



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

November 4, 2019

Mr. Anthony J. Vitale
Site Vice President
Entergy Nuclear Operations, Inc.
Indian Point Energy Center
450 Broadway, General Services Building
P.O. Box 249
Buchanan, NY 10511-0249

SUBJECT: INDIAN POINT NUCLEAR GENERATING, UNITS 2 AND 3 – INTEGRATED
INSPECTION REPORT 05000247/2019003 AND 05000286/2019003

Dear Mr. Vitale:

On September 30, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Indian Point Nuclear Generating, Units 2 and 3. On October 21, 2019, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors did not identify any findings or violations of more than minor significance.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Daniel L. Schroeder, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos. 05000247 and 05000286
License Nos. DPR-26 and DPR-64

Enclosure:
As stated

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SUBJECT: INDIAN POINT NUCLEAR GENERATING, UNITS 2 AND 3 – INTEGRATED
INSPECTION REPORT 05000247/2019003 AND 05000286/2019003 DATED
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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers: 05000247 and 05000286

License Numbers: DPR-26 and DPR-64

Report Numbers: 05000247/2019003 and 05000286/2019003

Enterprise Identifier: I-2019-003-0045

Licensee: Entergy Nuclear Operations, Inc.

Facility: Indian Point Nuclear Generating, Units 2 and 3

Location: 450 Broadway, General Services Building
Buchanan, NY 10511-0249

Inspection Dates: July 1, 2019, to September 30, 2019

Inspectors: B. Haagensen, Senior Resident Inspector
A. Siwy, Resident Inspector
J. Vazquez, Resident Inspector
J. Ambrosini, Senior Emergency Preparedness Inspector
A. Patel, Senior Reactor Inspector
P. Presby, Senior Operations Engineer

Approved By: Daniel L. Schroeder, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Indian Point Nuclear Generating, Units 2 and 3, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

None.

PLANT STATUS

Units 2 and 3 operated at or near rated thermal power for the entire inspection period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed plant status activities described in IMC 2515, Appendix D, "Plant Status," and conducted routine reviews using IP 71152, "Problem Identification and Resolution." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.04Q - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) 21 safety injection pump at Unit 2 on July 10, 2019
- (2) 23 auxiliary feedwater pump at Unit 2 on July 22, 2019
- (3) Essential service water during environmental high temperatures, grid stress conditions, and non-essential header realignment at Unit 3 on August 1, 2019
- (4) 21 auxiliary feedwater pump at Unit 2 on September 3, 2019

71111.04S - Equipment Alignment

Complete Walkdown Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated system configurations during a complete walkdown of the residual heat removal system at Unit 2 on September 19, 2019.

71111.05A - Fire Protection (Annual)

Annual Inspection (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated fire brigade performance at Unit 2 on September 26, 2019.

71111.05Q - Fire Protection

Quarterly Inspection (IP Section 03.01) (4 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

- (1) Lower electrical tunnel (pre-fire plan (PFP)-355) on September 9, 2019
- (2) Lower electrical penetration area (PFP-356) on September 9, 2019
- (3) Upper electrical tunnel (PFP-357) on September 9, 2019
- (4) Upper electrical penetration area (PFP-358) on September 9, 2019

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 02.02a.) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

- (1) Unit 3 upper and lower electrical tunnels and containment penetration areas

71111.11Q - Licensed Operator Regualification Program and Licensed Operator Performance

Licensed Operator Regualification Training/Examinations (IP Section 03.02) (2 Samples)

- (1) The inspectors observed and evaluated operator performance during the licensed operator regualification training scenario main steam line break with main steam isolation valve failure to close concurrent with an anticipated transient with scram at the Unit 2 simulator on August 27, 2019.
- (2) The inspectors observed and evaluated operator performance during a regualification annual exam scenario administered under Title 10 of the *Code of Federal Regulations* 55.59 which included a loss of a charging pump, a steam generator tube leak, and subsequent tube rupture with multiple post trip failures at the Unit 3 simulator on September 3, 2019.

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness Inspection (IP Section 02.01) (2 Samples)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

- (1) Emergency diesel generator maintenance rule status reclassification at Unit 3 on August 6, 2019
- (2) Auxiliary feedwater room temperature switch maintenance at Unit 2 on September 9, 2019

Quality Control (IP Section 02.02) (2 Samples)

The inspectors evaluated quality control activities associated with the following equipment performance activities:

- (1) Commercial dedication process for containment isolation valve IA-MOV-1702 (OpESS 2019/01-01) repair parts at Unit 3 on August 15, 2019
- (2) Item equivalency evaluation for main steam line flow channel 1 module FM-439C replacement following failure at Unit 2 on September 10, 2019

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

- (1) Unit 2 planned yellow risk for maintenance of the 23 charging pump on July 9, 2019
- (2) Unit 2 planned yellow risk for maintenance on the 21 motor-driven auxiliary feedwater pump on July 22, 2019
- (3) Unit 3 emergent elevated risk during service water essential header realignment with high river temperature and grid stress conditions on August 1, 2019
- (4) Unit 2 planned yellow risk for maintenance and testing on the 32 turbine-driven auxiliary feedwater pump on September 23, 2019
- (5) Unit 2 planned yellow risk for turbine control valve testing on September 24, 2019

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 02.02) (10 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) (CR-IP2-2019-02928) Auxiliary boiler feedwater pump building elevated temperature at Unit 2
- (2) (CR-IP3-2019-02949 and CR-IP3-2019-01335) Baffle bolt degradation real time analysis at Unit 3
- (3) (CR-IP3-2019-02654) Loss of cooling fans to station services transformer SST-6 at Unit 3
- (4) (CR-IP3-2019-02714) 32 emergency diesel generator with crankcase pressure out of specified range at Unit 3
- (5) (CR-IP3-2019-02737) Pressurizer heaters with heater group 32 power supply circuits out of service at Unit 3
- (6) (CR-IP3-2019-02794) Reactor coolant system unidentified leak rate increase at Unit 3
- (7) (CR-IP3-2019-02850) Service water pump 34 vacuum breaker SWN-1254 failed to reseal at Unit 3
- (8) (CR-IP3-2019-02997) Condensate storage tank operability with water level raised to over 34 feet to support chloride contamination cleanup at Unit 3
- (9) (CR-IP3-2019-03243) 32 safety injection pump with refueling water storage tank suction isolation valve (SI-MOV-887B) failure to stroke fully closed at Unit 3
- (10) (CR-IP3-2019-03409) Steam Line pressure loops P-429B and P-449B failed channel calibration at Unit 3

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Unit 3 EC-58829, High-energy line break 480-volt switchgear room door replacement (permanent modification)
- (2) Unit 3 EC-84031, Operation of auxiliary feedwater system with valve CT-82-7 throttled open at 10 gpm without a dedicated operator (temporary modification)

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (2 Samples)

The inspectors evaluated the following post-maintenance tests:

- (1) 3-PT-Q139, Appendix-R emergency diesel generator governor maintenance at Unit 3 on August 29, 2019 (work order (WO) 52882866)
- (2) 3-PT-Q85, Safety injection valve SI-MOV-887A actuator corrective maintenance at Unit 3 on September 6, 2019 (WO 00530927)

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (Other) (IP Section 03.01) (1 Sample)

- (1) 3-PT-2Y001C, 33 emergency diesel generator overspeed trip functional testing at Unit 3 on September 3, 2019

71114.02 - Alert and Notification System Testing

Inspection Review (IP Section 02.01-02.04) (1 Sample)

- (1) The inspectors evaluated Entergy's maintenance and testing of the Indian Point alert and notification system on July 15 to 18, 2019, for the period of July 2017 through June 2019.

71114.03 - Emergency Response Organization Staffing and Augmentation System

Inspection Review (IP Section 02.01-02.02) (1 Sample)

- (1) The inspectors evaluated the readiness of Entergy's Emergency Preparedness Organization on July 15 to 18, 2019.

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

- (1) The inspectors evaluated the following submitted Emergency Action Level and Emergency Plan changes:
 - IPEC-EP, Indian Point Energy Center Emergency Plan, Revision 18-01
 - IPEC-EP, Indian Point Energy Center Emergency Plan, Revision 19-01
 - EN-EP-310, Emergency Response Notification System, Revision 8

This evaluation does not constitute NRC approval.

71114.05 - Maintenance of Emergency Preparedness

Inspection Review (IP Section 02.01 - 02.11) (1 Sample)

- (1) The inspectors evaluated the maintenance of the emergency preparedness program on July 15 to 18, 2019, for the period of July 2017 through June 2019.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

EP01: Drill/Exercise Performance (IP Section 02.12) (1 Sample)

- (1) April 1, 2018, through March 31, 2019

EP02: ERO Drill Participation (IP Section 02.13) (1 Sample)

- (1) April 1, 2018, through March 31, 2019

EP03: Alert & Notification System Reliability (IP Section 02.14) (1 Sample)

- (1) April 1, 2018, through March 31, 2019

MS06: Emergency AC Power Systems (IP Section 02.05) (2 Samples)

- (1) Unit 2 (July 1, 2018, through June 30, 2019)
- (2) Unit 3 (July 1, 2018, through June 30, 2019)

MS07: High Pressure Injection Systems (IP Section 02.06) (2 Samples)

- (1) Unit 2 (July 1, 2018, through June 30, 2019)
- (2) Unit 3 (July 1, 2018, through June 30, 2019)

MS08: Heat Removal Systems (IP Section 02.07) (2 Samples)

- (1) Unit 2 (July 1, 2018, through June 30, 2019)
- (2) Unit 3 (July 1, 2018, through June 30, 2019)

MS09: Residual Heat Removal Systems (IP Section 02.08) (2 Samples)

- (1) Unit 2 (July 1, 2018, through June 30, 2019)
- (2) Unit 3 (July 1, 2018, through June 30, 2019)

MS10: Cooling Water Support Systems (IP Section 02.09) (2 Samples)

- (1) Unit 2 (July 1, 2018, through June 30, 2019)
- (2) Unit 3 (July 1, 2018, through June 30, 2019)

71152 - Problem Identification and Resolution

Annual Follow-Up of Selected Issues (IP Section 02.03) (4 Samples)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) Main and unit auxiliary transformer reliability at Units 2 and 3
- (2) Operator workarounds and burdens at Units 2 and 3
- (3) CR-IP2-2019-02099, review of corrective actions performed to address the issues identified with testing of medium voltage cables at Unit 2
- (4) Review of corrective actions to address containment equipment hatch closure plug testing issues discussed in NRC non-cited violation (NCV) 05000247 and 05000286/2016001-02

INSPECTION RESULTS

Observation: Annual Follow-Up of Selected Issues - Main and Unit Auxiliary Transformer Reliability	71152
The inspectors reviewed the system health reports, transformer maintenance program, and sample of corrective actions of various identified deficiencies at Units 2 and 3. The inspectors concluded that the transformer reliability is adequate and the corrective actions were timely.	
Observation: Annual Follow-Up of Selected Issues - Operator Workarounds and Burdens	71152
The inspectors reviewed the standard operator metrics administrative program that controls the categorization and reporting of operator workarounds, burdens, control room deficiencies, and out of specification readings at Units 2 and 3. The inspectors interviewed licensed operators, walked down the control room panels, and reviewed applicable administrative procedures.	
Neither unit had identified any equipment conditions that were considered operator workarounds or operator burdens. The inspectors reviewed 44 open work orders screened with effect codes that corresponded to equipment issues that had the potential to impact	

operator workload. Most of these work orders were appropriately characterized and were scheduled for resolution. The inspectors, however, identified five work orders that they determined had been mischaracterized as out-of-specification equipment. These included the following:

1. Unit 2 WO 00493899 (PT-457 vent stop valve (replace valve)): The valve was listed as "out of spec" but did not meet the criteria for screening as an "out of spec" item.
2. Unit 2 WO 00525249 (24 fan cooler unit weir drain valve LCV-1166 (dual indication)): The valve position indicator was listed as "out of spec reading" but should have been listed as a control room deficiency.
3. Unit 3 WO 00521325 (33 emergency diesel generator kilowatt meter does not read properly): The meter required local reading to ensure diesel load was within limits. This should have been considered an operator burden.
4. Unit 3 WO 00508083 (32 main boiler feedwater pump seal water temperature controller): Controller TIC-1353 was listed as "out of spec reading." This automatic controller required operation in manual. This should have been listed as an operator burden.
5. Unit 3 WO 00473957 (34 traveling screen differential level inaccurate): The screen was required to be run in manual and was listed as an "out of spec reading." This should have been classified as an operator burden.

The inspectors observed that operators apply small typed labels onto magnets and affix these labels to the control boards to identify deficiencies and provide useful information to the operators. This practice does not appear to be controlled by any formal process. 37 labels were affixed to the Unit 2 control boards. Several of these labels referred to work orders that had been previously closed and the information on the labels was no longer valid. Unit 3 only had four labels on their boards and all were still valid. The Unit 3 control room staff stated they only apply labels for work orders that were coded as "control room deficiencies," not as "out of specification readings." The two units appeared to be applying a different standard for labelling.

Some control room deficiencies and out of specification readings were referenced to potential allowable outage times (PAOTs) in Unit 3. Unit 2 did not appear to assign PAOTs to control room deficiencies or out of specification readings. There appears to be no defined process or formal guidance of the assignment of PAOTs.

Disposition: In each observation above, the licensee's performance did not rise to the level of a performance deficiency. The licensee's controlling procedures provide sufficient latitude to allow the characterization of these items based on operator judgment. The controlling procedure, "Standard Operator Metrics," Revision 5, was based on industry guidance. Additionally, there are no explicit regulatory requirements for the unique characterization of operator workarounds, burdens, control room deficiencies, or out of specification readings.

Observation: Annual Follow-Up of Selected Issues - Review of Corrective Actions to Address Containment Equipment Hatch Closure Plug Testing Issues	71152
In early 2016, the inspectors documented a Green non-cited violation because the licensee did not adequately demonstrate the capability to fully install the hatch plug and inflate the associated seals (NCV 05000247 and 05000286/2016001-02). Following documentation of this issue, the licensee developed a new procedure, 0-CON-402-EQH, "Equipment Hatch Closure Plug Testing, Installation, Practice, and Removal." This procedure allows the inflation of the hatch plug seals to be considered an optional step, once the hatch	

installation (including seal inflation) has been fully tested at least once during a given outage. The inspectors concluded that this approach was adequate, given that it required the site to fully verify the capability to complete the associated risk-mitigating action at the beginning of the outage.

On March 12, 2019, the inspectors observed practice installation of the hatch plug during the Unit 3 Spring 2019 refueling outage. During this practice installation, the licensee opted to conduct a full installation (including inflation of the seals). The licensee established a required time limit of 20 minutes for the installation of the hatch, given that Unit 3 was preparing to enter into a period of the outage during which inventory would be considerably reduced. (In such situations, if residual heat removal system cooling capabilities were lost, the time-to-boil of the reactor coolant can be as low as approximately 20 minutes.) The installation was successfully completed within approximately 18 minutes.

The inspectors noted, however, that the installation of the hatch plug was completed with very little time to spare. Furthermore, five individuals were involved in the execution of this task, each of them working continuously throughout the evolution. Procedure 0-CON-402-EQH, however, included guidance stating that only two individuals were required for the completion of the hatch plug installation. The inspectors determined that this guidance was inadequate, because it would be unreasonable to conclude that the hatch plug could successfully be installed within the allotted 20 minutes with only two individuals performing the necessary steps.

The inspectors discussed these concerns with licensee management. From these discussions and review of scheduling documentation, the inspectors determined that licensee management had adequate administrative controls in place to ensure that the necessary number of workers for successful hatch plug installation would be available during periods of reduced reactor coolant inventory. The inspectors concluded, however, that given the importance of the hatch plug installation for maintaining containment integrity during a potential loss-of-RHR event, these administrative controls should have been incorporated into the guidance established by the procedure.

The licensee captured the inspectors' concerns in their corrective action program (CR-IP3-2019-00885) and thereafter took corrective actions to revise the procedure guidance, requiring that a minimum crew of five individuals be staffed and dedicated to the task of installing the equipment hatch plug when plant conditions require installation of the plug within 30 minutes or less. This revised guidance was included in 0-CON-402-EQH, Revision 3, which was issued on August 5, 2019.

The inspectors screened the issue of inadequate procedure guidance, in accordance with Inspection Manual Chapter 0612, "Issue Screening," and determined that it was minor. Specifically, there was no adverse impact on the objective of the Barrier Integrity cornerstone, because the licensee had adequate administrative controls in place to ensure staffing of the minimum number of dedicated workers required to install the hatch plug during periods where time-to-boil was low, and they successfully demonstrated the capability to install the plug within the allotted time throughout the Spring 2019 refueling outage. Because this issue constitutes a minor violation, and because the licensee implemented adequate corrective actions, it is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On October 21, 2019, the inspectors presented the integrated inspection results to Anthony J. Vitale, Site Vice President, and other members of the licensee staff.
- On July 18, 2019, the inspectors presented the emergency preparedness program inspection results to Frank Mitchell, Emergency Preparedness Manager, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04Q	Corrective Action Documents		CR-IP3-2019-02850, CR-IP3-2019-02871	
71111.04Q	Drawings	9321-F-20333	Flow Diagram, Service Water	Revision 60
71111.04Q	Procedures	3-SOP-RW-005	Service Water System Operation	Revision 41
71111.05A	Fire Plans	PFP-256	Pre-Fire Plan, General Area Turbine Building, 36-Foot Level	Revision 14
71111.05A	Procedures	EALs	Emergency Action Level Matrix	Revision 18
71111.05Q	Procedures	PFP-355	Lower Electrical Tunnel	Revision 5
71111.05Q	Procedures	PFP-356	Lower Electrical Penetration Area	Revision 0
71111.05Q	Procedures	PFP-357	Upper Electrical Tunnel	Revision 5
71111.05Q	Procedures	PFP-358	Upper Electrical Penetration Area	Revision 15
71111.05Q	Procedures	SAO-703	Fire Impairment Criteria and Surveillance	Revision 35
71111.06	Corrective Action Documents		CR-IP3-2015-02921, CR-IP3-2015-03121, CR-IP3-2019-03120	
71111.06	Drawings	9321-F-40673-7	Electrical Floor Drains Plans and Sections	Revision 6
71111.06	Miscellaneous	IPE	Indian Point Unit 3 Individual Plant Evaluation	Revision 1
71111.06	Work Orders	52778051-01, 02, 03, 04		August 23 to 28, 2019
71111.11Q	Miscellaneous	13SX-LOR-SES006,	Loss of Charging Pump, RCP #2 Seal Failure, #33 ABFP Trip, SGTR with Loss of Offsite Power, Failure of PORV to Open	Revision 6
71111.11Q	Procedures	3-E-0	Reactor Trip or Safety Injection	Revision 6
71111.11Q	Procedures	3-E-3	Steam Generator Tube Rupture	Revision 6
71111.11Q	Procedures	3-ECA-3.3	SGTR without Pressurizer Pressure Control	Revision 6
71111.12	Corrective Action Documents		CR-IP2-2018-06461, CR-IP2-2018-06561, CR-IP2-2019-00300, CR-IP2-2019-03776, CR-IP2-2019-03785, CR-IP2-2019-03815, CR-IP3-2017-05517, CR-IP3-2017-05724, CR-IP3-2017-05817, CR-IP3-2018-03842, CR-IP3-2018-03843	
71111.12	Miscellaneous		Maintenance Rule Basis Document, Emergency Diesel Generators (IP2 and IP3)	Revision 2
71111.12	Miscellaneous		Maintenance Rule (a)(1) Action Plan, Indian Point Unit 2/3 Emergency Diesel Generators	Revision 3

71111.12	Miscellaneous		10 CFR 50.65 Maintenance Rule Performance Evaluation, IPEC – Unit 3 – Emergency Diesel Generators	January 16, 2019
71111.12	Miscellaneous	IP-RPT-19-00048	Seismic Qualification Report for NUS MBA500 Series of Instruments	Revision 0
71111.12	Miscellaneous	NUS-A045QA	MBA500 Series Instruments Version 2 Qualification Report	Revision 0
71111.12	Miscellaneous	Quality Assurance Program Manual (QAPM)	Entergy Quality Assurance Program Manual	Revision 37
71111.12	Procedures	2-PC-R29B	Main Steam Line Flow Channel I, Loops 3A and 3B	Revision 1
71111.12	Procedures	2-PT-Q62A	High Steam Flow and First Stage Pressure Bistables Channel I	Revision 2
71111.12	Procedures	EN-MA-101-02	Control of Material Outside Facility Warehouse	Revision 10
71111.12	Procedures	EN-MA-156	Compression Fitting Installation, Disassembly, Inspection, and Reassembly	Revision 6
71111.12	Procedures	EN-MP-120	Material Receipt	Revision 14
71111.12	Procedures	EN-MP-125	Control of Material	Revision 12
71111.12	Procedures	EN-MP-138	Commercial Grade Dedication Lab Conduct Operation	Revision 3
71111.12	Procedures	EN-WM-102	Work Implementation and Closeout	Revision 10
71111.12	Work Orders	WO 00531053		September 10, 2019
71111.12	Work Orders	WO 52775656		September 11, 2019
71111.13	Miscellaneous	EOOS	Unit 2 On-Line Risk Report	July 22, 2019
71111.13	Miscellaneous	EOOS	Unit 3 On-Line Risk Report	August 1, 2019
71111.13	Miscellaneous	EOOS	Unit 2 On-Line Risk Report	September 24, 2019
71111.13	Miscellaneous	EOOS	Unit 2 On-Line Risk Report	September 24, 2019
71111.13	Procedures	EN-WM-104	On-Line Risk Assessment	Revision 18
71111.15	Calculations	IP-CALC-06-0017	Service Water System Proto-Flo Model Expansion	Revision 2
71111.15	Calculations	IP3-CALC-COND-00795	Structural Assessment of CST MOD	Revision 0
71111.15	Calculations	IP3-CALC-ED-00196	Calculation to Determine Worst Case Loadings for 480V Buses 2A, 3A, 5A, and 6A During Safety Injection Loading (SI Auto Loading) Electrical Load Study	Revision 3
71111.15	Calculations	IP3-CALC-ED-300	Evaluation of Short Time Operation of 6.9KV to 480V AC Station Services Transformers above 3200A Rating	Revision 1
71111.15	Corrective Action Documents		CR-IP3-2009-00475, CR-IP3-2016-01113 CA-20, CR-IP3-2019-01335, CR-IP3-2019-02654, CR-IP3-2019- 02714,	

			CR-IP3-2019-02737, CR-IP3-2019-02850, CR-IP3-2019-02949, CR-IP3-2019-02992, CR-IP3-2019-02997, CR-IP3-2019-03243, CR-IP3-2019-03251	
71111.15	Engineering Changes	EC-14848	Evaluate Effect of Water Level in CST Overflow Line	Revision 0
71111.15	Miscellaneous	ANSI Appendix C57.96-1959	ANS Guide for Loading Dry-Type Distribution and Power Transformers	1959
71111.15	Miscellaneous	IEEE C57.96™-2013	Guide for Loading Dry-Type Distribution and Power Transformers	Revision of C57.96-1999
71111.15	Miscellaneous	VM-2351	ALCO Inspection Manual	Revision 1-1
71111.15	Miscellaneous	WCAP-18048-P	Westinghouse Report: Determination of Acceptable Baffle-Former Bolting for Indian Point Units 2 and 3 (Proprietary Class 2)	Revision 1 (June 2018)
71111.15	Miscellaneous	Westinghouse Letter	Subject: Summary of Indian Point Unit 3 Baffle-Former Bolt Real Time Analysis Results (Proprietary Class 2)	March 27, 2019
71111.15	Procedures	3-PT-M079B	32 EDG Functional Test	Revision 59
71111.15	Procedures	EN-OP-104	Operability Determination Process	Revision 16
71111.15	Work Orders	WO 00527966		
71111.15	Work Orders	WO 00530927		
71111.15	Work Orders	WO 52884224		
71111.18	Calculations	IP3-CALC-16-00017	Control Building Isolation Qualification of Switchgear Room to Turbine Building Doors under HELB Pressure Loading	Revision 0
71111.18	Corrective Action Documents		CR-IP3-2012-03262, CR-IP3-2019-02997	August 11, 2019
71111.18	Drawings	9321-F-13823	Control and Diesel Generator Buildings – Door Opening Details and Schedule	Revision 11
71111.18	Drawings	9321-F-20193 Sheet 1	Flow Diagram, Boiler Feedwater	Revision 63
71111.18	Engineering Changes	EC-58829	HELB – Modification to Replace IP3 SGR Double Doors	Revision 0
71111.18	Engineering Changes	EC-84031	Operate with CT-82-7 Open without a Dedicated Operator	Revision 0
71111.18	Operability Evaluations	Evaluation #19-3001-00-EVAL	Operation of Auxiliary Feedwater System with CT-82-7 Throttled Open at 10 gpm without a Dedicated Operator	Revision 0
71111.18	Procedures	3-SOP-AFW-002	Auxiliary Feedwater Support System	Revision 5

71111.19	Corrective Action Documents		CR-IP3-2019-03179	
71111.19	Procedures	3-PT-Q085	Safety Injection System Valve Operability Test	Revision 20
71111.19	Procedures	3-PT-Q139	Appendix "R" DG Functional Test	Revision 2
71111.19	Work Orders	WO 00530927		
71111.19	Work Orders	WO 52778938		
71111.19	Work Orders	WO 52882866		
71111.22	Corrective Action Documents		CR-IP3-2019-03209, CR-IP3-2019-03214	
71111.22	Procedures	3-PT-2Y001C	33 Diesel Generator Overspeed Trip Test	Revision 9
71111.22	Procedures	3-PT-M079C	33 EDG Functional Test	Revision 62
71111.22	Work Orders	WO 52779933		
71111.22	Work Orders	WO 52895013		
71114.02	Miscellaneous		Indian Point Energy Center Alert and Notification System Design Report	Revision 5
71114.03	Miscellaneous		Indian Point Energy Center On-Shift Staffing Analysis	February 7, 2019
71114.05	Miscellaneous		Indian Point Energy Center Emergency Plan	Revision 19-01
71151	Corrective Action Documents		CR-IP3-2019-00584	
71151	Corrective Action Documents Resulting from Inspection		CR-IP2-2019-03548	
71151	Procedures	IP-RPT-14-00015	Mitigating Systems Performance Index Basis Document Unit 2	Revision 4
71151	Procedures	IP-RPT-14-00016	Mitigating Systems Performance Index Basis Document Unit 3	Revision 3
71152	Corrective Action Documents		CR-IP2-2016-01883, CR-IP2-2016-01503	
71152	Corrective Action Documents Resulting from Inspection		CR-IP2-2019-03194, CR-IP3-2019-00885	
71152	Procedures		Standardized Operations Metrics	Revision 5
71152	Procedures	0-CON-401-EQH	Removal and Replacement of 16-Foot Diameter Equipment Hatch Assembly	Revision 10

71152	Procedures	0-CON-402-EQH	Equipment Hatch Closure Plug Testing, Installation, Practice, and Removal	Revision 0
71152	Procedures	0-CON-402-EQH	Equipment Hatch Closure Plug Testing, Installation, Practice, and Removal	Revision 2
71152	Procedures	0-CON-402-EQH	Equipment Hatch Closure Plug Testing, Installation, Practice, and Removal	Revision 3