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

January 16, 2020

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. 05000003/2019001

Dear Mr. Vitale:

On December 16-18, 2019, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Indian Point Nuclear Generating Station Unit 1. 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 inspector, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with Mr. Richard Drake, Acting Engineering Director and other members of your staff on December 18, 2019 and are described in the enclosed inspection report. No findings of safety significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.html.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select Radioactive Waste; Decommissioning of Nuclear Facilities; 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).

No reply to this letter is required. Please contact Orysia Masnyk Bailey (864) 427-1032 if you have any questions regarding this matter.

Sincerely,

***/RA/***

Anthony Dimitriadis, Chief
Decommissioning, ISFSI, and Reactor HP Branch
Division of Nuclear Materials Safety

Docket No. 05000003
License No. DPR-5

cc w/encl: Distribution via ListServ

Enclosure: Inspection Report No. 05000003/2019001

ENTERGY NUCLEAR OPERATIONS, INC., INDIAN POINT NUCLEAR GENERATING STATION
UNIT 1 – NRC INSPECTION REPORT NO. 05000003/2019001 DATED January 16, 2019

DOCUMENT NAME: G:\DNMS\WordDocs\Current\Insp Report\RDPR-5 2019001.doc.docx

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# U.S. NUCLEAR REGULATORY COMMISSION
# REGION I

## INSPECTION REPORT

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|---|---|
| Inspection No. | 05000003/2019001 |
| Docket No. | 05000003 |
| License No. | DPR-5 |
| Licensee: | Entergy Nuclear Operations Inc. (Entergy) |
| Facility: | Indian Point Nuclear Generating Station Unit 1 (IP-1) |
| Address: | Buchanan, NY 10511-0249 |
| Inspection Dates: | December 16-18, 2019 |
| Inspector: | Orysia Masnyk Bailey<br>Health Physicist<br>Decommissioning, ISFSI and Reactor<br>Health Physics Branch<br>Division of Nuclear Materials Safety |
| Approved By: | Anthony Dimitriadis, Chief<br>Decommissioning, ISFSI and Reactor<br>Health Physics Branch<br>Division of Nuclear Materials Safety |

## EXECUTIVE SUMMARY

Entergy Nuclear Operations, Inc.
Indian Point Nuclear Generating Station Unit 1
NRC Inspection Report No. 05000003/2019001

A routine announced safety inspection was conducted on December 16-18, 2019, at IP-1. The inspector 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 inspector, interviews with Entergy personnel, a review of procedures and records, and plant walkdowns. During the course of this inspection, there were 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, Indian Point Nuclear Generating Station Unit 3 (IP-3).

IP-1 and IP-2 are physically contiguous and share certain systems, such as the integrated liquid waste system, the air handling system and facilities, and 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, 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, 64704, 71801, 83750, 84750, 86750)

A routine announced safety inspection was conducted on December 16-18, 2019 at IP-1. The inspection consisted of observations by the inspector, interviews with Entergy personnel, a review of procedures and records, and plant walk-downs. The inspector reviewed the safe storage (SAFSTOR) program as outlined in the UFSAR, TS, ODCM, and procedure IP-SMMU1-001, “IPEC Site Management Manual, Control of Indian Point 1.” The inspector reviewed SAFSTOR activities, including site operations, engineering, maintenance, plant support activities, management oversight, and the CAP. The inspector also assessed the material condition of the IP-1 facilities during plant tours of the containment and other IP-1 buildings. The inspector noted that there were no design changes or modifications since the previous inspection.

The inspector 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 inspector reviewed radiological survey reports and 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 inspector reviewed quality assurance (QA) audit and CAP documents associated with IP-1 to determine if issues had been appropriately identified, assessed and reviewed and that corrective actions had been appropriately implemented.

b. Observations and Findings

The inspector 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 inspector confirmed that the staff effectively implemented the SAFSTOR program. The inspector verified that the staff conducted the maintenance and surveillance program for systems and components in accordance with the TS requirements and established procedures. The inspector accompanied Entergy Civil Engineers during the structural engineering audit that included the Chemical Systems Building, Superheater Building, Fuel Handling Building, Annulus, and Containment Building. Their audit disclosed some areas of deterioration, none requiring immediate action. A Condition Report (CR) was generated to have civil engineering staff perform walkdowns of accessible areas of Unit 1 not normally traveled to identify any potential personnel safety concerns. The inspector observed surplus equipment stored on the 53-foot elevation of the Chemical Systems Building, and areas of mold build up in the lower areas of the Unit 1 Chemical Systems Building that had been identified in 2018. Portable ventilation fans had been installed and recently, some of the radiation protection staff have been certified as state licensed mold remediators. The licensee plans to replace the North Curtain Drain pump; several CRs had been generated to address issues associated with the pump and drain system. Additionally, some leaks of this system have been identified; the licensee has hired a contractor to address the issue.

The annual radiological effluent and REMP reports documented that calculated doses were below regulatory dose criteria of 10 Code of Federal Regulations (CFR) 50, Appendix I for calendar year 2018. The inspector noted that there were no radioactive waste shipments from Unit 1 for offsite disposal or processing since the last inspection.

The inspector determined that audits were conducted in a timely fashion and Entergy had effectively entered concerns into the CAP to prioritize and evaluate commensurate with their safety significance. Generally, Entergy effectively addressed identified issues, implemented corrective actions, and ensured proper tracking for closure.

c. Conclusions

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

## 3.0 Exit Meeting Summary

On December 18, 2018, the inspector presented the inspection results to Mr. Richard Drake, Acting Director, Engineering, and other members of Entergy's organization. The inspector verified that no proprietary information was retained or documented in this report.

## SUPPLEMENTARY INFORMATION

## PARTIAL LIST OF PERSONS CONTACTED

R. Drake, Acting Director, Engineering
G. Dahl, Nuclear Safety/Licensing Specialist IV, Regulatory Assurance
J. Ruch, Senior Engineer, Design Engineering – Civil
J. Skonieczny, Supervisor, Design Engineering, Civil
F. Spagnuolo, Manager- Outage

## ITEMS OPEN, CLOSED, AND DISCUSSED

None

## LIST OF DOCUMENTS REVIEWED

Decommissioning Funding status report (period ending 12/31/2018)
EN-RP-102, Corrective Action Program, Rev. 38
IP-1 TS (Appendix A to Provisional Operating License No. DPR-5)
Indian Point Unit 1 Final Safety Analysis Report
IP-RPT-16-00092, Indian Point Unit 1 SAFSTOR 2017 Structural Inspection
IP-SMM-U1-001, Control of Indian Point 1, Revision 5
RWP Totals by Date 01/01/2019 to 12/18/2019
Entergy Quality Assurance Program Manual
QA-8-2019-IP-1, Engineering and Operational Information Technology
QA-9-2019-IP-1, Operations and Engineering
QA-10-2018-IP-1, Maintenance, Projects, and Maintenance Services
QA-14-15-2018-IP-1, Radiation Protection
Radiological Surveys for IP-1 Containment Building, March 2019, May 2019, and August 2019
Radiation Detection and Fire Surveillance Test Results
2018 Annual Radiological Environmental Operating Report Indian Point Unit Nos. 1, 2, and 3, dated May 7, 2019
Offsite Dose Calculation Manual, Rev.
Radiation work Permits 2019-1000. 1001, and 1002
2018 Annual Radiological Environmental Operating Report
2018 Annual Radioactive Effluent Release Report Indian Point Nuclear Generating Unit Nos 1, 2, and 3, dated April 23, 2019
Containment Fire Plans

Condition Reports:

CR-IP2-2018-05646, 05690, 05691, 05752, 05753, 05754, 05755, 05766, 05768, 05772, 06168, 06309, 06389, 06540, 06591, 06616, 06629, and 06856

CR-IP2-2019-00135, 02167, 03751, 00504, 00632, 00720, 00876, 00926, 01328, 01344, 01973, 02178, 03439, 03704, 04190, 04336, and 05079

## LIST OF ACRONYMS USED

| | |
|---|---|
| CAP | Corrective Action Program |
| CR | Condition Report |
| Entergy | Entergy Nuclear Operations, Inc. |
| IMC | Inspection Manual Chapter |
| IP | Inspection Procedure |
| IP-1 | Indian Point Unit 1 |
| IP-2 | Indian Point Unit 2 |
| IP-3 | Indian Point Unit 3 |
| 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 |