



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-4005

May 15, 2007

Kevin Walsh  
Vice President Operations  
Waterford 3  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70066-0751

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - NRC INTEGRATED  
INSPECTION REPORT 05000382/2007002

Dear Mr. Walsh:

On April 7, 2007, the NRC completed an inspection at your Waterford Steam Electric Station, Unit 3. The enclosed report documents the inspection findings, which were discussed on April 5, 2007, with you and other members of your staff.

This 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.

This report documents two findings of very low safety significance (Green). One of these findings was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because it was entered into your corrective action program, the NRC is treating this violation as a noncited violations (NCV), consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Waterford Steam Electric Station, Unit 3, facility.

Entergy Operations, Inc.

-2-

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, if any, 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/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Jeff A. Clark, P. E.  
Chief, Project Branch E  
Division of Reactor Projects

Docket: 50-382  
License: NPF-38

Enclosure: NRC Inspection Report 050000382/2007002  
w/Attachment: Supplemental Information

cc w/Enclosure:  
Executive Vice President and  
Chief Operating Officer  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, MS 39286-1995

Vice President, Operations Support  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, MS 39286-1995

General Manager, Plant Operations  
Waterford 3 SES  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70057-3093

Manager, Licensing  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70057-3093

Chairman  
Louisiana Public Service Commission  
P.O. Box 91154  
Baton Rouge, LA 70825-1697

Entergy Operations, Inc.

-3-

Director, Nuclear Safety Assurance  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70057-3093

Richard Penrod, Senior Environmental  
Scientist, State Liaison Officer  
Office of Environmental Services  
Northwestern State University  
Russell Hall, Room 201  
Natchitoches, LA 71497

Parish President  
Council  
St. Charles Parish  
P.O. Box 302  
Hahnville, LA 70057

Chairperson  
Denton Field Office  
Chemical and Nuclear Preparedness and Protection Division  
Office of Infrastructure Protection  
Preparedness Directorate  
Dept. of Homeland Security  
800 North Loop 288  
Federal Regional Center  
Denton, TX 76201-3698

Electronic distribution by RIV:  
 Regional Administrator (**BSM1**)  
 DRP Director (**ATH**)  
 DRS Director (**DDC**)  
 DRS Deputy Director (**RJC1**)  
 Senior Resident Inspector (**GFL1**)  
 Branch Chief, DRP/E (**JAC**)  
 Senior Project Engineer, DRP/E (**GDR**)  
 Team Leader, DRP/TSS (**RLN1**)  
 RITS Coordinator (**MSH3**)  
 Regional State Liaison Officer (**WAM**)  
 NSIR/DPR/EPD (**JTJ1**)  
 NSIR/DPR/EPD (**REK**)  
 DRS STA (**DAP**)  
 D. Cullison, OEDO RIV Coordinator (**DGC**)  
**ROPreports**  
 WAT Site Secretary (**AHY**)

SUNSI Review Completed:   JAC   ADAMS:  Yes  No Initials:   JAC    
 Publicly Available  Non-Publicly Available  Sensitive  Non-Sensitive

R:\\_REACTORS\\_WAT\2007\WT2007-02RP-GFL.wpd

RIV:RI:DRP/E	SRI:DRP/E	SPE:DRP/E	C:DRS/OB	C:DRS/EB2
DHOverland;mjs	GFLarkin	GDRreplogle	ATGody	LJSmith
<b>E-JAC</b>	<b>T-JAC</b>	<b>/RA/</b>	<b>/RA/</b>	<b>/RA/</b>
5/10/07	5/15/07	5/10/07	5/14/07	5/14/07
C:DRS/PSB	C:DRS/EB1	C:DRP/E		
MPShannon	WBJones	JAClark		
<b>/RA/</b>	<b>/RA/</b>	<b>/RA/</b>		
5/14/07	5/15/07	5/15/07		

OFFICIAL RECORD COPY

T=Telephone

E=E-mail

F=Fax

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 50-382

License No.: NPF-38

Report No.: 05000382/2007002

Licensee: Entergy Operations, Inc.

Facility: Waterford Steam Electric Station, Unit 3

Location: Hwy. 18  
Killona, Louisiana

Dates: January 1 through April 7, 2007

Inspectors: G. Larkin, Senior Resident Inspector  
D. Overland, Resident Inspector  
K. Clayton, Operations Engineer  
S. Alferink, Reactor Inspector

Approved By: Jeff A. Clark, P. E., Chief, Project Branch E

## SUMMARY OF FINDINGS

IR05000382/2007-002; 01/01/2007-04/07/2007; Waterford Steam Electric Station, Unit 3: Maintenance Rule; Other

The report covered a 3-month period of inspection by resident inspectors, an operations engineer, and a reactor inspector. The inspectors identified two Green findings, one of which was a noncited violation. The significance of most findings are indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### A. NRC-Identified and Self-Revealing Findings

#### Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green noncited violation of 10 CFR 50 Appendix B, Criterion III, "Design Control," for failure to assure that the design basis, as specified in the license application, was correctly translated into drawings and the actual plant configuration. Specifically, Waterford Final Safety Analysis Report, Section 2.4.2.3.3.d, describes openings in the dry cooling tower cubicles that help preclude the possibility of flooding Motor Control Centers 3A315-S and 3B315-S during the probable maximum precipitation event. These openings serve as a backup to the floor drains located in each cubicle. Current plant configuration and Drawing G-499 S06, "Common Foundation Structure, Masonry," Sheet 6, do not conform to the design basis, in that there are no openings other than the floor drains. These motor control centers control power to the wet and dry cooling tower fans, which act as the ultimate heat sink. The licensee entered this issue into their corrective action program for resolution.

This finding is more than minor because it is associated with the design control attribute and affects the Mitigating Systems cornerstone objective to ensure the reliability of the dry cooling tower system during the probable maximum precipitation event on the plant site. The normal floor drains had historically clogged and the drainage openings were needed to limit flood related challenges to the motor control centers. The finding was determined to be of very low safety significance because the deficiency did not represent an actual loss of the wet and dry cooling tower systems safety functions during the past year per "Part 9900: Technical Guidance, Operability Determinations & Functional Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality" (Section 1R12.2).

- Green. The inspectors identified a finding of very low safety significance for failure to assure that the design basis for the dry cooling tower diesel-driven sump pumps was properly implemented. Specifically, the Train B dry cooling tower diesel-driven sump pump was stored near nonseismic equipment which could fall and damage the pump during an operating-basis earthquake. The dry cooling tower diesel-driven sump pumps are equipment important to safety that are required to protect the ultimate heat sink during a standard project storm coincident with an operating-basis earthquake. The licensee entered this deficiency into their corrective action program for resolution.

The finding was greater than minor because it affected the mitigating systems cornerstone objective (design control attribute) to assure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," the inspectors determined that this finding was of very low safety significance because the finding was a design deficiency that was confirmed not to result in a loss of operability per "Part 9900, Technical Guidance, Operability Determination Process for Operability and Functional Assessment." The inspectors determined the cause of this finding was not related to a crosscutting element because the performance deficiency does not reflect current operating performance (Section 40A5).

B. Licensee-Identified Violations.

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and the applicable corrective actions are listed in Section 40A7.

## REPORT DETAILS

Summary of Plant Status: The plant began the period on January 1, 2007, at 100 percent power and remained at approximately 100 percent for the remainder of the inspection period.

### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R01 Adverse Weather Protection (711111.01)

##### .1 Readiness For Seasonal Susceptibilities

##### a. Inspection Scope

The inspectors completed a review of the licensee's readiness of seasonal susceptibilities of missile impact due to high winds. The inspectors: (1) reviewed plant procedures, the Final Safety Analysis Report, and Technical Specifications to ensure that operator actions defined in adverse weather procedures maintained the readiness of essential systems; (2) evaluated operator staffing levels to ensure the licensee could maintain the readiness of essential systems required by plant procedures; and (3) reviewed the corrective action program to determine if the licensee identified and corrected problems related to adverse weather conditions. The inspectors selected the following three risk-significant systems for this inspection:

- Dry cooling towers
- Emergency feedwater
- Main steam (atmospheric dump valves)

Documents reviewed by the inspectors included Operating Procedure OP-901-521, "Severe Weather and Flooding," Revision 4-3, and Engineering Calculation EC-C99-008, "TORMIS Analysis: Tornado Generated Missile Strike at Waterford 3," Revision 1.

The inspectors completed one sample.

##### b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

The inspectors: (1) walked down portions of the three below listed risk important systems, while the redundant train was out of service for maintenance, and reviewed plant procedures and documents to verify that critical portions of the selected systems were correctly aligned; (2) reviewed outstanding work requests; and (3) verified that the licensee was identifying and correcting deficiencies through their corrective action program.

- January 17, 2007: Auxiliary Component Cooling Water System Train A
- February 1, 2007: Component Cooling Water System Train A
- February 5, 2007: Component Cooling Water System Train B

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed three samples.

b. Findings

No Findings of significance were identified.

.2 Complete Walkdown (71111.04S)

a. Inspection Scope

The inspectors: (1) reviewed plant procedures, drawings, the Final Safety Analysis Report, Technical Specifications, and vendor manuals to determine the correct alignment of emergency diesel generator Train A; (2) reviewed outstanding design issues, operator work arounds, and open work requests to verify that outstanding issues did not adversely affect the functionality of the system; and (3) verified that the licensee was identifying and resolving equipment problems in accordance with corrective action program requirements.

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

## 1R05 Fire Protection (71111.05)

### .1 Quarterly Inspection

#### a. Inspection Scope

The inspectors walked down the six plant areas listed below to assess the material condition of active and passive fire protection features and their operational lineup and readiness. The inspectors: (1) verified that transient combustibles and hot work activities were controlled in accordance with plant procedures; (2) observed the condition of fire detection devices to verify that they remained functional; (3) observed fire suppression systems to verify that they remained functional and that access to manual actuators was unobstructed; (4) verified that fire extinguishers and hose stations were provided at their designated locations and that they were in a satisfactory condition; (5) verified that passive fire protection features (electrical raceway barriers, fire doors, fire dampers, steel fire proofing, penetration seals, and oil collection systems) were in a satisfactory material condition; (6) verified that adequate compensatory measures were established for degraded or inoperable fire protection features and that the compensatory measures were commensurate with the significance of the deficiency; and (7) reviewed corrective action program documents to verify that the licensee identified and corrected fire protection problems.

- January 21, 2007: Fire Zones RAB 1A, 2, 3, 5, 6, 7D, 8B, 11, 12, 13, and 32
- February 2, 2007: Fire Zones RAB 8B, 18, 19, 23, and Cooling Tower A
- February 2, 2007: All outdoor fire station hose houses
- February 5, 2007: Fire Zones RAB 8A, 17, 21, 23, and Cooling Tower B
- February 8, 2007: Fire Zones RAB 8C, 11, 12, 13, 16, and 32
- February 12, 2007: Fire Zones RAB 23, 31, 33, 36, 37, and 39

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed six samples.

#### b. Findings

No findings of significance were identified.

### .2 Annual Inspection

#### a. Inspection Scope

On February 6, 2007, the inspectors observed a fire brigade drill to evaluate the readiness of licensee personnel to prevent and fight fires, including the following aspects: (1) the number of personnel assigned to the fire brigade, (2) use of protective clothing, (3) use of breathing apparatuses, (4) use of fire procedures and declarations of emergency action levels, (5) command of the fire brigade, (6) implementation of prefire strategies and briefs, (7) access routes to the fire and the timeliness of the fire brigade response, (8) establishment of communications, (9) effectiveness of radio

communications, (10) placement and use of fire hoses, (11) entry into the fire area, (12) use of fire fighting equipment, (13) searches for fire victims and fire propagation, (14) smoke removal, (15) use of prefire plans, (16) adherence to the drill scenario, (17) performance of the postdrill critique, and (18) restoration from the fire drill. The licensee simulated a fire in switchgear Panel 23A in the condensate polisher building.

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11)

.1 Training Observation

a. Inspection Scope

On January 29, 2007, the inspectors observed training of senior reactor operators and reactor operators to identify deficiencies and discrepancies in the training, to assess operator performance, and to assess the evaluator's critique. The training scenario involved a pressurizer level instrument failure, a dropped control element assembly, a turbine control failure to manual, an additional dropped control element assembly, a loss of offsite power in conjunction with a failure of an emergency diesel generator to autostart, and a main steam line break inside containment with a failure of containment spray to actuate.

Documents reviewed by the inspectors included:

- Emergency Operating Procedure OP-902-000, "Standard Post Trip Actions," Revision 10
- Emergency Operating Procedure OP-902-003, "Loss of Offsite Power/Loss of Forced Flow," Revision 5
- Emergency Planning Procedure EP-001-001, "Recognition and Classification of Emergency Conditions," Revision 21

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

## .2 Biennial Inspection

### a. Inspection Scope

The following inspection activities were performed using Inspection Procedure 71111.11, "Licensed Operator Requalification Program," and 10 CFR 55.46, "Simulation Facilities," as acceptance criteria. The purpose of this review was to determine if the simulator was capable of supporting initial examinations, supporting requalification training required for all licensed operators on shift, and supporting reactivity and control manipulations for initial license applications.

The inspector reviewed the simulator annual performance test book for 2006 in which most of the annual tests were conducted between September and December 2006, using ANS/ANSI 3.5 -1998, "Nuclear Power Plant Simulators for Use in Operator Training and Examination," as committed to by the licensee in their simulator testing procedure "Simulator Annual Performance Tests," WSIM-DIR-003-ANNUAL TESTS, Revision 3.0. Because the licensee communicated to the inspector that the simulator would not be used for reactivity manipulation credits on the next exam, a small sample of the core performance test documents were reviewed in order to assess the adequacy of the simulator in supporting reactivity and control manipulations for future exams as documented on NRC Form 398 "Personal Qualification Statement." While simulator use for reactivity and control manipulation is permitted by 10 CFR 55.46, the simulator must meet the appropriate standards of fidelity, as required by 10 CFR 55.46(c)(2). Documents reviewed during the inspection are listed in the back of this report. The inspector reviewed the criteria in 10 CFR 55.46(c)(2) against the core performance test document samples and the Cycle 15 test data from the plant. The simulator was using the Cycle 15 core load for the current training cycle and no issues were found

One transient test, two scenario-based test packages, and a work package closeout test were run on the simulator with data capture enabled, in order to verify data collected from previous tests was an accurate representation of the test data ran during the testing in December of 2006 and also a verification of reasonable model performance based on the current design of the plant. These tests were: (1) Simultaneous Closure of all Main Steam Isolation Valves-Transient Test Three; (2) Design Basis Loss of Coolant Accident with Subsequent Loss of Off-Site Power-Scenario P-96; (3) Steam Generator Tube Leak-Scenario P-95; and (4) discrepancy work package for the "B" Train Emergency Diesel Generator Trip Discrepancy. These items are listed in the back of this report.

As part of this review, the inspector interviewed one instructor, one evaluator, two reactor operators, two senior reactor operators, both simulator engineers, the simulator support supervisor, and the operations training manager. The interviews were performed in order to collect feedback regarding the fidelity of the simulator, the simulator discrepancy reporting system effectiveness, and training on differences between the simulator and the plant. The inspector reviewed several program documents that describe the overall simulator program. One item specifically related to this review was how management groups such as the simulator review board coordinate discrepancy priorities and subsequent repair decisions. These decisions include cost

versus training impact for major model upgrades that would improve training on the emergency operating procedures and integrated plant operations. These items were reviewed in order to satisfy the requirements of 10 CFR 55.46(d) for continued assurance of simulator fidelity through problem identification and resolution, proper reporting, root cause evaluations, and a planned schedule for implementing timely corrective actions with proper content. The licensee communicated to the inspector that the balance of plant model was being replaced later this year, with work scheduled to be complete and rolled out to training by the end of the calendar year. The licensee also communicated to the inspector that many of the major hardware components were replaced in 2002.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the two equipment performance issues listed below to:  
(1) verify the appropriate handling of structure, system, and component performance or condition problems; (2) verify the appropriate handling of degraded structure, system, and component functional performance; (3) evaluate the role of work practices and common cause problems; and (4) evaluate the handling of structure, system, and component issues reviewed under the requirements of the Maintenance Rule, 10 CFR Part 50 Appendix B, and the Technical Specifications.

- Dry cooling tower elevated fan vibration
- Rust on auxiliary component cooling water structural components

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed two inspection samples.

b. Findings

No findings of significance were identified.

.2 Triennial Periodic Evaluation

a. Inspection Scope

The inspector reviewed the licensee's overall implementation of the maintenance rule, 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at

Nuclear Power Plants.” The inspector assessed the effectiveness of corrective actions and program adjustments performed as a result of the previous periodic evaluation, dated September 14, 2005. No new periodic evaluations were completed since the last triennial periodic evaluation inspection.

The inspector selected samples of structures, systems, and components within the scope of the licensee’s maintenance rule program that experienced degraded performance at some point during the review period. These samples were used to assess the licensee’s response to the degraded performance within the scope of the maintenance rule program. Inspection Procedure 71111.12T requires that the inspector review four to six structure system and component samples. The inspector selected the following four samples for a detailed review:

- Emergency feedwater
- Main feedwater and controls
- Essential chillers
- Dry and wet cooling tower structures

For these structures systems and components, the inspector reviewed procedures, condition reports, functional failure determinations, and plans for an (a)(1) Corrective Action Plan. Additionally, the inspector reviewed the licensee’s scoping and monitoring of the dry cooling tower drains to confirm appropriate inclusion in the maintenance rule program and the development of appropriate acceptance criteria. Finally, the inspector reviewed adjustments to the scope of the maintenance rule program and changes made during the assessment period.

The inspector completed four inspection samples.

b. Findings

Introduction. The inspector identified a Green noncited violation (NCV) of 10 CFR 50 Appendix B, Criterion III, “Design Control,” for failure to assure that the design basis, as specified in the license application, was correctly translated into drawings and the actual plant configuration.

Description. Waterford Final Safety Analysis Report, Section 2.4.2.3.3.d discusses the design function of the dry cooling tower structure to drain the dry cooling tower cubicle areas in order to protect safety-related transformers and motor control centers during the probable maximum precipitation event on the plant site. The Final Safety Analysis Report states that openings are provided for the respective dry cooling tower cubicles in order to further preclude the possibility of flooding Motor Control Centers 3A315-S and 3B315-S. Specifically, these openings will drain water from the cubicle in the event of localized drain clogging. This will prevent water from rising above a critical depth of 1.4'. These openings are intended to serve as a backup to the floor drains located in each cubicle.

When asked to locate the openings, the licensee initiated Condition Reports CR-WF3-2007-00818 and CR-WF3-2007-00830 to document that the plant

configuration and Drawing G-499 S06, "Common Foundation Structure, Masonry," Sheet 6, dated April 15, 1991, do not conform to the Final Safety Analysis Report, Section 2.4.2.3.3.d in that there are no openings other than the floor drain in the dry cooling tower cubicles containing Motor Control Centers 3A315-S and 3B315-S.

The licensee presented a position paper related to the dry cooling tower areas cubicle openings. The inspector reviewed the licensee's position paper and determined that the minor example cited in the paper did not apply to this performance deficiency. Specifically, the inspector determined that the performance deficiency did not constitute a minor dimensional discrepancy because there was a loss of the design function of the openings to further preclude the possibility of flooding Motor Control Centers 3A315-S and 3B315-S. These motor control centers control power to the wet and dry cooling tower fans, which act as the ultimate heat sink.

Analysis. The failure to translate the design basis into drawings and the plant configuration is a performance deficiency. The finding is more than minor because it is associated with the design control attribute and affects the Mitigating Systems cornerstone objective to ensure the reliability of the wet and dry cooling tower systems during the probable maximum precipitation event on the plant site. The normal floor drains had historically clogged and the drainage openings were needed to limit flood related challenges to the motor control centers. The finding was determined to be of very low safety significance because the deficiency did not represent an actual loss of the wet and dry cooling tower systems safety functions per "Part 9900: Technical Guidance, Operability Determinations & Functional Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality." Additionally, the floor drains remained available during the past year. The violation is not considered to have a cross-cutting aspect because it is not considered an indicator of current performance.

Enforcement. Part 50 of Title 10 of the Code of Federal Regulations, Appendix B, Criterion III, states, in part, that measures shall be established to assure that the design basis, as specified in the license application, is correctly translated into drawings. Contrary to the above, prior to March 9, 2007, the licensee failed to assure that the design basis, as specified in the license application, was correctly translated into drawings and the actual plant configuration. Specifically, Final Safety Analysis Report, Section 2.4.2.3.3.d describes openings in the dry cooling tower cubicles that help preclude the possibility of flooding Motor Control Centers 3A315-S and 3B315-S. Current plant configuration and Drawing G-499 S06, "Common Foundation Structure, Masonry," Sheet 6, dated April 15, 1991 do not conform to the Final Safety Analysis Report, Section 2.4.2.3.3.d, in that there are no openings other than the floor drain in the dry cooling tower cubicles containing Motor Control Centers 3A315-S and 3B315-S. Because this finding is of very low safety significance and has been entered into the corrective action program as Condition Reports CR-WF3-2007-00818 and CR-WF3-2007-00830, this violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000382/2007002-01, Failure to Translate Design Basis into Drawings.

The licensee took prompt corrective action and performed a field walk down of the dry cooling tower cubicles. The licensee also verified the existence of periodic tasks to inspect and clean the floor drains. This issue is in the licensee's corrective action program as Condition Reports CR-WF3-2007-00818 and CR-WF3-2007-00830.

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

.1 Risk Assessment and Management of Risk

a. Inspection Scope

The inspectors reviewed the three assessment activities listed below to verify: (1) performance of risk assessments when required by 10 CFR 50.65 (a)(4) and licensee procedures prior to changes in plant configuration for maintenance activities and plant operations; (2) the accuracy, adequacy, and completeness of the information considered in the risk assessment; (3) that the licensee recognizes, and/or enters as applicable, the appropriate licensee-established risk category according to the risk assessment results, and licensee procedures; (4) the licensee properly controlled emergent work; and (5) the licensee identified and corrected problems related to maintenance risk assessments.

- March 5, 2007: Planned surveillance activities for undervoltage and shunt trip coil testing for reactor trip circuit breakers
- March 6, 2007: Planned maintenance activities on emergency diesel generator Train A
- March 13, 2007: Planned maintenance activities on emergency diesel generator Train B

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed three samples.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors: (1) reviewed plants status documents such as operator shift logs, emergent work documentation, deferred modifications, and standing orders to determine if an operability evaluation was warranted for degraded components; (2) referred to the Final Safety Analysis Report and design-basis documents to review the technical adequacy of licensee operability evaluations; (3) evaluated compensatory measures associated with operability evaluations; (4) determined degraded component

impact on any Technical Specifications; (5) used the Significance Determination Process to evaluate the risk significance of degraded or inoperable equipment; and (6) verified that the licensee has identified and implemented appropriate corrective actions associated with degraded components.

- March 3, 2007: Operability evaluation addressing control element assembly Number 79 reed switch position transmitter as described in Condition Report CR-WF3-2007-0766
- March 14, 2007: Operability evaluation addressing steam generator Number 1 atmosphere dump valve stroke time less than minimum allowable as described in Condition Report CR-WF3-2007-0905
- March 26, 2007: Operability evaluation addressing emergency diesel generator Train B slow down during the cooldown cycle as described in Condition Report CR-WF3-2007-1039

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed three samples.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors selected the five postmaintenance test activities of risk significant systems or components listed below. For each item, the inspectors: (1) reviewed the applicable licensing basis and/or design-basis documents to determine the safety functions; (2) evaluated the safety functions that may have been effected by the maintenance activity; and (3) reviewed the test procedure to ensure it adequately tested the safety function that may have been affected. The inspectors either witnessed or reviewed test data to verify that acceptance criteria were met, plant impacts were evaluated, test equipment was calibrated, procedures were followed, jumpers were properly controlled, the test data results were complete and accurate, the test equipment was removed, the system was properly realigned, and deficiencies during testing were documented. The inspectors also reviewed the Final Safety Analysis Report to determine if the licensee identified and corrected problems related to postmaintenance testing.

- December 29, 2006: Emergent maintenance for main feedwater Pump B governor control cabinet
- January 10, 2007: Emergent maintenance on reactor auxiliary building controlled ventilation area Train A

- February 21, 2007: Corrective maintenance on dry cooling tower Train A fan sequencer
- February 22, 2007: Corrective maintenance on dry cooling tower Train B fan sequencer
- March 1, 2007: Corrective maintenance on containment atmospheric purge Valve CAP-204

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed five samples.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the Final Safety Analysis Report, procedure requirements, and Technical Specifications to ensure that the five surveillance activities listed below demonstrated that the structures, systems, and components tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the following significant surveillance test attributes were adequate: (1) preconditioning; (2) evaluation of testing impact on the plant; (3) acceptance criteria; (4) test equipment; (5) procedures; (6) jumper/lifted lead controls; (7) test data; (8) testing frequency and method demonstrated Technical Specification operability; (9) test equipment removal; (10) restoration of plant systems; (11) fulfillment of ASME Code requirements; (12) updating of performance indicator data; (13) engineering evaluations, root causes, and bases for returning tested structures, systems, and components not meeting the test acceptance criteria were correct; (14) reference setting data; (15) annunciators and alarms setpoints; and (16) reactor coolant pressure boundary leakage instrumentation requirements, checks and controls. The inspectors also verified that the licensee identified and implemented any needed corrective actions associated with the surveillance testing.

- February 12, 2007: Operating Procedure OP-903-068, "Emergency Diesel Generator," Revision 14. This monthly test verified operability of emergency diesel generator Train A to satisfy Technical Specification requirements.
- February 14, 2007: Surveillance Procedure STA-001-002, "Containment Purge Valve Leakage Test," Revision 3, Change 3. This test verified leakage past containment isolation valves are within acceptable limits.

- March 7, 2007: Surveillance Procedure OP-903-118, "Primary Auxiliaries Quarterly IST Valve Test," Revision 10, Section 7.4. This test verified acceptable stroke times for component cooling water Train A valves.
- March 8, 2007: Surveillance Procedure OP-903-050, "Component Cooling Water and Auxiliary Component Cooling Water Pump and Valve Operability Test," Revision 18. This test verified operability of auxiliary component cooling water Pump A.
- April 4, 2007: Surveillance Procedure OP-903-024, "Reactor Coolant System Water Inventory Balance," Revision 17. This surveillance determined the quantity of identified and unidentified leakage from the reactor coolant system during plant steady state operations.

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed five samples.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness (EP)

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

For the one drill listed below and simulator-based training evolution contributing to Drill/Exercise Performance and Emergency Response Organization Performance Indicators, the inspectors: (1) observed the training evolution to identify any weaknesses and deficiencies in classification, notification, and Protective Action Requirements development activities; (2) compared the identified weaknesses and deficiencies against licensee-identified findings to determine whether the licensee is properly identifying failures; and (3) determined whether licensee performance is in accordance with the guidance of the NEI 99-02, "Voluntary Submission of Performance Indicator Data," acceptance criteria.

- April 2, 2007: The simulator-based drill involved multiple equipment failures, including failure of pressurizer pressure and level instruments, and a main turbine trip without an automatic reactor trip, resulting in an anticipated transient without scram. This resulted in an alert due to reactor coolant system leakage greater than available charging pump capacity, as well as a failure of the reactor protection system to automatically trip the reactor when a setpoint had been exceeded.

Documents reviewed by the inspectors included:

- Simulator Scenario Number E-47 list of events and event objectives
- Operating Procedure OP-902-000, "Standard Post Trip Actions," Revision 10
- Operating Procedure OP-902-002, "Loss of Coolant Accident Recovery Procedure," Revision 11
- Emergency Planning Procedure EP-001-001, "Recognition and Classification of Emergency Conditions," Revision 21
- Operating Procedure OP-901-201, "Steam Generator Level Control System Malfunction," Revision 3
- Operating Procedure OP-901-110, "Pressurizer Level Control Malfunction," Revision 4

The inspectors completed one simulator-based drill sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification (71151)

Cornerstone: Initiating Events

a. Inspection Scope

The inspectors sampled licensee submittals for the three performance indicators listed below for the period April 2005 through December 2006. The definitions and guidance of Nuclear Energy Institute 99-02, "Regulatory Assessment Indicator Guideline," Revision 4, were used to verify the licensee's basis for reporting each data element in order to verify the accuracy of performance indicator data reported during the assessment period. The inspectors reviewed licensee event reports, monthly operating reports, and operating logs as part of the assessment. Licensee performance indicator data were also reviewed against the requirements of Procedure EN-LI-114, "Performance Indicator Process," Revision 2.

- Unplanned Scrams Per 7,000 Critical Hours
- Unplanned Scrams With Loss Of Normal Heat Removal
- Unplanned Power Changes Per 7,000 Critical Hours

b. Findings

No findings of significance were identified.

#### 4OA2 Identification and Resolution of Problems (71152)

##### .1 Routine Review of Identification and Resolution of Problems

###### a. Inspection Scope

The inspectors performed a daily screening of items entered into the licensee's corrective action program. This assessment was accomplished by reviewing condition reports and event trend reports and attending daily operational meetings. The inspectors: (1) verified that equipment, human performance, and program issues were being identified by the licensee at an appropriate threshold and that the issues were entered into the corrective action program; (2) verified that corrective actions were commensurate with the significance of the issue; and (3) identified conditions that might warrant additional follow-up through other baseline inspection procedures.

###### b. Findings

No findings of significance were identified.

##### .2 Selected Issue Follow-up Inspection

###### a. Inspection Scope

In addition to the routine review, the inspectors selected the one issue, listed below, for a more in-depth review. The inspectors considered the following during the review of the licensee's actions: (1) complete and accurate identification of the problem in a timely manner; (2) evaluation and disposition of operability/reportability issues; (3) consideration of extent of condition, generic implications, common cause, and previous occurrences; (4) classification and prioritization of the resolution of the problem; (5) identification of root and contributing causes of the problem; (6) identification of corrective actions; and (7) completion of corrective actions in a timely manner.

- March 30, 2007: Essential chiller cycle timer failures

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed one sample.

###### b. Findings

No findings of significance were identified.

#### 4OA5 Other Activities

(Closed) Unresolved Item 05000382/2006008-02: Failure to Ensure that Written Procedures Adequately Incorporate Regulatory Requirements and Design Basis

Introduction. The inspectors identified a finding of very low safety significance for the failure to ensure that the design basis for the dry cooling tower diesel-driven sump pumps was properly implemented. This failure resulted in storing the Train B dry cooling tower diesel-driven sump pump near nonseismic equipment which could fall and damage the pump during an operating-basis earthquake. The dry cooling tower diesel-driven sump pumps are equipment important to safety that are required to protect the ultimate heat sink during a standard project storm coincident with an operating-basis earthquake.

Description. The inspectors identified that the licensee had inappropriately located the Train B diesel-driven ultimate heat sink sump pumps near non-seismically qualified piping. The inspectors were concerned that the piping could fall and damage the pump during an operating-basis earthquake.

The failure to locate the pump in a location free from potentially seismic induced damage was inconsistent with the Final Safety Analysis Report. Section 2.4.2.3.4, "Effects of Standard Project Storm on Cooling Tower Areas," credits the diesel driven pump for protecting vital equipment during a standard project storm coincident with an operating-basis earthquake. Contrary to this commitment, the diesel driven pumps were located directly under non-seismic category I piping.

In response to the inspectors' concerns, the licensee performed a seismic analysis and determined that the non-seismic piping would not fall during an operating basis earthquake.

Analysis. The finding was greater than minor because it affected the mitigating systems cornerstone objective (design control attribute) to assure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," the inspectors determined that this finding was of very low safety significance because the finding was a design deficiency that was confirmed not to result in a loss of operability per "Part 9900, Technical Guidance, Operability Determination Process for Operability and Functional Assessment." The inspectors determined the cause of this finding was not related to a crosscutting element because the performance deficiency does not reflect current operating performance.

Enforcement. This finding was associated with non-safety related equipment and no violation of NRC requirements occurred. The finding has been entered into the licensee's corrective action program as Condition Report CR-WF3-2007-0824 (FIN 05000382/2007002-02, Dry Cooling Tower Sump Pump Design Bases Change).

#### 40A6 Meetings, Including Exit

On March 8, 2007, the operations inspector discussed the licensed operator requalification program inspection results with Mr. Al Dodds, Operations Manager, and other members of the licensee's staff.

On March 9, 2007, a reactor inspector presented the triennial maintenance rule inspection results to Mr. K. Walsh, Vice President, Operations, and other members of the licensee's staff.

On April 5, 2007, the resident inspectors presented the inspection results to Mr. K. Walsh and other members of licensee management.

For each exit meeting the licensee acknowledged the findings presented. In addition, the inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

#### 40A7 Licensee Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements. This violation meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-16000, for being dispositioned as a licensee identified noncited violation.

- The licensee identified that maintenance craftsmen had failed to follow a loop calibration procedure for the Train A reactor auxiliary building controlled ventilation system on January 8, 2007. Consequently, the train was rendered inoperable until January 10, 2007, when it failed to run during a surveillance. The failure to follow procedures was a violation of Technical Specification 6.8.1.a. It was licensee identified because it was found during licensee initiated surveillance activities.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee Personnel

S. Anders, Superintendent, Plant Security  
E. Brauner, Supervisor, System Engineering  
H. Brodt, Engineer, Probabilistic Safety Assessment  
K. Cook, Director, Nuclear Safety Assurance  
R. Dodds, General Manager, Plant Operations (Acting)  
C. Fugate, Manager, Operations (Acting)  
T. Gaudet, Director, Planning and Scheduling  
J. Holman, Manager, Safety and Engineering Analysis  
R. Jones, Simulator Support Supervisor  
M. Mason, Technical Specialist, Licensing  
M. Mills, Training Manager  
B. Morrison, Maintenance Rule Coordinator  
R. Murillo, Manager, Licensing  
A. Pilutti, Manager, Radiation Protection  
O. Pipkins, Senior Licensing Engineer  
R. Putnam, Manager, Programs and Components  
G. Scott, Licensing Engineer  
K. Walsh, Vice President, Operations  
B. Williams, Director, Engineering

### ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened and Closed

05000382/2007002-01	NCV	Failure to Translate Design Basis into Drawings (Section 1R12)
05000382/2007002-02	FIN	Failure to Ensure that Written Procedures Adequately Incorporate Regulatory Requirements and Design Basis (Section 4OA5)

#### Closed

05000382/2006008-02	URI	Failure to Ensure that Written Procedures Adequately Incorporate Regulatory Requirements and Design Basis (Section 4OA5)
---------------------	-----	--

**LIST OF DOCUMENTS REVIEWED**

**Section 1R04: Equipment Alignment (71111.04)**

Procedures

Number	Title	Revision
OP-002-003	Component Cooling Water System	Revision 14
OP-009-002	Emergency Diesel Generator	Revision 19
OP-002-001	Auxiliary Component Cooling Water System	Revision 13

Miscellaneous Documents

Final Safety Analysis Report  
 Flow Diagram - Component Cooling Water System, G160, Sheet 2, Rev. 48

**Section 1R05: Fire Protection (71111.05)**

Procedure

NUMBER	TITLE	REVISION
Administrative Procedure UNT-005-013	Fire Protection Program	9
Operating Procedure 009-004	Fire Protection	11-8
Maintenance Procedure MM- 007-010	Fire Extinguisher Inspection and Extinguisher Replacement	13
Administrative Procedure UNT-005-013	Fire Protection Program	9
Fire Protection Procedure FP- 001-015	Fire Protection System Impairments	17
Fire Protection Procedure FP- 001-017	Transient Combustibles	19
Training Manual Procedure NTP-202	Fire Protection Training	11-4

**Section 1R11: Licensed Operator Requalification (71111.11B)**

EN-TQ-202 Rev. 3 "Simulator Configuration Control"

EN-TQ-202 Rev 0. Attachment 9.7 "Scenario Based Testing Checklist"

TDG-SIM-016 Rev. 7 "Configuration Management Training Desk Guide"

WSIM-DIR-002-CORE RELOAD Rev. 0.0 "Simulator Core Reload Acceptance Test"

WSIM-DIR-003-ANNUAL TESTS Rev. 3.0 "Simulator Annual Performance Tests"

DG-TRNW-001 Rev. 13 "Operations Training Simulator Desk Guide"

Simulator Scenario for Loss of Coolant Accident with Loss of Off-Site Power, P-96, Rev. 1

Simulator Scenario for Steam Generator Tube Leak, P-95, Rev. 1

Open Simulator discrepancy report (all)

Closed Simulator discrepancy report from January 2005 thru January, 2007

Annual Operability Test packages

- a. Steady state power test (100%, 78%, 47%)
- b. Transients Reviewed (All 10)
- c. Core test package for cycle 15

Simulator versus Plant differences list and draft lesson plan

Work package closeout and post-test for simulator DR # 06-0032, EDG "B" train trip on the 2 hour load test

Waterford Simulator Training Performance Indicators from February 2006 thru January 2007

**Section 1R12: Maintenance Effectiveness (71111.12)**

Routine Maintenance Effectiveness Inspection

Procedures

Number	Title	Revision
DC-121	Maintenance Rule	1
NUMARC 93-01	Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants	3

Miscellaneous Documents

Engineering Report W-SE-2005-001	Waterford 3 Maintenance Rule Periodic (a)(3) Assessment	0
----------------------------------	---	---

Condition Reports

CR-WF3-2005-1104	CR-WF3-2006-0197	CR-WF3-2006-2537
CR-WF3-2005-1283	CR-WF3-2006-0947	CR-WF3-2006-2842
CR-WF3-2005-1618	CR-WF3-2006-1198	CR-WF3-2006-2914
CR-WF3-2005-1630	CR-WF3-2006-1249	CR-WF3-2006-4070
CR-WF3-2005-2021	CR-WF3-2006-1597	CR-WF3-2006-4277
CR-WF3-2005-2944	CR-WF3-2006-2079	CR-WF3-2006-4455
CR-WF3-2005-4872	CR-WF3-2006-2418	CR-WF3-2007-0006
CR-WF3-2005-4923	CR-WF3-2006-2506	CR-WF3-2007-0158

Triennial Maintenance Effectiveness

Procedures

Number	Title	Revision
CE-P-05.01	Probabilistic Safety Analysis (PSA) Model Maintenance Procedure	5
CE-P-05.07	Data Analysis for At-Power PSA Models	1
CIV-A-002	Maintenance Rule Structural Monitoring at Waterford 3	1
ENS-DC-121	Maintenance Rule	4
NOECP-402	NPIS Common Foundation Basemat Integrity Check	2-5
OP-901-521	Severe Weather and Flooding	4

**Section 1R13: Maintenance Risk Assessments and Emergent Work Control (71111.13)**

Procedures:

NUMBER	TITLE	REVISION
Administrative Procedure OI-037-000	Operations Risk Assessment Guideline	2

Miscellaneous Documents

NUMBER	TITLE/SUBJECT	REVISION
OP-903-127	Reactor Trip Circuit Breaker Post Maintenance Test	3

Drawings

Number	Title	Revision
B-289, Sheet 90	Power Distribution and Motor Data 480V MCC 3A315-S One Line Diagram	8
B-289, Sheet 91	Power Distribution and Motor Data 480V MCC 3A315-S One Line Diagram	10
B-289, Sheet 93	Power Distribution and Motor Data 480V MCC 3B315-S One Line Diagram	8
B-289, Sheet 94	Power Distribution and Motor Data 480V MCC 3B315-S One Line Diagram	9
G-173, Sheet 3	Flow Diagram, Sump Pump System	13
G-499, Sheet 6	Common Foundation Structure, Masonry	6
G-874, Sheet 1	Fuel Handling Building, Plan El. -34.75'	11

Condition Reports

CR-WF3-2004-02978	CR-WF3-2006-00006	CR-WF3-2007-00178
CR-WF3-2004-03626	CR-WF3-2006-00884	CR-WF3-2007-00270
CR-WF3-2005-00099	CR-WF3-2006-00959	CR-WF3-2007-00818
CR-WF3-2005-02558	CR-WF3-2006-02489	CR-WF3-2007-00824
CR-WF3-2005-03826	CR-WF3-2006-02762	CR-WF3-2007-00830
CR-WF3-2005-04598	CR-WF3-2006-04534	CR-WF3-2007-00831
CR-WF3-2005-04716	CR-WF3-2006-04650	CR-WF3-2007-00840
CR-WF3-2005-04992	CR-WF3-2007-00177	CR-WF3-2007-00936

Miscellaneous

Calculation EC-M99-010, Revision 0-2

LO-WLO-2007-00031, "Maintenance Rule Assessment," dated February 15, 2007

Maintenance Rule Tables for Waterford 3 Steam Electric Station

NUMAR 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2

Southwest Research Institute Report, "Failure Analysis of Automatic Timing and Controls Cycle Timers," dated February 14, 2007 (draft)

W-CS-2003-001-00, "Maintenance Rule Walkdown for Evaluation of Structures," , Revision 0

Waterford Steam Electric Station Unit 3 Final Safety Analysis Report, Revision 14B

**Section 1R15: Operability Evaluations (71111.15)**

Procedures:

NUMBER	TITLE	REVISION
EN-OP-104	Operability Evaluation	1
OP-035-000	Notification Matrix	6

Condition Reports

CR-WF3-2007-1039                      CR-WF3-2007-905  
CR-WF3-2007-766

**Section 1R19: Postmaintenance Testing (71111.19)**

Procedures

NUMBER	TITLE	REVISION
OP-903-052	Controlled Ventilation Area System Operability Check	9
MI-005-554	Controlled Ventilation Area System Filter Train A/B Inlet Temperature Loop Calibration HVRITS5250A/5255-A or HVRIT5250-B/5255B	6

Procedures

NUMBER	TITLE	REVISION
ENS-MA-114	Post Maintenance Testing	5

Miscellaneous Documents

NUMBER	TITLE/SUBJECT	REVISION
CEP-IST-1	IST Bases Document	3
Calibration Data Package	HVRIT5250A/5255A	0
DWG B425	HVR-CVAS Filter Train A Temp	

Condition Reports

CR-WF3-2007-0270	CR-WF3-2005-2821	CR-WF3-2006-4650
CR-WF3-2005-2819	CR-WF3-2007-123	

Work Orders

00101429, 01162802, 51049057, 103085

**Section 1R22: Surveillance Testing (71111.22)**

Procedures/Documents

NUMBER	TITLE	REVISION
OI-040-000	Reactor Coolant System Leakage Monitoring	
ECM94-004	RCS Inventory Balance Calculation	2
Entergy Letter CNRO-2007-0704	Inspection and Mitigation of Alloy 600/82/182	0
OP-903-127	Reactor Trip Circuit Breaker Post Maintenance Test	3
CEP-IST-1	IST Bases Document	3

**Section 4OA2: Identification and Resolution of Problems (71152)**

Procedures/Documents

NUMBER	TITLE	REVISIONS
EN-LI-113	Licensing Basis Document Change Process	1
EN-LI-102	Corrective Action Process	7
OP-002-004	Chilled Water System	12
W3P82-0652	Resolution of Hydrology Branch Concerns	March 30, 1982
EN-LI-110	Commitment Management Program	0
OP-100-014	Technical Specification and Technical Requirements Compliance	301
EC-M99-010	Dry Cooling Tower Basin Ponding Analysis	0
DCP-3521	Reroute Dry Cooling Tower Sump Pumps Discharge to Circulating Water System	4
ECP-97-024	Pipe Stress Calculation: Dry Cooling Tower Circulating Water Piping	0

Miscellaneous Documents

NUMBER	TITLE/SUBJECT	REVISION
ER-W3-00-0541-00	Evaluate the Essential Chilled Water Leaving Temperature Setpoint	0
Purchase Order 10101881	Cycle Timer	0
ER-W3-2002-0278-000	Essential Chiller Cycle Timer Improvement	0
Southwest Research Institute 10009164	Failure Analysis of Automatic Timing and Controls Cycle Timers	0

Condition Reports

CR-WF3-2005-2821	CR-WF3-2005-3308	CR-WF3-2005-0458
CR-WF3-2000-2819	CR-WF3-2001-0673	CR-WF3-2002-1989
CR-WF3-2005-3270	CR-WF3-2003-1192	
CR-WF3-2005-2849	CR-WF3-2003-0448	

## LIST OF ACRONYMS

NRC	Nuclear Regulatory Commission
PDR	Public Document Room
CFR	Code of Federal Regulations
NRR	Office of Nuclear Reactor Regulation