



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

June 30, 2015

Docket No. 05000003

License No. DPR-5

Lawrence Coyle
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.
05000003/2015009

Dear Mr. Coyle:

On June 1 – 4, 2015, 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 Don Mayer, Director Special Projects, Unit 1, and other members of your staff on June 4, 2015, at the conclusion of the inspection and are described in the enclosed 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).

L. Coyle

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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/

Marc S. Ferdas, Chief
Decommissioning and Technical
Support Branch
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000003/2015009

cc w/encl: Distribution via ListServ

L. Coyle

2

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000003/2015009
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: June 1-4, 2015

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

Kimberly Conway
Project Manager
Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery,
and Waste Management Programs
Office of Nuclear Materials Safety and Safeguards (NMSS)

Approved By: Marc S. Ferdas, 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. 05000003/2015009

A routine announced safety inspection was conducted on June 1 - 4, 2015 at IP-1. 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 safe storage (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 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 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).

Services provided by IP-2 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 the IP-1 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.

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 June 1 - 4, 2015 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. The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in IMC 2561.

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 CAP. The inspectors assessed the material condition of the IP-1 facilities during plant tours of the containment annulus, chemical systems building, and fuel handling building. The inspectors also discussed any design changes or modifications since the previous inspection.

Enclosure

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, radioactive gaseous and liquid effluent release permits, the groundwater monitoring program report, the annual REMP report, the annual effluent release report, which included a summary of the radioactive waste management and transportation programs, and a work order for replacing a component of the north curtain drain system.

The inspectors reviewed quality assurance (QA) 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 performed a follow-up review of the changes to the IP-1 SAFSTOR organization that were initiated in early 2014 and initially reviewed during the previous NRC SAFSTOR inspection of IP-1 [NRC Inspection Report No. 05000003/2014010 (ADAMS Accession Number ML14217A037)]. The inspectors discussed functional roles and staff duties with the Director, IP-1 and other staff impacted by the organizational changes. The inspectors noted that organizational changes appeared to be integrated with assigned staff duties and procedural actions, and that the Director, IP-1 had a sufficient budget to fund actions essential to maintaining IP-1's SAFSTOR condition. The inspectors also followed-up on the structural engineering inspection that Entergy had scheduled for late 2014 and was also discussed in the previous NRC SAFSTOR inspection of IP-1. Based on discussions with engineering staff, the inspectors noted that the field work from the engineering inspection was only recently completed and the written report was not yet available.

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 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 Entergy installed and effectively tested a replacement of the carbon absorption vessel for one of the trains of the north curtain drain system. The installation and testing appeared to be completed in accordance with the scope of the work order and associated procedures. The inspectors noted that the carbon absorption vessel from the north curtain drain system was shipped offsite as radioactive waste and the residual carbon was awaiting shipment until the waste container was full.

The inspectors determined that Entergy conducted audits in a timely fashion and utilized vulnerability determinations and operating experience to develop audit checklists. Findings or issues identified from audits were entered into the CAP as Condition Reports (CRs). Entergy effectively addressed identified issues, implemented corrective actions, and tracked them to closure. CRs appeared to be prioritized and evaluated commensurate with their safety significance.

c. Conclusions

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

3.0 Exit Meeting Summary

On June 4, 2015, the inspectors presented the inspection results to Don Mayer, Director, IP-1, and other members of Entergy's organization. The inspector confirmed that proprietary information was not removed from the site.

SUPPLEMENTARY INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. Beesley, Radiation Protection (RP) Technician
G. Dahl, Nuclear Safety/Licensing Specialist IV, Regulatory Assurance*
J. Doroski, Senior Health Physics/Chemistry Specialist
R. Drake, Supervisor, Design Engineering – Civil
C. English, Consultant
R. Fuchek, Online Work Control Superintendent
R. Mages, Senior Specialist, ALARA
D. Mayer, Director, IP-1*
J. Michetti, System Engineer, Radiation Monitoring System
M. Mirzai, Nuclear Safety/Licensing Specialist IV, Regulatory Assurance
W. O'Brien, RP Supervisor
J. Ruch, Engineer III, Design Engineering – Civil
R. Threlkeld, Quality Assurance (QA) Auditor
R. Walpole, Manager, Regulatory Assurance*
C. Wilson, Systems Engineer, Fire Protection

NRC

A. Bolger, Resident Inspector, Division of Reactor Projects, Region I*
K. Conway, Project Manager, NMSS*
G. Newman, Resident Inspector, Division of Reactor Projects, Region I*

* Denotes individuals present during final exit meeting held on June 4, 2015

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
 IP-SMM-U1-001, "IPEC Site Management Manual, Control of Indian Point 1", Rev. 3
 Indian Point Offsite Dose Calculation Manual (ODCM)
 IP-RPT-11-00044, "SAFSTOR 2011 Structural Inspection"
 IP-RPT-14-00020, "Maintenance Rule Structural Monitoring Inspection Report for the Unit 1 Turbine Building"
 IP-RPT-15-00019, "Maintenance Rule Structural Monitoring Inspection Report for the Unit 1 Nuclear Services Building"
 EN-LI-100, Process Applicability Determination, Rev. 16
 EN-LI-102, Corrective Action Program, Rev. 24
 EN-PL-155, Policy, Rev. 5 (Completed Attachments to procedure describing IP-1 organization change)
 EN-QV-109, Audit Process, Rev. 28
 EN-QV-129, Vulnerability Review Process, Rev. 8
 QA-2/6-2013-IP-01, "Quality Assurance Audit Report" (Chemistry, Effluent & Environmental), October 15, 2013
 QA-12/18-2013-IP-01, "Quality Assurance Audit Report" (Operations & Technical Specifications)
 QA-9-2014-IP-1, "Quality Assurance Audit Report" (Fire Protection)
 QA-14/15-2013-IP-01, "Quality Assurance Audit Report" (Radiation Protection & Radwaste)
 Audit Plan for QA-2/6-2013-IP-01, Combined Chemistry, Effluent Monitoring Audit, October 15, 2013
 Audit Plan for QA-12/18-2013-IP-01, Operations & Technical Specifications Audit, June 5, 2013
 Audit Plan for QA-9-2014-IP-1, Fire Protection Audit, January 2, 2014
 Audit Plan for QA-14/15-2013-IP-01, Radiation Protection & Radwaste, Audit, September 16, 2013
 EN-RP-101, Rev. 11, "Access Control for Radiologically Controlled Areas"
 EN-RP-108, Rev. 15, "Radiation Protection Posting"
 0-RP-ADM-109, Rev. 8, "Radiation Protection Periodic Task Scheduling"
 2014 Annual Radioactive Effluent Release Report
 2014 Annual Radiological Environmental Operating Report
 Liquid Release Permits and Dose Reports, July 2014 – May 2015
 Radiation Work Permit 20151000, Rev. 0, Unit 1 Support - All Groups
 SEP-FPP-IP-001, Rev. 4, "IPEC Fire Protection Program Plan"
 Work Order for Replacement of North Curtain Drain Train "A" Carbon Absorption Vessel, LW-1271 (WO-IPC-00379018, High Delta P, LW-1271 Leak), 5-8-2015
 Radiological Survey Reports - Containment (all elevations) and IP-1 steam generators
 Radiological Survey – IPEC-1503-0682, VI-004 U1 33 ft VC Annulus, 3-26-2015
 Radiological Survey – IPEC-1505-0069, VI-004 U1 33 ft VC Annulus, 5-18-2015
 Condition Reports: CR-IP2-2014-05249; CR-IP2-2014-05287; CR-IP2-2015-01378; CR-IP2-2014-02443

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
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
QA	Quality Assurance
REMP	Radiological Environmental Monitoring Program
SAFSTOR	Safe Storage
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report