met the requirements and design basis specifications identified in the UFSAR, technical specifications, licensee commitments, design basis documents, vendor technical manuals, calculations and plant drawings. A complete list of documents reviewed is included in the attachment to this report. The attributes were verified to meet system requirements as described below:

Component Degradation. The team reviewed the licensee's maintenance and operations procedures to determine how potential age related degradation of the selected components was monitored and corrected. The team verified that component and/or component materials replacement are scheduled prior to exceeding its expected qualified life or allowed number of cycles. Additionally, the team verified that deficiencies that could potentially reduce the life expectancy of the components, such as boric acid corrosion, were evaluated and corrected.

Environmental Qualification. The team verified that the equipment was qualified to operate under the environment in which it could be subjected under normal and accident conditions. The team reviewed design information, specifications, and documentation to ensure that the HHSI and CCW components were qualified to operate within normal and accident environments. These included a review of the temperatures, pressures, humidity and radiation fields in which selected components could be exposed.

Equipment Protection. The team verified that the HHSI and CCW system components were adequately protected from natural phenomenon and other hazards, such as high energy line breaks, fire, floods or missiles. The team reviewed design information, specifications, and documentation to ensure that system components were adequately protected from those hazards identified in the UFSAR that could impact their ability to perform their safety function.

Input/Output. The team verified that the HHSI and CCW system components input and output were adequate to provide the required signal to the receiving component during event or accident conditions. The team reviewed design information, specifications, and

documentation to ensure that system components were adequately designed to ensure component status information required to enable operators to make decisions and signals used for control of equipment operation as described in the UFSAR would be present during events.

Operating Experience. The team verified that insights from operating experience of similar systems had been reviewed and adequately evaluated by the licensee for the HHSI and CCW systems.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Inspection Scope

The team reviewed a sample of HHSI and CCW system problems that were identified by the licensee and entered into the corrective action program. The team reviewed these issues to verify an appropriate threshold for identifying issues and to evaluate the effectiveness of corrective actions related to design or qualification issues. In addition, condition reports written on issues identified during the inspection were reviewed to verify adequate problem identification and incorporation of the problem into the corrective action system. The specific corrective action documents that were sampled and reviewed by the team are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

The lead inspector presented the inspection results on November 18, 2005, to Mr. F Dacimo and other members of Entergy staff. The team reviewed proprietary information during the inspection, which was either returned to Entergy or was destroyed. The inspection team verified that this inspection report does not contain proprietary information.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

E. Anderson, Design Engineer
J. Bencivenga, Design Engineer
W. Bloss, Licensing Engineer
R. Burroni, Assistant Operations Manager
L. Cerra, Design Engineer
T. Chan, System Engineer
T. Czerniewski, Supervisor, Engineering
G. Dahl, Licensing Engineer
T. Dempsey, Design Engineer
R. Drake, Engineering Supervisor
E. Firth, Corrective Action Program
J. Herrera, System Engineer
C. Ingrassia, System Engineer
M. Johnson, System Engineer
K. Lo, Design Engineer
A. Mihalik, Programs and Components Engineer
B. Monahan, Superintendent, Nuclear
T. Moran, Component Engineer
S. Petrosi, Supervisor, Engineering
H. Robinson, Design Engineer
D. Shah, System Engineer
R. Sutton, System Engineer
M. Tesoriero, Supervisor, Programs and Components
M. Troy, Supervisor, Engineering
F. Weinert, Design Engineer
J. Whitney, System Engineer

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

None.

LIST OF DOCUMENTS REVIEWED

Procedures

3-AOP-CCW-1	Loss of Component Cooling Water, Rev. 1
3-MCC-001-ELC	480V MCC Inspection, Rev. 26
3-PC-OL27A	Bus 2A 480V Degraded Grid Voltage Relays Calibration, Rev. 1
3-PC-OL27B	Bus 3A 480V Degraded Grid Voltage Relays Calibration, Rev. 0

3-PC-OL27C	Bus 5A 480V Degraded Grid Voltage Relays Calibration, Rev. 0
3-PC-OL27D	Bus 6A 480V Degraded Grid Voltage Relays Calibration, Rev. 0
3-PC-OL27E	Bus 2A 480V UV Relays Inspection and Calibration, Rev. 0
3-PC-OL27F	Bus 3A 480V UV Relays Inspection and Calibration, Rev. 0
3-PC-OL27G	Bus 5A 480V UV Relays Inspection and Calibration, Rev. 0
3-PC-OL27H	Bus 6A 480V UV Relays Inspection and Calibration, Rev. 0
3-PT-M62A	480V UV/Degraded Grid Protection Bus 2A and 3A Functional, Rev. 1
3-PT-M62B	480V UV/Degraded Grid Protection Bus 5A Functional, Rev. 1
3-PT-M62C	480V UV/Degraded Grid Protection Bus 6A Functional, Rev. 1
3-SOP-EL-005	Operation of On Site Power Sources, Rev. 17
3-SOP-EL-015	Operation of Non-Safeguards Equipment During Use of EOPs, Rev. 16
3PT-CS003	Auxiliary Coolant System Valves, Rev. 16
3PT-CS040	Safety Injection Pumps Suction Check Valve Operability Test, Rev. 3
3PT-Q019	CCW to Excess Letdown Valve Test AC-791/793/796/798, Rev. 14
3PT-Q036	IST Strike Test of Valves AC-MOV-822A & B and AC-751A & B, Rev. 18
3PT-Q088	Component Cooling Pumps Functional Test, Rev. 13
3PT-Q116A	31 SI Pump Functional Test, Rev. 8
3PT-Q116C	33 SI Pump Functional Test, Rev. 10
3PT-Q119A	31 and 32 Auxiliary Component Cooling Pumps Functional Test, Rev. 0
BKR-016-CUB	480V Switchgear Cubicle Inspection and Cleaning, Rev. 4
E-0	Reactor Trip or Safety Injection, Rev. 21
E-1	Loss of Reactor or Secondary Coolant, Rev. 18
E-2	Faulted Steam Generator Isolation, Rev. 13
E-3	Steam Generator Tube Rupture, Rev. 20
ECA-0.0	Loss of All AC Power, Rev. 16
ECA-0.2	Loss of All AC Power Recovery with SI Required, Rev. 13
ECA-1.1	Loss of Emergency coolant Recirculation, Rev. 14
EES-7B	Thermal Overload Relay Heater Sizing, Rev. 2
EES-8	Selection and Replacement of Fuses, Rev. 2
EN-LI-102	Corrective Action Process, Rev. 2
EN-LI-119	Apparent Cause Evaluation Process, Rev. 3
EN-HU-101	Human Performance Program, Rev. 1
ES-0.0	Rediagnosis, Rev. 10
ES-0.1	Reactor Trip Response, Rev. 18
ES-1.1	SI Termination, Rev. 16
ES-1.2	Post-LOCA Cooldown and Depressurization, Rev. 12
ES-1.3	Transfer to Cold Leg Recirculation, Rev. 25
ES-1.4	Transfer to Hot Leg Recirculation, Rev. 15
ESS-6B	Control of Electrical Distribution System Changes, Rev. 1
FR-H.1	Response to Loss of Secondary Heat Sink, Rev. 18
FR-S.1	Response to Nuclear Power Generation/ATWS, Rev. 14

Completed Surveillances

3-VLV-005-GEN, 8Y PM, Open and Inspect of SI-838D (3/24/05)
3PT-Q83, RWST Level Instrument Check/Calibration (LIC-921), (5/26/05, 8/18/05)
3PT-Q116C, 33 SI Pump Functional Test, Rev. 10, Rev. 10 (9/29/05)

3PT-W019, Offsite Power Sources and AC Distribution, (10/25/05, 10/28/05, 10/29/05)
HTX-004-CCW, CCW Heat Exchanger Maintenance, (31 CCW Heat Exchanger, 3/8/04)
HTX-004-CCW, CCW Heat Exchanger Maintenance, (32 CCW Heat Exchanger, 1/5/04)
IC-PC-I-F-924A, Safety Injection Coolant Loop No. 1 Cold Leg Flow (3/31/03, 3/21/05)
IC-PC-I-F-925, Safety Injection Coolant Loop No. 2 Cold Leg Flow (3/16/05)
IC-PC-I-F-926, Safety Injection Coolant Loop No. 1 Cold Leg Flow (3/14/05)
IC-PC-I-F-926A, Safety Injection Coolant Loop No. 3 Cold Leg Flow (6/23/99)
IC-PC-I-F-927, Safety Injection Coolant Loop No. 4 Cold Leg Flow (6/23/99)
IC-PC-I-F-980, Safety Injection Coolant Loop No. 3 Cold Leg Flow (3/15/05)
IC-PC-I-F-981, Safety Injection Coolant Loop No. 2 Cold Leg Flow (3/13/05)
IC-PC-I-F-982, Safety Injection Coolant Loop No. 4 Cold Leg Flow (3/25/05)

Drawings

5651D72	Logic Diagrams Safeguards Sequence, Sh. 8A, Rev. 4
5651D72	Logic Diagram EDG Starting & 480V Bus Clearing, Sh. 7, Rev. 12
5651D72	Logic Diagram EDG Starting & 480V Bus Clearing, Sh. 2, Rev. 4
5651D72	Logic Diagram Index and Symbols, Sh. 1, Rev. 12
617F644	480V One Line Diagram, Rev. 30
617F645	Main One Line Diagram, Rev. 17
9321-F-27203	Flow Diagram Auxiliary Coolant System Inside Containment, Rev. 29
9321-F-27223	Flow Diagram SW System Nuclear Steam Supply Plant, Rev. 41
9321-F-27353	Flow Diagram SI System, Sh. 1, Rev. 39
9321-F-27503	Flow Diagram SI System, Sh. 2, Rev. 43
9321-F-27513	Flow Diagram Auxiliary Coolant System in PAB & FSB Sh. 2, Rev 42
9321-F-27513	Flow Diagram Auxiliary Coolant System in PAB & FSB Sh. 1, Rev. 29
9321-F-30073	Three Line Diagram Low Voltage, Rev. 25
9321-F-55003	PAB Restraint & Support Design Lines 199, 209 & 211, Rev. 11
9321-F-55023	Pipe Trench Area Restraint & Support Design Lines, Rev. 10
9321-F-55033	PAB Restraint & Support Design Lines, Rev. 11
9321-F-55063	Pipe Trench Area Restraint & Support Design Lines, Rev. 6
9321-F-55393	PAB Restraint & Support Design Lines 52 Sh. 3, 52A Sh, 3, Rev. 11
9321-F-55433	Containment Building Restraint & Support Design Lines, Rev. 6
9321-LL-31173	Schematic Diagram 480V Switchgear 31, Sh. 2, Rev. 17
9321-LL-31173	Schematic Diagram 480V Switchgear 31, Sh. 4, Rev. 15
9321-LL-31173	Schematic Diagram 480V Switchgear 31, Sh. 1, Rev. 15
9321-LL-31173	Schematic Diagram 480V Switchgear 31, Sh. 14, Rev. 12
9321-LL-31173	Schematic Diagram 480V Switchgear 31, Sh. 8, Rev. 13
9321-LL-31173	Schematic Diagram 480V Switchgear 31, Sh. 6, Rev. 23

Calculations/Evaluations

00-000715	Swagelock P/N SS-FM8-SL8-SL8-18, Rev. 0
2039-04-23-01	SI Pump Mechanical Seal Heat Exchanger Replacement, Rev. 1
32-1200105-02	SI-MOV-856C/E/H/J Differential Pressure Calculation, 2/1/94
32-1200106-01	SI-MOV-856B/G Differential Pressure Calculation, 1/31/94
6604.346-F-PAB-002	Long Term Temperature in PAB after LOCA, Rev. 0

8399.164-F-CCW-090	Evaluation of Reduced Flow to SI Pumps, Rev. 0
96-008737	Technical Evaluation for SI Pump Seal Heat Exchanger, Rev. 1
CALC-32-1200483	MOV Terminal Voltage at Start (PH1), Rev. 4
CALC-32-1206235	MOV Terminal Voltage at Start (PH2), Rev. 1
CN-CRA-02-77	IP3 - LOCA Doses for the Stretch Power Uprate, Rev. 5
CN-SEE-03-59	Development of the Revised IP3 HHSI Cold Leg Injection Phase, Cold Leg and Hot Leg Recirculation Phase for the SPU, Rev. 0
CN-SEE-03-129	HHSI Analysis of an Inadvertent Closure of a Cold Leg Branch Line MOV 856 for the Stretch Power Uprate Program, Rev. 0
CN-SEE-04-19	HHSI System Modification Hydraulic Requirements, Rev. 1
CN-SEE-04-68	Partial Plugging of the New Control Valves during the HHSI Recirculation Phase for the IP3 HHSI Modifications, Rev. 0
ENN-DC-115	Engineering Design Change to Move 32 EDG Contacts, Rev. 4
ENN DC-126	Thrust and Torque Limits for MOV AC-FCV-625, Rev. 1
ER-05-3-061	Installation of Vents on All SI Pump Casings, Rev. 0
FSE/SS-INT-1722	HHSI/LHSI Flow Balancing, Rev. 0
INT-1709	CCW Pump Runout Evaluation, 2/4/92
IP3-CALC-CC-01038	Analysis of Thrust / Torque Limits for MOV AC-FCV-625, Rev. 6
IP3-CALC-CCW-01343	SI Circ. Water Pump NPSH Available, Rev. 0
IP3-CALC-CCW-01418	CCW Flows vs. Temperature for HHSI Pump LO Cooler, Rev. 0
IP3-CALC-CCW-02487	Tube Plugging Limit for CCW Heat Exchangers, Rev. 0
IP3-CALC-CCW-02763	31 & 31 CCW Heat Exchanger Heat Transfer Coefficients, Rev. 0
IP3-CALC-CCW-03509	CCW Water Thermal Hydraulic Model, Rev. 1
IP3-CALC-CCW-03714	CCW Thermal Hydraulic Model, Rev. 0
IP3-CALC-ED-00201	480VAC Bus 2A, 3A, 5A, 6A Non-Accident Loading, 3/14/97
IP3-CALC-ED-00204	480VAC EDG 31, 32, and 33 Loading, 8/12/91
IP3-CALC-ED-00207	480VAC Bus 2A, 3A, 5A & 6A and EDG Accident Loading, Rev. 7
IP3-CALC-ED-00297	480VAC Bus 2A, 3A, 5A, 6A Degraded Voltage Alarm Relay Setpoint, Rev. 3
IP3-CALC-ED-01074	Thermal Overload Heater Sizing for MOV Motors, Rev. 1
IP3-CALC-ED-01300	Terminal Voltage for SI-MOV-888B, Rev. 0
IP3-CALC-ED-01303	480VAC Bus Degraded Voltage TD Relay Setpoint, Rev. 1
IP3-CALC-ED-02793	MOV Terminal Voltage at Start Voltage for SI-MOV-747, SI-MOV-843, SI-MOV-883 and SI-MOV-899A, Rev. 0
IP3-CALC-EL-00118	125 VDC Short Circuit Calculations Battery 31, Battery Charger 31, Power Panel 31, Distribution Panels 31, 31A and 33, Rev. 3
IP3-CALC-EL-00119	125V DC Short Circuit Calculations Battery 32, Battery Charger 32, Power Panel 32, Distribution Panels 32,32A and 34, Rev. 2
IP3-CALC-EL-00121	125V DC Short Circuit Calculations Battery 34, Battery Charger 34 (or 35) and Power Panel 34, Rev. 1
IP3-CALC-EL-00146	Short Circuit Current for 6900VAC and 480VAC Systems, Rev. 1
IP3-CALC-EL-00184	31 Battery, Charger, Panel/Cable Sizing and Voltage Drop, Rev. 3
IP3-CALC-EL-01965	Transformer Impedance Calculation, Rev. 0
IP3-CALC-ESS-00260	Loop Accuracy/Setpoint/480VAC UV/Degraded Voltage, Rev. 0
IP3-CALC-SI-00722	SI Minimum Flow to Remove Decay Heat, Post-LOCA, Rev. 0
IP3-CALC-SI-00725	Instrument Loop Accuracy/Setpoint Calc/RWST Level, Rev. 2
IP3-CALC-SI-00725	Instrument Loop Accuracy/Setpoint/RWST Level, 4/20/01

IP3-CALC-SI-02054	SI RWST Gravity Drain, Rev. 0
IP3-CALC-SI-02409	SI RWST Vortexing, Rev. 0
IP3-CALC-SI-03333	Evaluation of Postulated RWST inventory loss, Rev. 0
IP3-CALC-SI-309	SI Branch Line Flow Orifice Replacement, Rev. 0
IP3-CALC-SI-355	RWST Level Calculation, Rev. 0
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IP3-ECAF-BUS 3A-2C	480VAC Electrical Distribution System Coordination Study, Rev. 0
IP3-ECAF-BUS 5A-21C	480VAC Electrical Distribution System Coordination Study, Rev. 0
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Note: *Indicates CRs generated as a result of the inspection.

In-Service Test Data

FCV-625 (1985-2005)
MOV 769 (1985-2005)
MOV 822A (1985-2005)
AOV 793 (1985-2005)
RV 819A (1991-2005)
RV 819B (1992-2005)
31 CCW Pump (1997-2005)
32 CCW Pump (2002-2005)
33 CCW Pump (1999-2005)
31 Auxiliary CCW Pump (1987-2005)
31 SI CCW Pump (1995-2005)

Other/Miscellaneous

31 CCW Pump Curve, 12/21/68
31 SI CCW Pump Curve, 12/16/94
31 Auxiliary CCW Pump Curve, 1/27/69
32 Auxiliary CCW Pump Curve, 3/19/67
32 CCW Pump Curve, 12/21/68
32 SI CCW Pump Curve, 12/16/94
33 Auxiliary CCW Pump Curve, 3/19/67
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Westinghouse Bulletin 34-251, Instrument and Control Switches Type W-2, Sept. 1980

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
CCW	Component Cooling Water
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedure
HHSI	High Head Safety Injection
LOCA	Loss of Coolant Accident
MCC	Motor Control Center
MOV	Motor-Operated Valve
NPSH	Net Positive Suction Head
NRC	Nuclear Regulatory Commission
RWST	Refueling Water Storage Tank
SBLOCA	Small Break Loss of Coolant Accident
SI	Safety Injection
SSDPC	Safety System Design and Performance
UFSAR	Updated Final Safety Analysis Report