April 27, 2001

Mr. Robert J. Barrett
Vice President Operations
Entergy Nuclear Operations, Inc.
Indian Point 3 Nuclear Power Plant
Post Office Box 308
Buchanan, NY 10511

SUBJECT: NRC'S INDIAN POINT 3 INSPECTION REPORT NO. 05000286/2001-002

Dear Mr. Barrett:

On March 31, 2001, the NRC completed an inspection at the Indian Point 3 nuclear power plant. The enclosed report presents the results of that inspection. The results were discussed on April 11, 2001, with you and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

No findings of significance were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room **or** from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Curtis Cowgill, Chief
Projects Branch 6
Division of Reactor Projects

Docket No.05000286
License No. DPR-64

Enclosure: Inspection Report No. 05000286/2001-002
Attachment: Supplemental Information

cc w/encl:
J. Yelverton, Chief Executive Officer
M. Kansler, Chief Operating Officer
J. Knubel, Vice President, Operations Support
F. Dacimo, General Manager of Plant Operations
H. P. Salmon, Jr., Director of Oversight
D. Pace, Vice President, Engineering
J. Kelly, Director - Licensing
C. D. Faison, Licensing
K. Peters, Licensing Manager
A. Donahue, Mayor, Village of Buchanan
J. McCann, Nuclear Safety and Licensing
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
Chairman, Standing Committee on Energy, NYS Assembly
Chairman, Standing Committee on Environmental Conservation, NYS Assembly
T. Morra, Executive Chair, Four County Nuclear Safety Committee
Chairman, Committee on Corporations, Authorities, and Commissions
The Honorable Sandra Galef, NYS Assembly
P. D. Eddy, Electric Division, New York State Department of Public Service
W. Flynn, President, New York State Energy Research
and Development Authority
J. Spath, Program Director, New York State Energy Research
and Development Authority
C. Hehl, SRC Consultant
C. Terry, Niagara Mohawk Power Corporation
R. Toole, SRC Consultant
R. Schwarz, SRC Consultant
County Clerk, West Chester County Legislature
A. Spano, Westchester County Executive
R. Bondi, Putnam County Executive
C. Vanderhoef, Rockland County Executive
J. Rampe, Orange County Executive
T. Judson, Central NY Citizens Awareness Network
M. Elie, Citizens Awareness Network

Distribution w/encl: **(VIA E-MAIL)**
H. Miller, RA/J. Wiggins, DRA (1)
J. Shea, RI EDO Coordinator
E. Adensam, NRR (ridsnrrdlpmlpdi)
G. Wunder, NRR
P. Milano, NRR
L. Burkhart, NRR
C. Cowgill, DRP
R. Summers, DRP
K. Jenison, DRP
T. Haverkamp, DRP
R. Martin, DRP
Region I Docket Room (with concurrences)
P. Drysdale, SRI - Indian Point 3

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.	05000286
License No.	DPR-64
Report No.	05000286/2001-002
Licensee:	Entergy Nuclear Northeast
Facility:	Indian Point 3 Nuclear Power Plant
Location:	P.O. Box 308 Buchanan, New York 10511
Dates:	February 11, 2001 - March 31, 2001
Inspectors:	Peter Drysdale, Senior Resident Inspector Lois James, Resident Inspector Greg Cranston, Reactor Inspector Stephen Pindale, Reactor Inspector Keith A. Young, Reactor Inspector John McFadden, Health Physicist Paul Frechette, Security and Safeguards Specialist
Approved by:	Curtis J. Cowgill, Chief Projects Branch 6 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000286/2001-002; on 02/11/00 - 03/31/01; Entergy Nuclear Northeast; Indian Point 3 Nuclear Power Plant.

The report covered a seven-week period of inspection conducted by resident and regional inspectors in accordance with the NRC's revised reactor oversight process.

A. There were no findings of significance identified during this inspection.

B. There were no violations identified by the licensee during this inspection.

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Report Details

SUMMARY OF PLANT STATUS

The Indian Point 3 nuclear power plant remained at full power during the entire inspection period.

1. REACTOR SAFETY
(Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness)

1R02 Evaluations of Changes, Tests, or Experiments

a. Inspection Scope (71111.02)

The inspectors reviewed the nuclear safety evaluations (NSEs) described below. The review was conducted to verify that changes to the facility or to the procedures as described in the Final Safety Analysis Report (FSAR) were reviewed and documented by the licensee in accordance with Title 10 of the Code of Federal Regulations (CFR), Part 50.59, Changes, Tests and Experiments. The samples chosen covered changes to the facility, to procedures, and to the FSAR, taking into consideration the safety significance of the change, the risk to the structures, systems, and components (SSC) affected, and the impact on the three reactor safety cornerstones. The inspection team also reviewed the licensee's identification and resolution of problems related to NSEs and associated changes.

NSEs

- 97-3-155 31 Auxiliary Feedwater Pump Motor Replacement
- 97-3-156 33 Auxiliary Feedwater Pump Motor Replacement
- 97-3-329 Change Boron Injection Tank Isolation Valves Position from Normally Closed to Open
- 98-3-019 Backup Spent Fuel Pool Cooling System
- 98-3-131 Required Post-Loss of Coolant Accident (LOCA) Recirculation Flow
- 99-3-035 Use of Refueling Water Storage Tank Purification Loop During Plant Operation
- 99-3-080 Temporary Air Compressor Supplying Instrument Gas
- 99-3-093 Changes to Containment Purge System
- 00-3-016 FSAR Update for Valve Backseat Issue
- 00-3-046 Safety Injection Accumulator Draining via the Sample System

The inspectors also reviewed a sample of changes to plant SSCs and to procedures, as identified below, for which the licensee determined that a NSE was not required (screens). This review was performed to verify that the licensee's threshold for performing NSEs was consistent with the requirements of 10CFR50.59.

NSE Screens

- 97-3-126 Replacement of Component Cooling Water System Valve AC-803
- 97-3-267 Torque Switch Bypass Setpoint for Generic Letter (GL) 89-10 MOVs with Limitorque Actuators
- 97-3-406 Removal of Eight Switch Sequences from Service Water Actions During Switch to Recirculation Phase

- 98-3-085 Changes to the Fire Protection Program as Described in FSAR
- 98-3-130 Replace Foxboro M/66C Summing Modules
- 99-3-001 33 Safety Injection (SI) Pump Allowed Outage time Extension
- 99-3-004 Emergency Diesel Generator Short Term Capacity Ratings Clarification
- 99-3-049 Correct Error in FSAR Section 4.5.2
- 99-3-088 NNE-PCV-942 Replacement, Power-Operated Relief Valve and SI Accumulator Nitrogen Supply Pressure Control Valve
- 99-3-100 EDG Silencer Drain Tank Heat Trace Replacement
- 00-3-001 Evaluation of Fire Damper FP-DF-6 in the Control Building
- 00-3-002 Control Room Air Conditioning Air Intake Toxic Gas Monitor
- 00-3-086 36 Battery Room Ventilation Alarm Timing

Procedure Screens

- Check-off List COL-CW-1, “City Water”
- FIR-001-BAR, “Installation and Repair of Elastomer Fire Barrier Penetration Seal Design”
- IC-PC-I-F-1121/5, “Containment Fan Cooling Units Nos. 31, 32, 33, 34, and 35 Service Water Flow”
- IC-PC-I-P-600A/B, “Component Cooling Pump Discharge Pressure Indicators and Controllers”
- Plant Operating Procedure POP-1.1, “Plant Heatup From Cold Shutdown Condition”

b. Observations and Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope (71111.04)

On March 1, 2001, the inspectors performed a partial walkdown of the 31 Containment Spray (CS) System using check-off list COL-CS-1, “Containment Spray System” and system operating procedure SOP-CS-001, “Containment Spray Operation.” During this inspection, the 32 CS pump was out of service for planned preventive maintenance on selected associated motor-operated valves. The inspectors verified the valve and breaker lineup for the 31 CS pump.

b. Issues and Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope (71111.06)

The inspectors reviewed sections of the FSAR that addressed internal and external flooding issues related to the IP3 station. The inspectors also reviewed sections of the Individual Plant Examination for External Events (IPEEE) that were applicable to external flooding. All of the supporting information and analyses for the FSAR and IPEEE conclusions indicated that the design external flood level at the plant was at grade level along the Hudson River (15 feet above mean sea level (MSL)). The worst credible flooding conditions analyzed for the site were assumed to result from the coincidence of local dam failures and a hurricane with wind-driven wave action. These conditions were not predicted to produce a water level high enough to directly affect safety-related plant equipment above the 15 foot elevation, and the licensee concluded that there were no credible external flooding events representing a core damage frequency greater than the nominal value for the plant (E-6). The historic high level water recorded at the site was 7.4 feet above MSL during a storm in 1950. Nonetheless, the licensee's flood protection plan had contingency provisions for sandbagging the service water pumps and several openings around the main turbine building in the event that the river level increased about 11 feet. The inspectors toured external areas around the site during and after a heavy rainfall on April 30, 2001, to observe areas of water accumulation, storm drainage paths, and potential for or existing blockage.

The inspectors reviewed FSAR sections and the Individual Plant Examination (IPE) that described the most likely scenarios and vulnerabilities for an internal flooding event from a large pipe break in the condensate, fire water, or city water systems. The inspectors also reviewed the licensee's designated actions in response to internal flooding events as described in operations directive OD-8, "Guidelines for Severe Weather," off-normal procedures ONOP-RW-3, "Plant Flooding," ONOP-WDS-1, "Abnormal Containment Sump Levels, and ONOP-RP-3, "Loss of Refueling Cavity Water Level During Refueling," and maintenance procedure MET-002-GEN, "Location of Sandbags in Flood Warning Conditions."

The inspectors performed walkdowns of areas important to safety to assess the material condition of the internal and external flood protection barriers designed to mitigate the consequences of a flood from the most likely sources. The areas toured included the primary auxiliary building (PAB), the pipe penetration area, the circulating/service water intake structure, the 15 foot and 5 foot elevations of the main turbine hall, and the 480VAC switchgear room. The inspectors evaluated the condition of pipe supports, level detection devices, watertight doors, and other flood barriers in these areas.

b. Issues and Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope (71111.12)

The inspectors reviewed problems involving selected in-scope SSCs to assess the effectiveness of the maintenance program. The review included a sample of operating logs, system engineer data, system reports, deficiency reports, availability data, selected surveillance performance data, and selected maintenance-related data. The reviews focused on proper maintenance rule scoping, proper classification of SSC equipment failures, safety significance classifications, 10 CFR 50.65 (a)(1) and (a)(2) classifications, and performance criteria for SSCs classified as (a)(2). The inspectors reviewed scoping documents, deviation/event reports (DERs), and completed work requests (WRs). The following SSC deficiencies were reviewed:

- WR 00-01500-0033, 33 Component Cooling Water (CCW) pump motor replacement. The 33 CCW pump was taken out of service on February 26, 2001, its motor was replaced, and the pump was returned to service on March 1, 2001. The CCW system was classified as a normally operating, risk significant system. It had been monitored by a combination of unavailability (less than 1.5% unavailability per CCW pump) and its maintenance preventable functional failure (MPFF) count (less than 2 per cycle). The motor replacement on the 33 CCW pump during the week of February 26, 2001, caused the pump to approach its unavailability performance criteria, but not to exceed that criteria.

- DER 01-00929, “Loss of 13.8 kV Power Source.” This failure resulted from the loss of the 13.8 kV line, due to a trip of the GT-2F breaker in the 13.8kV line upstream from the GT Substation, after the breaker was closed from the control room. The 13.8 kV distribution system was within the scope of the Maintenance Rule and was classified as a standby risk-significant system that was monitored for maintenance preventable functional failures (less than 2 per cycle). The failure of the GT-2F breaker to close did not represent a functional failure because the alternate 13.8 kV feed was available through breaker GT-BT.

- WR 00-03118-03, and DER 01-00646, “New Prelube Pump, FME Concerns.” During preventive maintenance to replace the prelube pump on the 32 Emergency Diesel Generator (EDG) on February 21, 2001, maintenance personnel discovered unacceptable foreign material (metal filings) inside the replacement pump. A second replacement pump obtained from the site warehouse also contained metal filings. The licensee cleaned the second pump and installed it in the EDG fuel oil prelube system. However, the pump seized after approximately 3-1/2 hours of operation (DER 01-00650). The licensee concluded that the pump seized because of manufacturing defects. The 32 EDG had not been returned to service at the time the pump failed, and the pump seizure did not represent a maintenance preventable functional failure. The licensee maintained the EDG inoperable while the original prelube pump was refurbished and tested, and the additional unavailability time for the 32 EDG was properly accounted for Maintenance Rule tracking.

b. Issues and Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work

a. Inspection Scope (71111.13)

The inspectors reviewed the maintenance risk assessments and corrective maintenance work packages for the following planned and emergent work on the residual heat removal (RHR) system, 13.8 kV power circuit, and a reactor coolant system (RCS) delta-temperature module. The inspectors discussed deficient conditions with cognizant engineering and maintenance personnel :

Planned Work:

- 3PT-Q118A, "RHR Pump Functional Test (RHR Cooling Not in Service)" completed on March 9, 2001.

- WR 01-00487-00, Replacement of Reactor Coolant System (RCS) Temperature Module TM-411E (Average delta-T Summing Amplifier).

Emergent Work:

- DER 01-00929: On March 14, 2001, one of the plant's offsite power circuits (13.8 kV line to the GT Substation) was lost following a trip of breaker GT-2F. After breaker relay testing was completed and the breaker racked into its cubicle, control room operators attempted to close the breaker. However, the breaker immediately tripped open. The phases A and C differential relays actuated with the instantaneous portion of the C phase protective relay. During subsequent troubleshooting, technicians adjusted the three phase instantaneous contacts, and noted that the phase A primary breaker contacts had made up slightly ahead of phases B and C. The licensee attributed the slightly different primary contact points to be the apparent cause of the breaker trip.

  Following the GT-2F breaker trip, and during subsequent troubleshooting, the licensee suspended all scheduled work on the 480 V safeguards buses that could potential degrade the electrical system further.

- Following replacement of temperature module TM-411E, post-work testing of the harmonic filter associated with the 33 static inverter caused an inadvertent failure of internal inverter components that required corrective maintenance. At the time, the 31 auxiliary feedwater (AFW) pump was removed from service since the plant cutback controller would have been disabled if a loss of offsite power occurred with the 33 static inverter out. The licensee performed a probabilistic risk assessment (PRA) evaluation to analyze the risk of a plant trip associated with this condition, and determined that all scheduled PRA/Risk activities must be suspended until the static inverter was restored to service. Consequently, the functional testing of all three emergency diesel generators that had been scheduled for that day was placed on hold pending completion of the static inverter repairs and post-work tests.

b. Issues and Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions and Events

a. Inspection Scope (71111.14)

On February 13, 2001, the inspectors observed control room operators perform a test to verify the moderator temperature coefficient (MTC) in accordance with procedure RA-4.4, "End of Life MTC Measurement." RA-4.4 was a new procedure implemented to meet the requirements of the Improved Technical Specifications (ITS). The February 13, 2001 completion of RA-4.4 was the first performance of this procedure and it entailed reactivity changes. The inspectors also reviewed the final results including the Westinghouse correspondence indicating that the results were acceptable.

b. Issues and Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope (71111.15)

The inspectors reviewed various DERs on degraded or non-conforming conditions that raised questions on equipment operability. The inspectors reviewed the resulting operability determinations for technical adequacy, whether or not continued operability was warranted, and to what extent other existing degraded system conditions adversely impacted the affected system or compensatory actions. The following DER and operability evaluations were evaluated in depth:

- DER 01-00213; Appendix R diesel generator shut down from excessive exhaust smoke. The initial operability determination under this DER indicated "N" to signify that operability was not in question. However, when the DER was subsequently reviewed by the plant leadership team (PLT), they questioned whether an operability determination should be performed to evaluate the potential for diesel inoperability under an Appendix R fire scenario that could disable the diesel.

  The licensee subsequently issued DER 01-00720 to evaluate the PLT comments that were not addressed in DER 01-00213. The Appendix R diesel system engineer subsequently documented in a DER Response Report (DRR) that there was no safety impact on the exhaust smoke shutting down the diesel because the automatic trip function of the engine smoke detectors was active only in the "parallel" (i.e., test) mode. If the diesel were used in an Appendix R fire situation, the engine would be operated in the "unit" mode, and the trip function would be disabled.

b. Issues and Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope (71111.17)

The inspection team reviewed the permanent plant modifications listed below:

Design Change Packages (DCPs):

- 97-3-155 31 Auxiliary Feedwater Pump Motor Replacement
- 98-3-130 Replace Foxboro M/66C Summing Modules
- 99-3-071 Inspection and Repair of #32 EDG Fuel Oil Storage Tank
- 99-3-088 NNE-PCV-942 Replacement (PORV and Safety Injection Accumulator Nitrogen Supply Pressure Control Valve)
- 99-3-100 EDG Silencer Drain Tank Heat Trace Replacement
- 00-3-002 Control Room A/C Air Intake Toxic Gas Monitor
- 00-3-005 Install Auto-Closure Feature for Main Feedwater Motor Operated BFD-5's and BFD-90's
- 00-3-086 36 Battery Room Ventilation Alarm Timing

The plant modifications reviewed were either completed during the last two years or were scheduled to be installed during the upcoming 2001 refueling outage (RO-11). The modifications included component replacements, equivalency evaluations, and setpoint changes. The selection of plant modifications reviewed was based on risk significance and impact on the reactor safety cornerstones: initiating events, mitigating systems, and barrier integrity. The inspection team reviewed modifications to determine if there were any adverse impacts for risk-significant SSCs on their availability, reliability, or functional capability as well as verifying that their design bases, licensing bases, and performance capability had not been degraded. The inspectors also reviewed the adequacy of translation of design and licensing basis information into documents and procedures to maintain configuration control. The inspectors conducted interviews with design engineers, system engineers, and licensing personnel familiar with the modification. The inspectors also performed walkdowns of selected modifications to verify installation and material condition of the modification.

The inspectors reviewed the following modifications and maintenance activities to verify that the design bases, licensing bases, and performance capability of risk significant SSCs had not been degraded through modifications and to verify that modifications performed during increased risk-significant configurations did not place the plant in an unsafe condition.

- DCP 00-3-010, RCS Vacuum Fill and Level Monitoring System. The inspectors reviewed the licensee’s design documents containing details of a modification to the RCS system that will install new mechanical joints for use with an outage system. The outage system will pull a vacuum on the RCS to assist fill operations following restoration of the RCS pressure boundary. The modification also installed a mechanical joint to be used for an electronic RCS level monitoring (Mansell) system that functions under partial vacuum conditions. The inspectors observed portions of the electrical installation for this modification inside containment.

- DCP 01-03-007 EDG, Inspection and Repairs of EDG Oil Storage Tanks. In February 2001, the licensee detected water in the bottom of the 31 and 32 EDG underground fuel storage tanks. The licensee developed a design change to upgrade the tanks to meet American Petroleum Institute standard API-1631, “Interior

Lining of Underground Storage Tanks," to prevent further water intrusion. The inspectors reviewed the DCP and the safety evaluation written to install a temporary above ground tank to supply fuel oil to the EDGs when the underground tanks are removed from service while repairs are made on the underground tanks. The licensee installed the temporary tank during the inspection period and the inspectors conducted walkdowns of the installation to review conformance with its design.

- DCP 98-3-072, "Removal of Check Valve Internals for CT-85-2," in the auxiliary feedwater (AFW) pump "balancing line." The inspectors reviewed the DCP, and observed the work performed in the field and the post-work testing.

- WR 01-00147-02, Jumper installation between "N" & "G" terminals on LIG/LSG Amptectors used on Westinghouse model DS breakers. The inspectors reviewed the work request, the vendor manual, and the licensee's associated information on related problems at other Westinghouse plants, and observed a shop demonstration of the jumper installation.

b. Observations and Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope (71111.19)

The inspectors reviewed post-maintenance test procedures and associated testing activities to assess whether 1) the effect of testing in the plant had been adequately addressed by control room personnel, 2) testing was adequate for maintenance performed, 3) acceptance criteria were clear and adequately demonstrated operational readiness consistent with design and licensing documents, 4) test instrumentation had current calibrations, range, and accuracy for the application, and 5) test equipment was removed following testing. The following surveillance activities were evaluated:

- WR 99-04980-02; Post-Work Test (PWT) on March 8, 2001, following a lock nut adjustment on RHR valve MOV-745A (#32 RHR heat exchanger inlet isolation). The PWT involved stroking the valve open and closed, recording the stroke times, and verifying that the stroke times were acceptable.

- WR 00-01500-00, Replacement of the 33 Component Cooling Water Pump Motor. The retest was completed within the scope of the WR. The vibration data recorded were within the acceptance limits defined in the WR and in test procedure 3QT-088, "Component Cooling Pumps Functional Test."

- WR 98-00619-07, Perform Post-Work Test for DCP 98-072, and functional test of AFW Pump #31 and Check Valve CT-85-2. DCP 98-072 removed the internals of check valve CT-85-2 and the post-work test identified no leakage from the valve bonnet post-modification.

b. Issues and Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope (71111.22)

On March 9, 2001, the inspectors observed portions of the RHR pump surveillance test 3PT-Q118A, "RHR Pump Functional Test (RHR Cooling Not in Service)" and reviewed the surveillance test data and associated design basis documents, including:

- FSAR Section 6.2.2 System Design and Operation,
- FSAR Section 9.3, Auxiliary Coolant System,
- Technical Specification (TS) Section 3.1 Reactor Coolant System,
- TS 3.3 Engineered Safety Features, and
- System Operation Procedure SOP-RHR-001, Residual Heat Removal System.

The purpose of the review and observations was to assess whether 1) the test preconditioned the RHR pumps, 2) the effect of testing was adequately addressed in the control room, 3) the acceptance criteria demonstrated operational readiness consistent with design calculations and licensing documents, 4) the test was performed in the proper sequence, and 5) the test equipment was removed following testing.

b. Issues and Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope (71111.23A)

The inspectors reviewed the work packages for temporary modification 00-02619-00, fill and vent line for the 32 reactor coolant pump (RCP) lower bearing lube oil reservoir. In April 2000, the licensee noted a gradual loss of level in the lower reservoir around a thermocouple penetration, and installed the temporary modification in June 2000 to allow periodic replenishment of the oil from the 95 foot elevation, an area with radiation levels that were significantly lower than the oil fill connection at the RCP oil reservoir. The inspector observed the lines from the 95 foot elevation to confirm that they were installed and maintained in accordance with specifications in the modification package.

b. Issues and Findings

No findings of significance were identified.

Emergency Preparedness [EP]

1EP6 Drill Evaluation

a. Inspection Scope (71114.06)

The inspectors observed an emergency planning drill conducted on February 22, 2001, to evaluate the adequacy of the conduct of drills and critique of performance to identify weaknesses and deficiencies. The drill scenario exercised the control room (simulator), the technical support center (TSC), the operations support center (OSC), and the

alternate emergency operations facility (AEOF). The inspectors specifically observed the drill from the control room (simulator) to witness the emergency classifications and notifications, and from the OSC to witness security and health physics personnel conduct a simulated search and rescue.

b. Issues and Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Control To Radiologically Significant Areas

a. Inspection Scope (71121.01)

The inspectors reviewed radiological work activities and practices during tours of the facilities and inspected procedures, procedural implementation, records, and other program documents to evaluate the effectiveness of the licensee's access controls to radiologically significant areas.

The inspectors observed activities at the routine radiologically-controlled-area (RCA) control point on the fourth floor of the Administration Building on a daily basis to verify compliance with requirements for RCA entry and exit, wearing of record dosimetry, and issuance and use of electronic dosimeters. On March 20, 2001, the inspectors participated in a pre-job briefing for radiation work permit (RWP) 0001-028 for containment entries while reactor is critical. The inspectors accompanied the work crew which included a radiation protection technician into the reactor containment building at 100% power and observed the radiological controls used. Also, the inspectors verified the dose rates on the radiation survey record for the 46-foot elevation for the entry by using a radiation survey meter. In addition, the inspectors observed the pre-job briefings for containment entries on March 21 and 22 and the pre-job briefing for radiography in the turbine building on March 21. Later, the inspectors observed the activities of radiological control technicians in support of the radiographic activities. The work activities being conducted in reactor containment at 100% power were pre-outage preparations including walk downs for cable routing and for scaffolding, relamping, preventative maintenance tasks, and inspections. On March 22, 2001, the inspectors toured in the RCA, including the health physics (HP) count room, the PAB, the fan house, the fuel storage building, and the radioactive machine shop building (RAMS). During these tours, the inspectors reviewed the posting, labeling, barricading, and level of access control for locked high radiation areas (LHRAs), high radiation areas (HRAs), radiation and contamination areas, and radioactive material areas.

The inspectors selectively examined the following RWPs, survey record, procedures, and other program documents.

- RWP 0001-028, Containment entry - reactor critical
- RWP 0001-035, Radiography - outside controlled areas
- Radiological survey record for job coverage for RWP 0001-028, dated March 17,
- 2001, 46-foot elevation of containment
- Procedure RE-REA-4-1, Radiation work permit (RWP)

- RE-DOS-8-25, Health Physics instructions for dose control, extremity and multi-badge issue
- RE-UOE-14-5, Personnel Decontamination
- RE-CON-3-5, Draft Rev. 3, Hot particle control
- RE-REA-4-4, Draft Rev. 7, Steam generator secondary side work
- RE-TRA-15-5, Contractor health physics technician selection and training
- Radiological Event Record Summary for the fourth quarter of 2000

The inspectors reviewed the following eight DERs and their associated Action Commitment Tracking System (ACTS) items for the appropriate categorization, immediate correction actions and corrective actions to prevent recurrence, and for the timeliness and effectiveness of corrective actions: DERs 01-00118, 01-00120, 01-00404, 01-00469, 01-00758, 01-00762, 01-00791, and 01-00855. These DERs were generated during the period of January to March 2001.

The review in this section was performed against criteria contained in Title 10 of the Code of Federal Regulations, 10 CFR 20.1301, Dose limits for individual members of the public; Subpart F, Surveys and monitoring; Section 20.1601, Control of access to high radiation areas; Section 20.1902, Posting requirements; site Technical Specification Section 6.12, High Radiation Area; and site procedures (cited above in this section).

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls

a. Inspection Scope (71121.02)

The inspectors reviewed radiological work activities and practices during tours of the facilities and inspected procedures, procedural implementation, records, and other program documents to determine the effectiveness of ALARA (as low as reasonably achievable) planning and control.

During the pre-job briefings, the accompaniment, and tour of facilities described in the previous section, the inspectors observed the attention paid by radiation protection technicians to dose avoidance in discussions with radiation workers, the directions given by radiation protection technicians to workers during job coverage to maximize dose avoidance, and the use of signs to identify low dose waiting areas and to identify higher dose areas where access time should be minimized.

The inspectors selectively examined the following procedures, procedural implementation, and other program documents, including assessments.

- Procedure RE-REA-4-1, Radiation work permit (RWP)
- Procedure AP-7, Radiation Protection Plan
- Daily ALARA reports for March 19, 20, 21, 22, 2001
- Summary listing of RWP dose projections for routine and specific evolutions and for routine operations, refueling outage (RO-11) preparations, and RO-11 tasks
- Preliminary dose estimate/budget reviews for the following upcoming outage work:

- RWP 0001-219, Fuel transfer system work
- RWP 0001-220, Reactor head mechanical support
- RWP 0001-221, Reactor head I&C support
- RWP 0001-222, Reactor head/upper internals/reactor vessel cover-remove and replace
- RWP 0001-223, Reactor vessel foreign object search and retrieval
- RWP 0001-224, Reactor head O-rings and vessel flange
- RWP 0001-225, Core exit thermocouples/removal and replacement
- RWP 0001-227, Refueling activities in the reactor containment and fuel storage buildings
- RWP 0001-229 and 230, Seal table activities
- RWP 0001-233, Reactor coolant pump motor work
- RWP 0001-243, Steam generator #32 steam drum internal inspection
- RWP 0001-249, Excore and incore detectors and source range work

- Log sheet for temporary shielding packages for RO-11
- Site ALARA committee meeting minutes for January 30, 2001
- RO-11 Outage Readiness Review for Radiological and Environmental Services, dated February 27, 2001
- RO-11 Outage Readiness Review for steam generator secondary side work, dated March 22, 2001
- Fourth quarter review of station ALARA program, dated January 30, 2001
- End of year review of station ALARA program, dated January 30, 2001
- Review of the IP-3 Radiation Protection Program, January - December 2000, dated February 27, 2001

This inspection included a review of the planning and preparation for the upcoming outage, and the inspectors noted that the recent revision to Procedure AP-7, “Radiation Protection Plan,” contained more specifics about the frequency of meetings of the site ALARA committee. In regard to person-rem projections, the inspectors noted that the person-rem estimates for the year 2001 for routine operations, outage preparations, and the refueling outage were approximately 8, 4, and 77, respectively.

The review in this section was against criteria contained in 10 CFR 20.1101 (Radiation protection programs), 10 CFR 20.1701 (Use of process or other engineering controls), and site procedures (cited above in this section).

b. Findings

No findings of significance were identified.

3. Safeguards (Cornerstone Physical Protection)

3PP1 Access Authorization Program

a. Inspection Scope (71130.01)

The following activities were conducted to determine the effectiveness of the licensee’s behavior observation portion of the personnel screening and fitness-for-duty programs:

During March 27-29, 2001, the inspectors reviewed two Access Authorization/Fitness-for-Duty self-assessments, an audit, and event reports and loggable events for the four previous quarters. On March 28, 2001, the inspectors reviewed behavior observation training procedures and records, and on March 29, 2001, five supervisors representing the Chemistry, System Engineering, Training, Programs and Components and Corrective Action/Assessment were interviewed regarding their understanding of behavior observation responsibilities and the ability to recognize aberrant behavior traits. On March 29, 2001, five individuals who perform escort duties were interviewed to establish their knowledge level of those duties.

b. Findings

No findings of significance were identified.

3PP2 Access Control

a. Inspection Scope (71130.02)

The following activities were conducted during the period March 26-30, 2001 to verify that the licensee has effective site access controls, and equipment in place designed to detect and prevent the introduction of contraband (firearms, explosives, incendiary devices) into the protected area:

Site access control activities were observed, including personnel and package processing through the search equipment during peak ingress periods on March 27 and 28, 2001, and vehicle searches, on March 28, 2001. On March 27, 2001 testing of all access control equipment; including metal detectors, explosive material detectors, and X-ray examination equipment, was observed. The Access Control event log, an audit, and three (3) maintenance work requests were also reviewed.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification

a. Inspection Scope (71151)

The inspectors reviewed the licensee's programs for gathering and submitting data for the three performance indicators involving Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment. The review also included the licensee's tracking and trending reports, personnel interviews and security event reports for the performance indicator data submitted from the 1st quarter of 2000 through the 1st quarter of 2001.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

a. Inspection Scope (71152)

The inspection team reviewed the licensee's problem identification and resolution program as it applied to plant modifications and NSEs in order to verify the licensee personnel identified modification and NSE issues at the appropriate threshold and entered them into their corrective action program for action. The following corrective action items were reviewed to verify the effectiveness of corrective actions.

Deviation/Event Reports (DERs)

- 01-00306 Question for Number of Fan Coil Units Required for Normal Operations
- 00-03276 Incorrect Valves Sent by Manufacturer
- 00-02224 BIT Valve Position Procedure Conflict
- 00-02128 Lack of a Preventive Maintenance Procedure for #36 Battery Charger
- 00-01743 Non Compliance with Modification Change Manual (MCM)-8
- 00-01376 No Preventive Maintenance During Wet Lay-up for Back-up Spent Fuel Pool Cooling System
- 00-01238 Direct Current (DC) System Upgrade
- 00-01075 Cable Spreading Room Smoke Detection
- 00-00665 Incomplete Modification Closeout
- 99–02720 Failure to Incorporate Modification Requirement into Procedure
- 99-02385 Pressure Control Valve (PCV) 1139 Valve and Controller Replacement Post-Modification Testing Failure
- 99–02168 Incorrect Thermal Overload Information in Preventive Maintenance (PM) Procedure Following Modification
- 99-01706 Wrong Pressure Controller Received for Minor Modification Package (MMP) 97-3-320 AFW

- 99-01622 33 EDG Jacket Water Cooler Temporary Modification Installation Problems

b. Observations and Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting Summary

The engineering inspection team discussed the results of that inspection with licensee management at the conclusion of the inspection on March 2, 2001. On March 23, 2001, the health physics inspectors met with licensee representatives, and the security inspector met with licensee representatives at the conclusion of that inspection on March 30, 2001.

On April 11, 2001, the resident inspectors presented the aggregate inspection results to Mr. R. Barrett and other Entergy staff members who acknowledged the inspection results presented. No proprietary information was identified during this inspection.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

a. Key Points of Contact

R. Barrett, Vice President, Operations - IP3
J. Barry, Sr. Radiological Engineer
R. Burroni, I&C Manager
F. Dacimo, General Manager of Plant Operations
J. Comiotes, Director, Safety Assurance
E. Danko, Licensing Engineer
J. DeRoy, Director, IP-3 Engineering
R. Deschamps, Radiation Protection/Radiological and Environmental Services Manager
A. Grosjean, Sr. Emergency Preparedness Engineer
R. LaVera, Sr. Radiological Engineer
J. LePere, General Supervisor, Waste Management
D. Mayer, Manager, Health Physics/Chemistry
F. Mitchell, General Supervisor, Health Physics
J. Perrotta, Quality Assurance Manager
K. Peters, Licensing Manager
P. Rubin, Operations Manager
J. Russell, Projects Manager
R. Solano, HP Supervisor
J. Stewart, HP Supervisor
A. Vitali, Maintenance Manager
J. Wheeler, Training Manager
M. Wilson, Emergency Preparedness Coordinator

b. List of Items Opened, Closed and Discussed

Opened/Closed

N/A

Discussed

N/A

c. List of Acronyms

A/C	air conditioning
ACTS	action commitment tracking system
AEOF	alternate emergency operations facility
AFW	auxiliary feedwater
ALARA	as low as reasonably achievable
BIT	boron injection tank
CCW	component cooling water
CFR	code of federal regulations
COL	checkoff list
CS	containment spray
DC	design change
DCP	design change package
DER	deviation/event report
DRR	DER response report
EDG	emergency diesel generator
EP	emergency preparedness
FME	foreign material exclusion
FSAR	final safety analysis report
GL	generic letter
HP	health physics
HRA	high radiation area
IPE	individual plant examination
IPEEE	individual plant examination for external events
ITS	improved technical specifications
LHRA	locked high radiation area
LOCA	loss of coolant accident
MCM	modification change manual
MMP	minor modification package
MOV	motor-operated valve
MPFF	maintenance preventable functional failure
MSL	mean sea level
MTC	moderator temperature coefficient
NRC	Nuclear Regulatory Commission
NSE	nuclear safety evaluation
OD	operability determination
OSC	operations support center
PAB	primary auxiliary building
PCV	pressure control valve
PI	performance indicator
PLT	plant leadership team
PM	preventive maintenance
POP	plant operating procedure
PORV	power-operated relief valve
PRA	probabilistic risk assessment
psid	pounds per square inch differential
PWT	post-work test
RAMS	radioactive machine shop
RCA	radiologically controlled area
RCS	reactor coolant system

RHR	residual heat removal
RO-11	refueling outage No. 11
RWP	radiation work permit
RWST	refueling water storage tank
SI	safety injection
SOP	system operation procedure
SSCs	structures, systems and components
TS	technical specifications
TSC	technical support center
WR	work request