

January 24, 2002

Mr. Theodore Sullivan
Vice President - Operations
Entergy Nuclear Northeast
James A. FitzPatrick Nuclear Power Plant
Post Office Box 110
Lycoming, NY 13093

SUBJECT: FITZPATRICK - NRC INSPECTION REPORT 50-333/01-12

Dear Mr. Sullivan:

On December 31, 2001, the NRC completed an inspection at the James A. FitzPatrick Nuclear Power Plant. The enclosed report documents the inspection findings which were discussed on January 3, 2002, with members of your staff.

The inspection examined 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings of significance were identified.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued an advisory recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the Nation's nuclear power plants remain at the highest level of security and the NRC continues to monitor the situation. This advisory was followed by additional advisories, and although the specific actions are not releasable to the public, they generally include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and more limited access of personnel and vehicles to the sites. The NRC has conducted various audits of your response to these advisories and your ability to respond to terrorist attacks with the capabilities of the current design basis threat (DBT). From these audits, the NRC has concluded that your security program is adequate at this time.

Mr. T. Sullivan

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Sincerely,

/RA/

Glenn W. Meyer, Chief
Projects Branch 3
Division of Reactor Projects

Docket No. 50-333
License No.: DPR-59

Enclosure: Inspection Report 50-333/01-12
Attachment: Supplemental Information

cc w/encl: J. Yelverton, CEO, Entergy Operations
B. O'Grady, General Manager, Entergy Nuclear Operations
J. Knubel, VP Operations Support
H. Salmon, Director of Oversight
A. Halliday, Licensing Manager
M. Kansler, Chief Operating Officer, Entergy
D. Pace, VP Engineering
J. Fulton, Assistant General Counsel
Supervisor, Town of Scriba
J. Tierney, Oswego County Administrator
C. Donaldson, Esquire, Assistant Attorney General, New York Dept. of Law
P. Eddy, Electric Division, Department of Public Service, State of New York
W. Flynn, President, New York State Energy Research
and Development Authority
S. Lousteau, Treasury Department
T. Judson, Central New York Citizens Awareness Network

Mr. T. Sullivan

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 T. Haverkamp, DRP
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-333

License No.: DPR-59

Report No.: 50-333/01-12

Licensee: Entergy Nuclear Northeast

Facility: James A. FitzPatrick Nuclear Power Plant

Location: 268 Lake Road
Scriba, New York 13093

Dates: November 19 - December 31, 2001

Inspectors: R. A. Rasmussen, Senior Resident Inspector
D. A. Dempsey, Resident Inspector
R. S. Barkley, Senior Project Engineer
T. A. Moslak, Health Physicist
J. G. Caruso, Senior Operations Engineer

Approved by: Glenn W. Meyer, Chief
Projects Branch 3
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000333-01-12, on 11/19 - 12/31/2001; Entergy Nuclear Northeast, James A. FitzPatrick Nuclear Power Plant, resident inspection.

The report covers a six-week inspection by resident inspectors, a specialist inspection of access controls to radiologically significant areas, and an inspection of the licensed operator requalification program by a region-based inspector. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/reactors/operating/oversight.html> .

A. Inspector Identified Findings

None

B. Licensee Identified Findings

None

REPORT DETAILS

SUMMARY OF PLANT STATUS

The reactor operated at full power for the majority of the inspection period.

1. REACTOR SAFETY

Initiating Events, Mitigating Systems, Barrier Integrity [REACTOR - R]

1R04 Equipment Alignments

a. Inspection Scope

The inspectors performed the following partial equipment alignment walkdowns:

- A RHR and B core spray walkdowns during planned B RHR LCO maintenance
- B RHRSW during A RHRSW outage

During these walkdowns the inspectors verified that select valves and circuit breakers were in the appropriate position by comparing actual component position and the position described in the applicable operating procedures. The inspectors also performed visual inspections of the material condition of the major system components.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors toured several plant areas and observed conditions related to fire protection. The inspectors looked for transient combustible materials, observed the condition of suppression systems, penetration seals, and ventilation system fire dampers, and verified that fire doors were functional. Areas observed were:

- Fire zone SG-1, standby gas filter room
- Fire zone MG-1, motor generator set room
- Intake structure

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performancea. Inspection Scope

The inspectors reviewed the testing and evaluation of test results for the crescent area coolers. ST-8Q, "Testing of the Emergency Service Water System (IST)", was performed to verify system performance following cooler cleaning maintenance. The inspectors also observed portions of the test.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification1. Simulator Observationa. Inspection Scope

On December 18, 2001, the inspector observed licensed operator simulator training to assess operator performance for scenarios involving: (a) Toxic gas in control room with turbine trip and scram; (b) Loss of A average power range monitor, a safety relief valve stuck open and an anticipated transient without scram. The scenarios included event classifications in accordance with IAP-2, "Classification of Emergency Events," and simulated NRC notifications. Following the exercises the inspector observed the training instructor debriefs with the operating crew.

b. Findings

No findings of significance were identified.

2. Exam Reviewa. Inspection Scope

An in-office review was conducted of operator requalification exam results for the biennial testing cycle. The inspection assessed whether pass rates were consistent with the guidance of NUREG-1021, Revision 8, "Operator Licensing Examination Standards for Power Reactors" and NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)".

The inspector verified that:

- Crew pass rate was greater than 80% (Pass rate was 100%)
- Individual pass rate on the simulator test was greater than or equal to 80% (Pass rate was 100%)
- Individual pass rate on the walk-through (JPMs) was greater than or equal to 80% (Pass rate was 100%)

- Individual pass rate on the written exam was greater than or equal to 80% (Pass rate was 100%)
- Individual pass rate for all portions of the exam was greater than or equal to 75% (100% of the individuals passed all portions of the exam)

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspector reviewed the implementation of the maintenance rule (10 CFR 50.65) as it pertained to the following:

- containment air dilution system
- standby gas treatment system
- emergency service water system
- residual heat removal service water system

The inspectors reviewed the classification of functional failures associated with these systems. The inspectors also reviewed the deviation/event reports that were initiated for these components and verified that functional failures were properly evaluated.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work

a. Inspection Scope

The inspector reviewed Entergy's assessment of plant risk due to the following planned and emergent maintenance activities:

- Scram discharge instrument volume (SDIV) level switch replacement, 03DPT-231H, during the week of November 19
- Planned outage of B residual heat removal system during the week of November 26
- B reactor recirculation motor generator troubleshoot and repair during the week of November 26
- Replacement of 10RHR-431A, RHRSW keepfill check valve during the week of December 3
- Emergent repairs to the crescent cooler service water system check valve 46SWS-60A during the week of December 3

The inspectors reviewed the maintenance risk assessments and the evaluations of the potential core damage impact of the activities. Entergy concluded that these activities

were not risk significant, based on the slight increase in conditional core damage probability for the period that the systems were out of service. The inspectors also reviewed the technical specifications and the final safety analysis report (FSAR) for compensatory measures associated with these activities.

The inspection also included a review of contingency plans and verification that the effects on plant risk and protected equipment were discussed during briefings and shift turnovers. During the maintenance, the inspectors toured the work areas to assure that the scope of the work was consistent with the maintenance plans and that no additional systems were adversely impacted.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance Related to Non-Routine Plant Evolutions and Events

a. Inspection Scope

The inspectors reviewed personnel performance related to the non-routine events listed below.

- The inspectors observed the operators and fire brigade responses to a minor electrical fire that occurred on December 13, 2001, in an electrical control box for the reactor recirculation motor generator room overhead crane. The inspectors observed the response from the control room and the field. The fire was minor and was extinguished in less than fifteen minutes.
- The inspectors reviewed logs and plant computer data, and interviewed operators regarding the operations response to the trip of the A reactor water recirculation pump on October 28, 2001. The recirculation pump trip resulted in an unplanned power transient, but did not require a reactor trip.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the below listed operability determinations performed to address issues identified with safety significant systems. The inspectors reviewed associated sections of the FSAR and technical specifications for the discrepant conditions.

- Environmental qualification of SDIV level switch
- Failure of check valve 46ESW-21B to close
- DER-01-04668, "RPS/PCIS Setpoint Calculation Errors"

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors reviewed maintenance backlog items to assess their screening, prioritization, and the overall effect on plant operation. The inspectors reviewed items designated as catch containments, control room deficiencies, oil leaks, and operator workarounds.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors observed and reviewed the post maintenance testing associated with the following activities:

- Residual heat removal system maintenance activities conducted the week of November 26
- B Recirc MG controller motor and amplifier card replacement
- Maintenance to unit cooler 66UC-22B conducted the week of December 3.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed temporary modification (TMOD) 01-038, "Install Temporary Locking Device on the B Reactor Recirculation Motor Generator Scoop Tube." The inspectors verified that the modification was controlled to minimize the probability of a power excursion during the installation. The TMOD was reviewed for impact on control room operations and 10 CFR 50.59 applicability. Additionally, the inspectors performed a walkdown of the TMOD to ensure consistency with the TMOD documentation.

b. Findings

No findings of significance were identified.

Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

The inspector observed portions of an emergency preparedness drill on November 29, 2001. The inspector also reviewed the post drill critique to determine if issues were identified and entered into the corrective action program.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope

During November 26 - 30, 2001, the inspector performed the following activities to verify that Entergy was properly implementing physical and administrative controls for access to locked high radiation areas and other radiologically controlled areas, and that workers were adhering to these controls when working in these areas. Implementation of the access control program was reviewed against the criteria contained in 10 CFR 20, technical specifications, and procedures.

Independent radiation surveys were performed in the radiologically controlled areas (RCA) of the Reactor Building, Turbine Building, and Radwaste Processing Building to confirm the accuracy of posted survey results; and assess the adequacy of radiation work permits and associated controls. Keys to technical specification locked high radiation areas were inventoried and these areas were verified to be properly secured and posted during plant tours.

Additional surveys were made in the east and west crescents of the reactor building to evaluate the effectiveness of system flushes to reduce radiation fields.

The inspector attended pre-job briefings and reviewed the exposure controls specified in radiation work permits (RWP) and the associated ALARA reviews (AR) for the following jobs-in-progress:

- replacement of the dry well supply fan (27Fan-1), RWP 01-0027, AR 01-006
- preparation of 10-MOV-66B for VOTES testing, RWP 01-0037, AR 01-007

For these tasks the inspector interviewed selected workers on their knowledge of the relevant RWP, electronic dosimetry setpoints, and job site radiological conditions.

The inspector reviewed pertinent information regarding cumulative exposure history, departmental exposure trends, and plant survey records to assess Entergy's effectiveness in establishing exposure goals and in limiting worker dose. Also reviewed were historical surveys to assess their effectiveness in reducing system source terms by hydrolazing and installing shielding.

The inspector reviewed 17 Deviation/Event Reports (DER) relating to the control of personnel exposure and work activities in the RCA to evaluate the threshold for identifying problems regarding the implementation of the radiation protection program, and the promptness and effectiveness of the resulting corrective actions. Additionally, the DER issues were evaluated against the criteria contained in 10 CFR 20, technical specifications, and site procedures to determine the regulatory significance of the identified issue. Included in this review were DER Nos. 3805, 3948, 4104, 4118, 2674, 2729, 2975, 3579, 3590, 3594, 3897, 3959, 3977, 3978, 4183, 4242, and 4331.

In evaluating the effectiveness of the problem identification and resolution program, the inspector reviewed the following radiation protection department self-assessments:

- Respiratory Protection Department Emergency Breathing Air Program (JRP-01-0200)
- Peer Assessment of Effectiveness of Dosimetry Program (JRP-01-216)
- Compliance of Emergency Breathing Equipment (JRP-01-212)
- Effectiveness of Source Term Reduction (JRP-01-188)

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Initiating Events

a. Inspection Scope

The inspector reviewed performance indicator data for the three performance indicators related to initiating events. These were:

- Unplanned Scrams per 7,000 Critical Hours
- Scrams with a Loss of Normal Heat Removal per 12 Quarters
- Unplanned Power Changes per 7,000 Critical Hours

The inspectors reviewed operator logs and plant computer data for the year beginning January 1, 2001.

b. Findings

No findings of significance were identified.

.2 Mitigating Systems

a. Inspection Scope

The inspector reviewed performance indicator data for the Safety System Functional Failure Performance Indicator. The inspectors reviewed operator logs and licensee event reports for the year beginning January 1, 2001.

b. Findings

No findings of significance were identified.

.3 Occupational Exposure Control Effectiveness

a. Inspection Scope

The inspector reviewed Entergy's implementation of the Occupational Exposure Control Effectiveness Performance Indicator (PI). Specifically, the inspector reviewed DERs, and associated documents, for occurrences involving locked high radiation areas, very high radiation areas, and unplanned personnel exposures since the last inspection against the criteria specified in Nuclear Energy Institute (NEI) 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 1, to verify that all occurrences that met the NEI criteria were identified and reported within the performance indicators.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting Summary

On January 2, 2002, the resident inspectors presented their inspection results to Mr. D. Johnson and members of the Entergy staff. The inspectors asked whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

**ATTACHMENT 1
SUPPLEMENTAL INFORMATION**

a. Key Points of Contact

| | |
|----------------|--|
| T. Bergene | ALARA Supervisor |
| R. Brown | Dosimetry Supervisor |
| G. Brownell | Licensing Engineer |
| P. Caplette | Radiation Protection Supervisor |
| D. Cristafulli | Respiratory Protection Supervisor |
| L. DeSantis | Radiological Engineer |
| A. Halliday | Licensing Manager |
| D. Johnson | Acting General Manager of Plant Operations |
| A. Khanifar | Manager of Engineering |
| W. Maguire | General Maintenance Manager |
| M. McCarrick | Radiation Protection Technician |
| R. Murray | Health Physicist, Performance Indicators |
| B. O'Grady | General Manager of Plant Operations |
| P. Policastro | Radiation Protection Operations Supervisor |
| K. Pushee | Radiation Protection Manager |
| J. Ratigan | Principal Health Physicist |
| W. Rohr | Radiological Engineer |
| J. Solini | Senior Health Physicist |
| A. Stark | Radiological Engineer |
| T. Sullivan | Site Executive Officer |
| D. Towndrow | Radiation Protection Technician |
| M. Wilcox | Radiation Protection Technician |
| A. Zarembo | Director Safety Assurance |

b. List of Items Opened, Closed and Discussed

None

c. List of Acronyms

| | |
|-------|--------------------------------------|
| ALARA | As Low As Reasonably Achievable |
| AR | ALARA Review |
| CFR | Code of Federal Regulations |
| DER | Deviation/Event Report |
| FSAR | Final Safety Analysis Review |
| IST | Inservice Test |
| LCO | Limiting Condition for Operability |
| LER | Licensee Event Report |
| LHRA | Locked High Radiation Area |
| NCV | Non-Cited Violation |
| NEI | Nuclear Energy Institute |
| PI | Performance Indicator |
| RCA | Radiologically Controlled Area |
| RHR | Residual Heat Removal |
| RHRSW | Residual Heat Removal Service Water |
| RSPS | Risk Significance Planning Standards |
| RWP | Radiation Work Permit |
| SDIV | Scram Discharge Instrument Volume |
| SDP | Significance Determination Process |
| SSC | Systems, Structures, and Components |
| TMOD | Temporary Modification |
| TS | Technical Specification |

d. List of Documents Reviewed

| | |
|---------------------|---|
| AP-07.01, Rev 7 | Radiation Work Permit Program |
| AP-07.02, Rev 4 | Radiological Equipment Use |
| AP-07.03, Rev 2 | ALARA Program |
| AP-07.04, Rev 4 | Respiratory Protection Program |
| AP-07.05, Rev 6 | Exposure Monitoring and Radiological Controls for Site and RCA Access |
| AP-07.06, Rev 9 | High Radiation Area Control |
| RP-OPS-02.02, Rev 6 | Radiation Work Permit |
| RP-OPS-02.03, Rev 1 | High Radiation Area Access and Key Control |
| RP-OPS-02.04, Rev 1 | Personnel Radiological Hold |
| RP-OPS-03.01, Rev 1 | Radiological Survey Performance and Documentation |
| RP-OPS-03.02, Rev 3 | Airborne Radioactivity Survey Techniques |
| RP-OPS-03.03, Rev 3 | Radiological Postings and Labels |
| RP-OPS-03.05, Rev 1 | Refuel Floor and Drywell Radiological Controls |
| RP-OPS-08.01, Rev 8 | Routine Surveys and Inspections |