



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064**

July 18, 2001

John T. Herron  
Vice President Operations  
Waterford 3  
Entergy Operations, Inc.  
17265 River Road  
Killona, Louisiana 70066-0751

SUBJECT: NRC INSPECTION REPORT 50-382/01-02

Dear Mr. Herron:

On June 30, 2001, the NRC completed an inspection at your Waterford Steam Electric Station, Unit 3, for the period April 1 through June 30, 2001. The enclosed integrated inspection report documents the inspection findings of:

- The radiation protection inspectors, which were discussed on April 20, 2001, with Mr. Alan Harris, Director, Nuclear Safety Assurance, and other members of your staff.
- The resident inspectors, which were discussed on July 3, 2001, with you and other members of your staff.

These inspections 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. Within these areas, the inspections consisted of 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, its enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of 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).

Entergy Operations, Inc.

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Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

*/RA/*

William B. Jones, Chief  
Project Branch E  
Division of Reactor Projects

Docket: 50-382

License: NPF-38

Enclosure:

NRC Inspection Report  
50-382/01-02

cc w/enclosure:

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- Senior Project Engineer, DRP/E (**GAP**)
- Section Chief, DRP/TSS (**PHH**)
- RITS Coordinator (**NBH**)
- Scott Morris (**SAM1**)
- NRR Event Tracking System (**IPAS**)
- WAT Site Secretary (**AHY**)
- Dale Thatcher (**DFT**)

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RIV:RI:DRP/E	SRI:DRP/E	RI:DRS/PSB	RI:DRS/PSB	C:DRS/PSB
JMKeeton	TRFarnholtz	PJEIkmann	JBNicholas	GMGood
<b>E-WBJones</b>	<b>E-WBJones</b>	<b>E-WBJones</b>	<b>E-WBJones</b>	<b>E-WBJones</b>
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C:DRP/E				
WBJones				
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07/18/01				

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket No: 50-382

License No: NPF-38

Report No: 50-382/01-02

Licensee: Entergy Operations, Inc.

Facility: Waterford Steam Electric Station, Unit 3

Location: Hwy. 18  
Killona, Louisiana

Dates: April 1 through June 30, 2001

Inspectors: T. R. Farnholtz, Senior Resident Inspector  
J. M. Keeton, Resident Inspector  
J. B. Nicholas, Ph.D., Senior Health Physicist  
P. J. Elkmann, Emergency Preparedness Inspector

Accompanying  
Personnel: B. D. Baca, Health Physicist  
G. F. Larkin, Reactor Engineer

Approved By: W. B. Jones, Chief, Project Branch E  
Division of Reactor Projects

ATTACHMENTS: Supplemental Information

## SUMMARY OF FINDINGS

IR05000382-01-02; on 04/01-06/30/01; Entergy Operations, Inc.; Waterford Steam Electric Station; Unit 3; Integrated Resident & Regional Report; Radiation Specialist Report.

The report covers a 3-month period of resident inspection and radiation safety inspection. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using IMC 0609 "Significance Determination Process" (SDP). 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/NRR/OVERSIGHT/index.html>. Findings for which the SDP does not apply are indicated by No Color or by the severity level of the applicable violation.

No findings of significance were identified.

## Report Details

Summary of Plant Status: At the beginning of this inspection period, the plant was at full power. The plant remained at that power until June 3, 2001, when Steam Generator Feedwater Pump A tripped causing a reactor power cutback to less than 50 percent power. Problems with Control Element Assembly 47 required the operators to reduce reactor power to less than 20 percent. After the problems had been corrected, the plant was returned to approximately full power on June 4. The plant remained at full power for the remainder of this inspection period.

### **1 REACTOR SAFETY**

Initiating Events, Mitigating Systems, Barrier Integrity

#### 1R01 Adverse Weather Protection (71111.01)

##### a. Inspection Scope

On May 15, 2001, the inspectors accompanied the site emergency preparedness manager on a walkdown of the emergency response communications equipment, supply storage, and preparations. The inspectors reviewed appropriate plant documents such as Technical Specifications and plant logs for surveillance currency of the emergency diesel generators and the ultimate heat sink to verify that continued operability of the systems during hurricanes and tornadoes had been appropriately addressed. The inspectors also reviewed Operating Procedure OP-901-521, "Severe Weather and Flooding," Revision 3, and Departmental Procedure W6.103, "Emergency Preparedness Hurricane Policy and Preparation/Response Guidelines," Revision 0, to verify operator actions focused on maintaining readiness of essential systems.

##### b. Findings

No findings of significance were identified.

#### 1R04 Equipment Alignment (71111.04)

##### a. Inspection Scope

The inspectors reviewed the following system alignments during this quarter:

- Emergency Feedwater Trains B and AB: On April 10, 2001, the inspectors reviewed the mechanical and electrical alignment of Emergency Feedwater Trains B and AB, which were aligned in standby while Train A equipment was out of service for a scheduled surveillance. The alignment of critical portions of the system were verified using Surveillance Procedure OP-903-045, "Emergency Feedwater Flow Path Lineup Verification," Revision 5.
- High Pressure Safety Injection System B: On May 8, 2001, the inspectors walked down and observed the mechanical and electrical alignment of High Pressure Safety Injection System B, which was aligned in standby while Trains A and AB equipment were out of service for a scheduled surveillance. The alignments of critical portions of the system were verified using Surveillance Procedure OP-009-008, "Safety Injection System," Revision 15.

- High Pressure Safety Injection Pump A: On June 28, 2001, the inspectors reviewed the mechanical and electrical alignment of High Pressure Safety Injection Pump A, which was aligned in standby while High Pressure Safety Injection Pump B was out of service for a scheduled replacement of the Emergency Diesel Generator B Agastat sequencer relay for that pump. The alignment of critical portions of the system were verified using Surveillance Procedure OP-903-026, "Emergency Core Cooling System Valve Lineup Verification," Revision 11.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors conducted tours, assessed the material condition of the active and manual fire detection and suppression systems, and verified that combustible materials were appropriately controlled in the following areas:

- Emergency switchgear rooms, reactor auxiliary building +21-foot elevation, and essential chiller area on April 2, 2001
- Turbine generator switchgear rooms and main, auxiliary, and startup transformer areas on May 1, 2001
- Reactor auxiliary building wing area on May 8, 2001
- Turbine building and main switchgear rooms on June 7, 2001
- Reactor auxiliary building switchgear and relay rooms on June 10, 2001
- Reactor auxiliary building -35-foot area on June 19, 2001

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On May 16, 2001, the inspectors reviewed the status of the external flood protection measures for the nuclear plant island structure. The inspectors reviewed the Updated Final Safety Analysis Report, toured the areas susceptible to flooding with the responsible engineers, and interviewed the engineers to determine the extent of any concerns for health of the flood protection measures and their understanding of the risk



associated with external flooding. The inspectors reviewed the inspection and preventive maintenance instructions contained in Procedure MM-006-106, "Plant Door Maintenance," Revision 4, along with the most recent surveillance procedures performed for the flood doors. The inspectors also reviewed the flood protective actions to verify that required operator actions could reasonably be achieved, especially during the online diesel maintenance.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

On June 18, 2001, the inspectors observed the conduct of an evaluated simulator scenario for a shift crew during annual requalification examinations. The following areas were considered:

- Crew performance in terms of clarity and formality of communication
- Ability to take timely action in the safe direction
- Prioritizing, interpreting, and verifying alarms
- Correct use and implementation of procedures, including the alarm response procedures
- Timely control board operation and manipulation, including high-risk operator actions
- Oversight and direction provided by the shift supervisor, including ability to identify and implement appropriate procedures
- Technical Specifications actions such as reporting and emergency plan actions and notifications
- Group dynamics involved in crew performance

The inspectors also observed the self-critique session conducted by the shift crew following the completion of the simulator scenario.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

.1 Maintenance Rule Applications to High Pressure Safety Injection System

a. Inspection Scope

During the weeks of April 30 and May 7, 2001, the inspectors performed an in-office review of the high pressure safety injection system's condition reports for the past year to determine if the Maintenance Rule scoping and application of unavailability hours for these systems had been appropriate. The inspectors also reviewed the system's associated Updated Final Safety Analysis Report chapter; Administrative Procedures UNT-006-029, "The Maintenance Rule," Revision 2; W2.502, "Configuration Risk Management Program Implementation," Revision 0; and Engineering Guide 459020100, "Maintenance Rule Guideline," Revision 2, to verify that the system availability was being appropriately treated.

b. Findings

No findings of significance were identified.

.2 Maintenance Rule for the Component Cooling Water System

a. Inspection Scope

On May 2, 2001, the inspectors completed a review of the Maintenance Rule as it applies to the component cooling water system. During this inspection period, the licensee experienced several minor problems with the portion of the system that includes the dry cooling tower fans and motors. This system was classified as Category (a)(2) in the Maintenance Rule.

b. Findings

No findings of significance were identified.

.3 Maintenance Rule Applications to Emergency Diesel Generators A and B

a. Inspection Scope

During the weeks of May 14-27, 2001, the inspectors performed an in-office review of the emergency diesel generator system's maintenance history and condition reports to determine if the Maintenance Rule scoping and application of unavailability hours for these systems had been appropriate. The inspectors also reviewed the system's associated Updated Final Safety Analysis Report chapter; Administrative Procedures UNT-006-029, "The Maintenance Rule," Revision 2; W2.502, "Configuration Risk Management Program Implementation," Revision 0; and Engineering Guide 459020100, "Maintenance Rule Guideline," Revision 2, to verify that the availability of the system was being appropriately treated.

b. Findings

No findings of significance were identified.

.4 Maintenance Rule Applications to Main Feedwater System

a. Inspection Scope

On June 7, 2001, the inspectors performed an in-office review of the main feedwater system maintenance history to determine if the Maintenance Rule scoping and application of unavailability hours for this system had been appropriate. The inspectors also reviewed the system's associated Updated Final Safety Analysis Report chapter; Administrative Procedures UNT-006-029, "The Maintenance Rule," Revision 2; W2.502, "Configuration Risk Management Program Implementation," Revision 0; and Engineering Guide 459020100, "Maintenance Rule Guideline," Revision 2, to verify that the system availability was being appropriately treated.

b. Findings

No findings of significance were identified.

.5 Maintenance Rule Applications to Component Cooling Water System Train A

a. Inspection Scope

On June 10-11, 2001, the inspectors observed control room activities associated with a relay failure that caused Component Cooling Water System Train A to be declared inoperable. The inspectors performed an in-office review of the affected train's condition reports to determine if the Maintenance Rule application of unavailability hours for this system had been appropriate. The inspectors also reviewed the system's associated Updated Final Safety Analysis Report chapter; Administrative Procedures UNT-006-029, "The Maintenance Rule," Revision 2; W2.502, "Configuration Risk Management Program Implementation," Revision 0; and Engineering Guide 459020100, "Maintenance Rule Guideline," Revision 2, to verify that the system availability was being appropriately treated.

b. Findings

No findings of significance were identified.

.6 Maintenance Rule Applications to Emergency Diesel Generators Sequencer Relays

a. Inspection Scope

During the week of June 8, 2001, the inspectors performed an in-office review of the emergency diesel generators' sequencer maintenance history and condition reports to determine if the recovery plan goals for moving this system from Category (a)(1) back into Category (a)(2) had been appropriate. The inspectors also reviewed Administrative

Procedures UNT-006-029, "The Maintenance Rule," Revision 2; W2.502, "Configuration Risk Management Program Implementation," Revision 0; and Engineering Guide 459020100, "Maintenance Rule Guideline," Revision 2, to verify that the system availability was being appropriately treated.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13)

.1 Turbine Driven Emergency Feedwater Pump AB Special Test

a. Inspection Scope

On April 17, 2001, the licensee installed special test instrumentation on Emergency Feedwater Pump AB for a test to be conducted the following day. The inspectors reviewed Engineering Evaluation ER-W3-01-0264-00-00, which addressed the operability of this pump with the instrumentation installed and Special Test Procedure STP-01426183, "Emergency Feedwater Pump AB Data Acquisition Test," Revision 0, to determine the extent and scope of the testing to be conducted. The inspectors also observed portions of the testing in progress. The inspectors reviewed the data from both the special test and Operations Procedure OP-903-046, "Emergency Feedwater Pump Operability Check," Revision 14.

b. Findings

No findings of significance were identified.

.2 Emergency Diesel Generator A Overhaul on Line

a. Inspection Scope

On May 14, 2001, the inspectors completed a review of the "Extended Diesel AOT Risk Assessment" written to support the Emergency Diesel Generator A scheduled overhaul. The inspectors also reviewed Operating Procedure OP-TEM-008, "Emergency Diesel Generator A(B) Backup Temporary Diesel Generator(s)," Revision 0, to verify adequacy of the risk assessments and appropriate management of the risks associated with the outage.

b. Findings

No findings of significance were identified.

.3 Emergent Work Control for Repair to the Exhaust Muffler of Emergency Diesel Generator A

a. Inspection Scope

On May 15, 2001, during the Emergency Diesel Generator A maintenance outage, workers discovered that the flange on top of the silencer (exhaust muffler) had rusted through and broken away from the top of the silencer. The repair activity was outside the scope of the original outage. The inspectors interviewed the operators and engineers and reviewed Engineering Request ER-W3-01-0329-00-00, "Emergency Diesel Generator A Silencer," to determine if the activity risk had been appropriately considered. The inspectors considered the assessments which had been performed as well as the equipment alignments that were established to comply with Technical Specification requirements.

b. Findings

No findings of significance were identified.

.4 Risk Evaluation Associated with Nitrogen Accumulator 8

a. Inspection Scope

On May 29, 2001, the inspectors reviewed the operability evaluation associated with Nitrogen Accumulator 8 and discussed the risks associated with failure of the isolation valve to close with operators and engineers. The inspectors reviewed the risk assessments and management of the risks associated with the valve failure.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions (71111.14)

a. Inspection Scope

On June 3, 2001, with the plant at 100 percent power, Steam Generator Feedwater Pump A tripped resulting in a reactor power cutback to less than 50 percent power. While attempting to recover from the cutback, Control Element Assembly 47 failed to withdraw with its control group thus forcing the operators to borate and reduce reactor thermal power to less than 20 percent to control the axial shape index. The inspectors reviewed the operator performance in coping with the power reduction. The inspectors reviewed the operator logs, plant computer data, and charts of key parameters, and assessed the plant and operator response to the evolution.

The inspectors also reviewed the applicable Technical Specifications and Root Cause Analysis Report CR-WF3-2001-0647 dated June 3, 2001. The inspectors evaluated the

performance of mitigating systems and operator actions to confirm that the appropriate procedures were entered and timely notifications were made.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the operability evaluations for the following:

- Emergency Feedwater Pump: On April 13 and 16, 2001, the inspectors reviewed the operability evaluation associated with Condition Report 2001-0433. This condition report concerned Operations Procedure OP-903-047 "Emergency Feedwater Actuation Signal Test," Revision 7, which did not support the emergency feedwater pump design-basis requirements.
- Inadequate Weekly Channel Check of Incore Nuclear Instruments: On April 24, 2001, the inspectors reviewed the licensee's operability evaluation for Condition Report 2001-0462. The review considered the minimum incore instrument requirements established in Technical Requirements Manual 3.3.3.2 to support greater than 20 percent reactor power operation. This requirement had been verified by a plant computer printout. The operators discovered that the report had failed to adequately verify operability of the incore detectors and additional manual verifications were initiated to meet the requirements until a fix could be implemented.
- Operability Evaluation and Engineering Confirmation of Nitrogen Accumulator 8: On May 29, 2001, while performing surveillance testing of Nitrogen Accumulator 8, the isolation valve failed to close, potentially causing the emergency feedwater valves to Steam Generator B to become inoperable. The operators requested operability confirmation in accordance with Site Directive W4.101, "Operability Confirmation Process," Revision 3. The inspectors reviewed the licensee's operability evaluation for Condition Report 2001-063 and their basis for continued operability of the nitrogen accumulator based on additional testing of the valve.
- Operability Evaluation of Steam Generator Feedwater Pump B: On June 4, 2001, following a trip of Steam Generator Feedwater Pump A, the trip circuits for Pump B were checked and the same relay problems identified as the cause of the Pump A trip were found to exist. If the same sequence of events had occurred in Pump B, that pump would also trip. The inspectors reviewed the licensee's operability evaluation for Condition Report 2001-0655. The inspectors considered the continued operability of Steam Generator Feedwater Pump B, the increased risk for initiating a transient until the faulty relays could be repaired and the accelerated repair scheduled.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed postmaintenance testing activities conducted on:

- Dry Cooling Tower Fan 3B: On May 2, 2001, the inspectors reviewed the work package for the repair of Dry Cooling Tower 3B and the postmaintenance testing specified in the work package. The fan seal disk was identified as having a crack on the outer edge and required replacement.
- Dry Cooling Tower Fan 13B: On May 4, 2001, the inspectors followed the postmaintenance testing activities conducted on Dry Cooling Tower Fan 13B. Corrective maintenance had been performed on the fan following failure to sequence on with the control switch in the automatic position. The inspectors considered whether the postmaintenance testing requirements had been appropriately addressed by the operations and engineering personnel; the scope of the test was adequate; acceptance criteria was clear; testing had been performed as written; and test data was complete.
- Emergency Diesel Generator A: On May 15-16, 2001, the inspectors observed portions of the postmaintenance testing activities conducted on Emergency Diesel Generator A. An online maintenance outage had been performed on the emergency diesel generator and associated equipment. The inspectors reviewed the postmaintenance testing requirements (Maintenance Action Item 416218) established by operations and engineering personnel. The scope of the test; acceptance criteria and whether testing had been performed as written; and test data completion were considered.
- Emergency Diesel Generator B: On May 25, 2001, the inspectors reviewed the postmaintenance testing for Emergency Diesel Generator B, which had been performed on May 21-24. The inspectors reviewed that: the postmaintenance testing requirements (Maintenance Action Item 416377) had been appropriately addressed by the operations and engineering personnel; the scope of the test was adequate; acceptance criteria was clear; testing had been performed as written; and test data was complete.
- Steam Generator Feedwater Pump A: On June 4, 2001, the inspectors followed the postmaintenance testing activities of Maintenance Action Item 427368 conducted on Steam Generator Feedwater Pump A. Corrective maintenance had been performed on the pump trip circuit following the pump trip that had occurred on June 3. The inspectors reviewed the postmaintenance testing requirements; the scope of the test; acceptance criteria was clear; testing had been performed as written; and test data was complete.

- Dry Cooling Tower Fan 12B: On June 19-21, 2001, the inspectors followed the postmaintenance testing activities for Maintenance Action Item 414657 conducted on Dry Cooling Tower Fan 12B. The fan motor had been replaced with a new motor in accordance with a scheduled replacement plan. The inspectors reviewed the postmaintenance testing requirements; the scope of the test; acceptance criteria was clear; testing had been performed as written; and test data was complete.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed or reviewed the following:

- Emergency Feedwater Pump A: On April 10-11, 2001, the inspectors observed the setup and conduct of portions of Surveillance Procedure OP-903-046, "Emergency Feedwater Pump Operability Check," Revision 14, for Emergency Feedwater Pump A. The inspectors reviewed the completed data sheets to verify that the surveillance acceptance criteria had been met.
- Emergency Diesel Generator B: On April 30, 2001, the inspectors observed the startup of Emergency Diesel Generator B and portions of the associated surveillance test, Surveillance Procedure OP-903-068, "Emergency Diesel Generator and Subgroup Relay Operability Verification," Revision 12, and System Operating Procedure OP-009-002, "Emergency Diesel Generator," Revision 17. The inspectors reviewed the completed surveillance data sheets and diesel generator running log to verify that the surveillance acceptance criteria had been met.
- High Pressure Safety Injection Pump AB: On May 8, 2001, the inspectors observed setup and portions of scheduled surveillance test, "Surveillance Procedure OP-903-030," Revision 13, for High Pressure Safety Injection Pump AB. The inspectors also reviewed the completed data sheets to verify that the surveillance acceptance criteria had been met.
- Dry Cooling Tower A: On May 10, 2001, the inspectors reviewed the results of a scheduled surveillance, for Maintenance Action Item 426555, to test Dry Cooling Tower A. The periodic test is required by Technical Specification 4.7.4.b at 31-day intervals. The test was conducted in accordance with the surveillance procedure. The inspectors also reviewed the completed documentation to verify that the surveillance acceptance criteria had been met.
- Emergency Diesel Generator B: On June 25, 2001, the inspectors observed the startup of Emergency Diesel Generator B and portions of the associated



surveillance test, Surveillance Procedure OP-903-068, "Emergency Diesel Generator and Subgroup Relay Operability Verification," Revision 12, and System Operating Procedure OP-009-002, "Emergency Diesel Generator," Revision 17. The inspectors reviewed the completed surveillance data sheets and diesel generator running log to verify that the surveillance acceptance criteria had been met.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

During the week of May 15, 2001, the inspectors observed and reviewed temporary alterations associated with connecting two temporary diesel generators to the plant electrical busses to serve as backup emergency power supplies during the online maintenance of the emergency diesel generators. The inspectors review included:

- Administrative Procedure ME-001-012, "Temporary Power from Temporary Diesel for 3A2 and 3B2 4KV Busses (Modes 1-6)," Revision 0
- Engineering Response ER-W3-01-0096-00-00, "Evaluation of Temporary Emergency Diesel (TED) at Power Ops Condition"
- Procedure UNT-005-004, "Temporary Alteration Control," Revision 5
- Applicable work instructions

These documents were reviewed to verify that the licensee had appropriately considered the effected risk-significant systems and the modification's effect on these systems.

b. Findings

No findings of significance were identified.

Emergency Preparedness (EP)

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

On June 5, 2001, the inspectors observed activities in the Emergency Operations Facility, Technical Support Center, and Operations Support Center during a tabletop emergency plan drill. The licensee conducted the drill for the purposes of exercising the emergency planning organization and to provide an opportunity to coach the

participants. The inspectors reviewed the drill scenario and the licensee's critique notes from various drill coordinators and observers and interviewed the emergency planning manager to determine the effectiveness of the exercise.

b. Findings

No findings of significance were identified.

**2 RADIATION SAFETY**

Public Radiation Safety (PS)

2PS2 Radioactive Material Processing and Transportation (71122.02)

a. Inspection Scope

The inspectors interviewed radiation protection personnel involved in radioactive material/waste processing and transportation activities and walked down the liquid and solid radioactive waste processing systems to verify that the current system configuration and operation agreed with the descriptions contained in the Updated Final Safety Analysis Report and the Process Control Program. One shipment of radioactive waste packaged in two sealand containers was observed during the inspection (Shipment 2001-1003). The following items were reviewed and compared with regulatory requirements:

- Radioactive material/waste processing and shipping procedures
- The status of radioactive waste processing systems that were not operational and/or abandoned in place
- Changes made to the radioactive waste processing systems since the previous inspection in July 1999
- Waste stream sampling procedures and radio-chemical sample analysis results for each of the licensee identified radioactive waste streams for the year 2000
- Scaling factors and calculations used to account for difficult-to-measure radionuclides
- Conduct of the licensee's quality assurance program per 10 CFR Part 20, Appendix G
- Documentation for 11 nonexcepted package shipments that demonstrated shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, waste disposal manifest, shipping papers provided to the driver, and licensee verification of shipment readiness

(Shipments 1999-1001, 1999-1006, 1999-1008, 2000-1001, 2000-1005, 2000-2006, 2000-3021, 2001-1001, 2001-1003, 2001-3004, and 2001-3026)

- Applicable transport cask Certificates of Compliance and cask loading and closure procedures
- Transferee licenses and state Department of Transportation permits
- Preparation of two sealand containers for Shipment 2001-1003 on April 18, 2001
- Training program for personnel responsible for the conduct of radioactive waste processing and radioactive material/waste shipment preparation activities
- Quality Assurance Audit QA-15-2000-W3-1, "Radwaste," October 5, 2000, through February 1, 2001
- Quality Assurance Surveillance Reports QS-99-053, "Receipt of the 10-142 Type B Shipping Container"; QS-99-103, "Spent Resin Transfer"; and QS-2000-109, "Activities Associated with High Integrity Container Shipment 2000-1006"
- Radiation Protection Department Self-Assessment, "Radioactive Waste Processing and Transportation," conducted January 16 through March 1, 2001
- Eleven condition reports related to the radioactive material/waste processing and shipping program (1999-0820, 2000-0103, 2000-0281, 2000-0891, 2000-0918, 2000-1119, 2000-1557, 2001-0047, 2001-0064, 2001-0065, and 2001-0112)

b. Findings

No findings of significance were identified.

**4 OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors reviewed the performance indicator data for the following:

- Unplanned Scrams Performance Indicator: On April 13, 2001, the inspectors reviewed the performance indicator data for unplanned scrams per 7,000 critical hours for the fourth quarter, 2000. This performance indicator is included in the initiating events cornerstone.
- Scrams with Loss of Normal Heat Removal Performance Indicator: On May 17, 2001, the inspectors reviewed the performance indicator data for

scrams with loss of normal heat removal for the first quarter, 2001. This performance indicator is included in the initiating events cornerstone.

- Unplanned Power Changes Performance Indicator: On May 18, 2001, the inspectors reviewed the performance indicator data for unplanned power changes per 7,000 critical hours for the first quarter, 2001. This performance indicator is included in the initiating events cornerstone.
- Safety System Unavailability Performance Indicator: On May 18, 2001, the inspectors reviewed the performance indicator data for safety system unavailability - emergency ac power system for the first quarter, 2001. This performance indicator is included in the mitigating systems cornerstone.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting Summary

- .1 The radiation protection inspectors presented the inspection results to Mr. Alan Harris, Director, Nuclear Safety Assurance, and other members of licensee management at the conclusion of the inspection on April 20, 2001. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. The licensee indicated that the two Chem-Nuclear resin processing procedures were considered proprietary. The two procedures were returned to the licensee following the inspection.

- .2 The resident inspectors presented the inspection results to Mr. John Herron, Vice President, Operations, and other members of licensee management at the conclusion of the inspection on July 3, 2001. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

## ATTACHMENT

### Supplemental Information

#### PARTIAL LIST OF PERSONS CONTACTED

##### Licensee

B. Allen, Director, Engineering  
M. Brandon, Manager, Licensing  
J. Douet, Manager Plant Maintenance  
E. Ewing, General Manager, Plant Operations  
R. Fili, Manager, Quality Assurance  
B. Fron, Superintendent, Plant Security  
C. Fugate, Manager, Technical Support  
T. Gaudet, Director, Planning and Scheduling  
A. Harris, Director, Nuclear Safety Assurance  
J. Herron, Vice President, Operations  
P. Kelly, Supervisor, Radiation Protection  
S. Landry, Specialist, Radiation Protection  
T. Lett, Superintendent, Radiation Protection  
D. Madere, Supervisor, Licensing  
R. Osborne, Manager, System Engineering  
C. Pickering, Licensing Engineer, Licensing  
B. Pilutti, Supervisor, Radiation Protection  
J. Ridgel, Manager, Maintenance  
D. Stevens, Specialist, Radiation Protection  
T. Tankersley, Manager, Training

#### LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
NRC	Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation