



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

November 30, 2016

Docket No. 05000003

License No. DPR-5

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

SUBJECT: ENTERGY NUCLEAR OPERATIONS, INC., INDIAN POINT NUCLEAR
GENERATING STATION UNIT 1 – NRC INSPECTION REPORT NO.
05000003/2016008

Dear Mr. Vitale:

On October 4 – 6, 2016, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Indian Point Nuclear Generating Station Unit 1. Additional discussions were conducted on October 13, 2016, via telephone with staff who were unable to be scheduled for discussions during the onsite inspection period. The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and the conditions of your license. The inspection consisted of observations by the inspectors, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with you and other members of your staff on October 31, 2016, and are described in the enclosed inspection report. No findings of safety significance were identified.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Med, Ind, & Academic Uses**; then **Regulations, Guidance and Communications**. The current Enforcement Policy is included on the NRC's website at www.nrc.gov; select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy (Under 'Related Information')**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

A. Vitale

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No reply to this letter is required. Please contact Mark Roberts (610) 337-5094 if you have any questions regarding this matter.

Sincerely,

/RA/

Raymond J. Powell, Chief
Decommissioning and Technical
Support Branch
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000003/2016008

cc w/encl: Distribution via ListServ

A. Vitale

2

No reply to this letter is required. Please contact Mark Roberts (610) 337-5094 if you have any questions regarding this matter.

Sincerely,

/RA/

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000003/2016008

Docket No. 05000003

License No. DPR-5

Licensee: Entergy Nuclear Operations Inc. (Entergy)

Facility: Indian Point Nuclear Generating Station Unit 1 (IP-1)

Address: 450 Broadway
Buchanan, NY 10511-0249

Inspection Dates: October 4-6, 2016
October 13, 2016 (telephone interviews with selected staff)

Inspector: Mark C. Roberts
Senior Health Physicist
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety
Region I

Katherine Warner
Health Physicist
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety
Region I

Approved By: Raymond Powell, Chief
Decommissioning and Technical Support Branch
Division of Nuclear Materials Safety
Region I

Enclosure

EXECUTIVE SUMMARY

Entergy Nuclear Operations, Inc.
Indian Point Nuclear Generating Station Unit 1
NRC Inspection Report No. 05000003/2016008

A routine announced safety inspection was conducted on October 4 - 6, 2016 at IP-1. Additional telephone discussions with selected staff were held on October 13, 2016. The inspectors reviewed IP-1's activities related to the safe storage of radioactive material, including site operations, engineering, maintenance, plant support activities, management oversight, and corrective action program (CAP) implementation. The inspection consisted of observations by the inspectors, interviews with Entergy personnel, a review of procedures and records, and plant walk-downs. There are currently no ongoing decommissioning activities being conducted at IP-1. The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in Inspection Manual Chapter (IMC) 2561, "Decommissioning Power Reactor Inspection Program." Based on the results of this inspection, no findings of safety significance were identified.

REPORT DETAILS

1.0 Background

IP-1 is a pressurized water reactor that was granted a 40-year Operating License in 1962 and was permanently shut down in 1974. The facility is being maintained in SAFSTOR status. Pursuant to the June 19, 1980, "Commission Order Revoking Authority to Operate Facility" and the "Decommissioning Plan for Indian Point Unit No. 1," approved by the NRC in an Order, dated January 31, 1996, the reactor remains in a defueled status. There are ongoing activities in the IP-1 space that are support services for Indian Point Nuclear Generating Station Unit 2 (IP-2) and to a lesser extent Unit 3 (IP-3).

IP-1 and IP-2 are physically contiguous and share systems, such as the integrated liquid waste system and the air handling system and facilities, such as the chemistry and health physics laboratories. IP-1 also contains radioactive waste processing facilities that provide waste processing services for both units. Radiological effluent limits are met on an overall site basis and specific operating limits and surveillance requirements for effluent monitoring instrumentation, including stack noble gas monitoring, are discussed in the Offsite Dose Calculation Manual (ODCM).

Support services provided by IP-2 to IP-1 include maintenance, corrective action program implementation, plant support activities while in SAFSTOR status, and implementation of the SAFSTOR activities required in the Updated Final Safety Analysis Report (UFSAR), and Technical Specifications (TS).

Appendix A to Provisional Operating License No. DPR-5 recognizes this commonality, as well as the intended use of the IP-1 facility to support IP-2 until the retirement of that unit, and contains specific references to Appendix A of the IP-2 Facility Operating License No. DPR-26.

The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in IMC 2561.

2.0 Safe Storage (SAFSTOR) Performance and Status Review

- a. Inspection Scope [Inspection Procedures (IPs) 36801, 37801, 40801, 62801, 64704, 71801, 83750, 84750]

A routine announced safety inspection was conducted on October 4 - 6, 2016 at IP-1. The inspection consisted of observations by the inspectors, interviews with Entergy personnel, a review of procedures and records, and plant walk-downs. In addition, the inspectors conducted interviews on October 13, 2016, with selected Indian Point Energy Center staff who were unable to be scheduled for discussion during the onsite inspection period. The inspectors reviewed the SAFSTOR program as outlined in the UFSAR, TS, ODCM, and procedure IP-SMM-U1-001, "IPEC Site Management Manual, Control of Indian Point 1." The inspectors reviewed SAFSTOR activities, including site operations, engineering, maintenance, plant support activities, management oversight, and the corrective action program (CAP). The inspectors also assessed the material condition of the IP-1 facilities

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during plant tours of the containment annulus, chemical systems building, containment building, and fuel handling building. The inspectors also discussed any design changes or modifications since the previous inspection.

The inspectors reviewed activities, components, and documentation associated with the following SAFSTOR programs: occupational exposure, fire protection, radioactive effluent control, site radiological environmental monitoring program (REMP), and decommissioning organization and staffing. The inspectors reviewed radiological survey reports, fire extinguisher and fire hose inspection reports, radioactive gaseous and liquid effluent release permits, the groundwater monitoring program report, the annual REMP report, and the annual effluent release report, which included a summary of the radioactive waste management and transportation programs.

The inspectors reviewed quality assurance audit and CAP documents associated with IP-1 to determine if issues were being appropriately identified, assessed and reviewed, and that corrective actions were being appropriately implemented.

b. Observations and Findings

The inspectors noted that there have been organizational changes since the last SAFSTOR inspection. The previous IP-1 director retired after the previous inspection and the position is no longer being filled. The inspectors noted that organizational responsibilities for IP-1 were shared across multiple groups within the IPEC organization. The inspectors discussed the IP-1 support functions performed by various organizational groups including operations, radiation protection, engineering, and work control with representatives from the respective groups and found that activities were effectively coordinated between the various technical groups to maintain IP-1's SAFSTOR condition. The inspectors discussed prioritization of maintenance activities for IP-1 with a representative from the work control organization. Essential items, such as replacement of a depleted ion exchange resin column for treatment of north curtain drain effluent processing, was performed in a timely manner with less critical items handled with a lower priority.

The inspectors confirmed that the staff effectively implemented the SAFSTOR program. The inspectors verified that the staff conducted the maintenance and surveillance program for systems and components in accordance with the TS requirements and established procedures. The inspectors evaluated the results of Entergy's IP-1 structural engineering inspection that included the exterior dome. The inspectors determined that a thorough review had been performed. The inspection found that there were some areas of deterioration, but no areas required immediate action.

The annual radiological effluent and REMP reports demonstrated that all calculated doses were below regulatory dose criteria of 10 CFR 50, Appendix I. The inspectors noted that radioactive waste was not shipped for offsite disposal or processing since the last inspection.

The inspectors determined that Entergy effectively entered concerns into the CAP to prioritize and evaluate them commensurate with their safety significance. However, during the 2015 SAFSTOR inspection, the inspectors noted that Entergy had not been effective in

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correcting certain challenges regarding document retrieval such as radiological survey records for IP-1 containment. The inspectors noted that Entergy initiated a condition report and evaluators from the quality assurance department reviewed the issue during the next quality assurance audit. The inspectors reviewed the quality assurance audit results during this inspection. An adverse quality assurance finding regarding this issue was captured in the corrective action program and an evaluation was performed. The inspectors noted that adequate corrective actions have been completed. Generally, Entergy effectively addressed identified issues, implemented corrective actions, and tracked them to closure.

c. Conclusions

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

3.0 Exit Meeting Summary

On October 31, 2016, the inspectors presented the inspection results to Anthony Vitale, Site Vice President, and other members of Entergy's organization. The inspectors confirmed that proprietary information was not removed from the site.

SUPPLEMENTARY INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Agrest, Radiation Protection (RP) Technician
S. Bianco, Fire Marshall
R. Burroni, Director, Engineering
T. Cramer, Fire Marshall
G. Dahl, Nuclear Safety/Licensing Specialist IV, Regulatory Assurance
J. Doroski, Senior Health Physics/Chemistry Specialist
R. Drake, Supervisor, Design Engineering – Civil
J. Ferrick, Director, Regulatory & Performance Improvement
R. Fuchek, Radiation Protection Superintendent
J. Kirkpatrick, General Manager Plant Operations
W. O'Brien, RP Supervisor
B. Pawlowski, Nuclear Plant Operator
J. Ruch, Engineer III, Design Engineering – Civil
J. Skonieczny, Lead Senior Engineer, Civil
S. Stevens, Manager, Radiation Protection
J. Stewart, RP Supervisor
M. Troy, Nuclear Oversight Manager (QA)
A. Vitale, Site Vice President
R. Walpole, Manager, Regulatory Assurance
B. Zandstra, Work Week Manager

NRC

B. Haagensen, Senior Resident Inspector, Division of Reactor Projects
G. Newman, Resident Inspector, Division of Reactor Projects
S. Rich, Resident Inspector, Division of Reactor Projects

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

IP-1 TS (Appendix A to Provisional Operating License No. DPR-5)
 Indian Point Unit 1 Final Safety Analysis Report
 QA-2-6-2015-IP-1, Quality Assurance Audit Report, Chemistry, Effluents and Environmental Monitoring
 QA-0-2016-IP-1, Quality Assurance Audit Report, Fire Protection
 QA-12/18-2015-IP-1, Quality Assurance Audit Report, Operations/Technical Specifications
 QA-14/15-2015-IP-1, Quality Assurance Audit Report, Radwaste/Radiation Protection
 IP-RPT-15-00019, Maintenance Rule Structural Monitoring Inspection Report (Baseline) for the Nuclear Services Building
 IP-RPT-14-00050, Indian Point Unit 1 SAFSTOR 2014 Structural Inspection
 IP-RPT-14-00020, Maintenance Rule Structural Monitoring Inspection Report (4th Cycle) for the Unit 1 Turbine Building
 IP-RPT-11-00044, Indian Point Unit 1 SAFSTOR 2011 Structural Inspection
 IP-SMM-U1-001, Control of Indian Point 1
 IPEC RWP 2016-1000, Unit 1 SAFESTOR Support
 2016 Liquid Release Permit Reports, U1 Foundation Drain, North Curtain Drain, Sphere Foundation Drain Sump
 2016 Radiological Surveys for IP-1 Containment Building
 2-CY-2625, General Plant Systems Specifications and Frequencies

Work Orders:
 WO-00441210
 WO-IPC-00435211
 WO-00416500

Condition Reports:

2015-02706	2016-00230	2016-01975
2015-03951	2016-01309	2016-01976
2015-04233	2016-01380	2016-04617
2015-04759	2016-01930	2016-05377
2016-00208	2016-01939	2016-05700

LIST OF ACRONYMS USED

CAP	Corrective Action Program
Entergy	Entergy Nuclear Operations, Inc.
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IPEC	Indian Point Energy Center
IP-1	Indian Point Unit 1
IP-2	Indian Point Unit 2
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
REMP	Radiological Environmental Monitoring Program
SAFSTOR	Safe Storage
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report