



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

July 19, 2012

Docket No. 05000003

License No. DPR-5

John Ventosa
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.
05000003/2012010**

Dear Mr. Ventosa:

On June 4 – 8, 2012, and July 5 – 6, 2012, 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 inspectors, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with Donald Mayer, Director, Unit 1, and other members of your organization on July 10, 2012, at the conclusion of the inspection and are described in the enclosed report.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements occurred. The violation is being treated as a Non-Cited Violation (NCV) consistent with Section 2.3.2. of the NRC Enforcement Policy. The NCV is described in the subject inspection report. If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to: (1) the Regional Administrator, Region I; (2) the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and (3) the NRC Senior Resident Inspector at Indian Point Nuclear Generating Station, Unit 2.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, 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>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

J. Ventosa

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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).

Please contact Laurie Kauffman at 610-337-5323 if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Mr S Ferdas", with a long horizontal line extending to the right.

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

Enclosure:
Inspection Report No. 05000003/2012010

cc:
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J. Ventosa

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Sincerely,

/RA/

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

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No.: 05000003/2012010
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 4 - 8, 2012 and July 5 - 6, 2012
Inspectors: Laurie A. Kauffman
Health Physicist
Decommissioning Branch
Division of Nuclear Materials Safety

Sammy McCarver
Project Engineer, Branch 2
Division of Reactor Projects

Stephen Giebel
Health Physicist/Project Manager
Reactor Decommissioning Branch
Office of Federal and State Materials and Environmental
Management Programs

Approved By: Marc S. Ferdas, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Entergy Nuclear Operations, Inc.
Indian Point Nuclear Generating Station
NRC Inspection Report No. 05000003/2012010

A routine announced safety inspection was conducted between June 4-8, 2012, and July 5-6, 2012 at IP-1. The inspection included a review of operations and management oversight, maintenance, corrective action program implementation, and plant support activities while in safe storage (SAFSTOR) status. The inspection also included a review of activities associated with the partial dismantlement of the IP-1 vent stack and associated containment annulus exhaust duct. The inspection consisted of observations by the inspectors, interviews with Entergy personnel, and a review of procedures and records. 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, a Severity Level (SL) IV Non-Cited Violation (NCV) of the IP-1 Provisional Operating License DPR-5 and Technical Specification (TS) 3.3.2, "Operating Instructions and Procedures," was identified. Entergy did not perform required semi-annual radiological surveys of the IP-1 containment since August 2011, in accordance with the required frequency in procedures IP-SMM-U1-001, "Control of IP-1" and 0-RP-ADM-109, "Radiation Protection Periodic Task Scheduling." Because this violation was of very low safety significance and it was entered into Entergy's corrective action program (CAP), this violation is being treated as a NCV, consistent with the NRC Enforcement Policy.

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, and 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 and the unit continues to operate as a support facility for Indian Point Nuclear Generating Station Unit 2 (IP-2) operations.

IP-1 and IP-2 are physically contiguous and share systems and facilities as well as a common operating organization. IP-1 contains radioactive waste processing facilities, which 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 TS.

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

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."

2.0 Safe Storage (SAFSTOR) Performance and Status Review

a. Inspection Scope (Inspection Procedures (IPs) 36801, 37801, 40801, 62801, 71801, 83750, 84750, 86750)

A routine announced safety inspection was conducted between June 4-8, 2012, and July 5-6, 2012, at IP-1. The inspectors reviewed the SAFSTOR program as outlined in the UFSAR, TS, ODCM, and procedure IP-SMM-U1-001 (formerly IP-SMM-OC-905) to assess the effectiveness of management oversight of SAFSTOR responsibilities for IP-1 and implementation of SAFSTOR activities related to the safe storage of radioactive material.

The inspectors also reviewed activities associated with the partial dismantlement of the IP-1 vent stack and associated containment annuals exhaust duct. Specifically, the inspectors reviewed engineering change 32468, "IP-1 Vent Stack Height Modification." The inspectors interviewed Entergy personnel and reviewed supporting information

including calculations, analyses, design change documentation, procedures, UFSAR, TS, and plant drawings to assess Entergy's implementation of the 50.59 process in accordance with guidance and methods provided in Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Evaluations," as endorsed by NRC Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments." In addition, the inspectors verified that the design bases, licensing bases, and performance capabilities of the affected systems would not be degraded by the modification. The inspectors also reviewed documents prepared by Entergy to be utilized for the partial dismantlement of the IP-1 stack including the work order, radiation work permit, and documents associated with the management, control and transportation of the stack debris.

The inspectors reviewed activities and documentation associated with the following SAFSTOR programs: occupational exposure, radioactive effluent control, and site radiological environmental monitoring program (REMP). The inspectors reviewed radioactive gaseous effluent release permits, the annual REMP report, and the annual effluent report, which included a summary of the radioactive waste management and transportation programs.

The inspectors assessed the material condition of IP-1 facilities during plant tours of the nuclear service building (NSB), the chemical systems building (CSB), and the fuel handling building (FHB). The inspectors toured the exterior of the facility; and observed preparations and portions of the removal of the top portion of the IP-1 main stack and associated components.

The inspectors also reviewed CAP condition reports (CRs) associated with IP-1 to determine if issues were being properly identified and evaluated, and if corrective actions were appropriately prioritized in the CAP.

b. Observations and Findings

The inspectors noted that there were no personnel changes within the IP-1 organization. The inspectors confirmed that the staff effectively implemented the SAFSTOR activities and verified that the maintenance and surveillances had been conducted in accordance with the TS requirements and Entergy procedures. The inspectors noted one exception. Specifically, the inspectors identified that the semi-annual radiation surveys of the IP-1 containment had not been performed, in accordance with the Provisional Operating License and TS. Entergy's procedures, IP-SMM-U1-001 and 0-RP-ADM-109 state, in part, that semi-annual radiological surveys of the IP-1 containment be conducted. However, Entergy did not perform the required semi-annual radiological surveys of the IP-1 containment since August 2011. The inspectors discussed this issue with Entergy personnel who confirmed that the radiation surveys had not been performed in accordance with the frequency outlined in their procedures. Entergy entered this issue into the CAP under CR-IP2-2012-03986. The required surveys were completed by Entergy on June 11 and 21, 2012.

The inspectors evaluated the engineering design changes related to the IP-1 vent stack partial dismantlement. Entergy concluded that a safety evaluation was not required for this modification. The inspectors determined that the dismantlement activities did not

adversely affect any design basis accident mitigation scenarios. On July 5 and 6, 2012, the inspectors observed portions of the dismantlement activities that began on June 10, 2012. The inspectors confirmed that activities were being performed in accordance with the work order and radiation work permit. Portions of the stack were being removed by cutting them into small pieces, lowering them through the center of the stack and into the hopper at the base of the stack, surveyed, and transferred to intermodal shipping containers. This was being done to ensure nearby components would not be damaged by an accidental drop.

The annual radiological effluent and radiological environmental monitoring reports demonstrated that all calculated doses were below regulatory dose criteria of 10 CFR 50, Appendix I. The inspectors determined that Entergy did not generate radioactive waste from the IP-1 facility and therefore, did not ship radioactive waste for offsite disposal since the previous inspection. The inspectors also noted that Entergy had not shipped stack debris offsite for disposal as of July 6, 2012.

The inspectors determined that issues were entered into the CAP, and prioritized and evaluated commensurate with their safety significance. In general, corrective actions were implemented to address identified issues and were being tracked to closure using the CAP.

c. Conclusions

Based on the results of this inspection, a SL IV NCV of IP-1 Provisional Operating License DPR-5 and TS 3.3.2 was identified. Specifically, IP-1 TS 3.3.2 requires, in part, conformance to the requirements specified in IP-2 TS. IP-2 TS 5.4.1(f) states that written procedures shall be established, implemented, and maintained covering personnel radiation protection consistent with the requirements of 10 CFR 20. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that may be necessary for the licensee to comply with the regulations in this part; and are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels; and the potential radiological hazards. Entergy procedures, IP-SMM-U1-001 and 0-RP-ADM-109 state, in part, that semi-annual radiological surveys of the IP-1 containment be conducted. Contrary to the above, Entergy did not perform required semi-annual radiological surveys of the IP-1 containment since August 2011, in accordance with the frequency in their procedures.

Because this violation was of very low safety significance and it was entered into Entergy's CAP, this violation is being treated as a NCV, consistent with NRC Enforcement Policy. **(NCV 05000003/2012010-01; Entergy Did Not Perform Semi-Annual Radiological Surveys In IP-1 Containment In Accordance With The Provisional Operating License And TS)**

3.0 Exit Meeting Summary

On July 10, 2012, the inspectors presented the inspection results to Donald Mayer, Director, IP-1, and other members of Entergy's organization. The inspectors confirmed that proprietary information was not removed from the site.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

S. Bear, Radiation Protection Supervisor
G. Dahl, Licensing Engineer
M. Donegan, Certified Health Physicist Consultant, IP-1
J. Doroski, Health Physics and Chemistry Specialist
C. English, Superintendent, IP-1
W. Henries, Senior Engineer Consultant, IP-1
S. Lucas, RP Technician
D. Mayer, Director, IP-1
W. Nazarenko, Maintenance Supervisor
M. Readinger, Radiation Protection Supervisor
R. Rodino, Superintendent, Radiation Protection
S. Sandike, Senior Chemistry Engineer
W. Scholtens, Radioactive Waste Engineer
D. Smith, Health Physicist, Radiation Protection
R. Tagliamonte, Radiation Protection Manager
W. Torres, Maintenance

SUPPLEMENTAL INFORMATION

None

ITEMS OPEN, CLOSED, AND DISCUSSED

Open/Closed

| | | |
|---------------------|-----|--|
| 05000003/2012010-01 | NCV | Entergy Did Not Perform Semi-Annual Radiological Surveys In IP-1 Containment In Accordance With The Provisional Operating License And TS |
|---------------------|-----|--|

LIST OF DOCUMENTS REVIEWED

Indian Point Unit 1 Final Safety Analysis Report
IP-1 TS (Appendix A to Provisional Operating License No. DPR-5)
IP-2 TS (Appendix A of the Indian Point Unit 2 Facility Operating License No. DPR-26)
Indian Point Off-site Dose Calculation Manual (ODCM), Rev. 3, January 24, 2011
IP-SMM-U1-001, Rev. 0, IPEC Site Management Manual, Control of Indian Point 1, January 26, 2012 (formerly IP-SMM-OC-905)
0-RP-ADM-109, Rev. 4, Radiation Protection Periodic Task Scheduling, September 29, 2011
EN-RP-108, Rev. 11, Radiation Protection Posting, April 3, 2012
EN-RP-101, Rev. 6, Access Control for Radiologically Controlled Areas, June 23, 2011
EN-RP-203, Rev. 5, Dose Assessment
RP-STD-17, Rev. 10, Satellite RP Key Issuance and HRA, LHRA, and VHRA Boundary Verifications, May 17, 2010

0-CY-1840, Rev 1, ODCM Impact Review, OIR No. 2009-004, dated March 5, 2009
IPEC-CHM-12-009 Memorandum, May 14, 2012, Radioactivity Releases From IPEC-April 2012
EN-LI-100, Rev. 11, Process Applicability Determination; Engineering Change EC-32468
EC No.: 32468 Rev. 0/ECN 37267; ENC 37267; Topic Notes (Section 5.10)
EN-DC-126, Rev. 4, Engineering Calculation Process
EN-IS-124, Rev. 4, Industrial Safety Planning & Job Safety Hazards Analysis
Work Order (WO) WO#294174-01 Partial Removal of the Unit 1 Stack
2-SOP-12-03-01 and -02 for Radiation Monitor (R-60) Operation
EN-DC-137, Rev. 11, Control of Hot Work and Ignition Sources (sign on Hot Work Permit)
Radiation Work Permit 20121005, Rev. 2, Task 1 and 2
EN-IS-124, Rev. 4, Industry Safety Planning and Job Safety Hazards Analysis
EN-MA-119, Rev. 12, Material Handling Program
EN-OP-102-01, Rev. 8, Protective and Caution Tagging & Checklist (sign in/out)
EN-MA-101, Rev.10, Fundamentals of Maintenance
Summary Report for Fitness for Service Assessment of the IPEC Unit 1 Vent Stack, Report No. A10337-R002, Rev. 0, December, 2010
Sample analyses results from IP-1 stack debris for 10 CFR Part 50/61 analyses, May 2012

Radiological Surveys related to stack dismantlement (Surveys 12-2-1880, 12-2-1881; 12-2-1882; 12-2-1883; 12-2-1884; 12-2-1885; 12-2-1886; 12-2-1911; and 12-2-1933)
Radiological Surveys related to IP-1 Containment, dated June 11, 2011 (all elevations)
Radiological Surveys related to IP-1 steam generators, dated June 11, 2011 (11SG – 14SG)

Sphere Foundation Sump Pump Discharge Flow Meter Calibration (WO#52309615-01)
12/15/11
North Curtain Drain Effluent Line Flow Meter Calibration (WO#52218839-01) 6/10/10
Dose Totals for 2011 and January – June 2012
Vent Stack Samples for 2011 and 2012
IP-RPT-11-00044, Rev. 0, SAFSTOR 2011 Structural Inspection

Quality Assurance Audit Report, QA-12/18-2011-IP-1, IPEC Operations, June 6-27, 2011
Quality Assurance Audit Report, QA-14/15-2011-IP-1, Radiation Protection, 10/3/11 – 11/30/11
Condition Reports: IP2-2012-04250; IP2-2012-03890; IP2-2012-03986; IP2-2012-03890; IP2-2012-04250 and IP2-2011-05868

LIST OF ACRONYMS USED

| | |
|---------|---|
| CAP | Corrective Action Program |
| CR | Condition Reports |
| CSB | Chemical Systems Building |
| Entergy | Entergy Nuclear Operations, Inc. |
| FHB | Fuel Handling Building |
| IMC | Inspection Manual Chapter |
| IP | Inspection Procedure |
| IPEC | Indian Point Energy Center |
| IP-1 | Indian Point Unit 1 |
| IP-2 | Indian Point Unit 2 |
| IP-1 TS | Appendix A to Provisional Operating License No. DPR-5 |
| IP-2 TS | Appendix A of the Indian Point Unit 2 Facility Operating License No. DPR-26 |
| NCV | Non-Cited Violation |
| NRC | Nuclear Regulatory Commission |
| NSB | Nuclear Service Building |
| ODCM | Offsite Dose Calculation Manual |
| QA | Quality Assurance |
| SAFSTOR | Safe Storage |
| SL | Severity Level |
| TS | Technical Specification |
| UFSAR | Updated Final Safety Analysis Report |