



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
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October 5, 2006

Joseph E. Venable  
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SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - NRC TRIENNIAL FIRE PROTECTION INSPECTION REPORT 05000382/2006010 AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Venable:

On August 7 through August 25, 2006, the NRC completed an inspection at your Waterford Steam Electric Station, Unit 3. The enclosed report documents the inspection findings which were discussed on August 25, 2006, with Mr. Bruce Williams and other members of your staff.

During this triennial fire protection inspection, the inspection team examined activities conducted under your license related to safety and compliance with the Commission's rules and regulations and the conditions of your license. The inspection consisted of selected examination of procedures and records, observations of activities and installed plant systems, and interviews with personnel.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of 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/**

Linda J. Smith, Chief  
Engineering Branch 2  
Division of Reactor Safety

Docket: 50-382  
License: NPF-38

Entergy Operations, Inc.

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Enclosure: NRC Inspection Report 050000382/2006010

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SUNSI Review Completed:  LJS  ADAMS:  Yes     No    Initials:  LJS   
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DOCUMENT: R:\ REACTORS\ WAT\2006\WT006-010RP-JMM.wpd

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**U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV**

Docket No.: 50-382  
License No.: NPF-38  
Report No.: 05000382/2006010  
Licensee: Entergy Operations, Inc.  
Facility: Waterford Steam Electric Station, Unit 3  
Location: Hwy. 18  
Killona, Louisiana  
Dates: August 7 through 25, 2006  
Inspectors: J. Mateychick - Senior Reactor Inspector  
D. Livermore - Reactor Inspector  
R. Mullikin - Consultant  
Approved By: L. J. Smith, Chief  
Engineering Branch 2  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000382/2006-010; August 7 - 25, 2006; Waterford Steam Electric Station, Unit 3:  
Triennial Fire Protection Inspection

The report covered a 2-week period of inspection by region-based specialist inspectors and a contractor. No findings of significance were identified. The significance of most findings is indicated by its 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.

Waterford Steam Electric Station, Unit 3 formally committed to converting their Fire Protection Program to comply with the requirements of 10 CFR Part 50.48.(c) and National Fire Protection Association Standard 805. This involves using a risk-informed methodology. Because the conversion and licensing process are expected to identify and address a variety of difficult issues that are normally the subject of triennial fire protection inspections, and because any findings in this area would have to be addressed under the new, rather than the existing, program, the NRC has adapted its inspection and enforcement of certain issues for plants in this situation. As a result, the scope of this inspection was modified, and some issues raised in this inspection are documented but subject to enforcement discretion.

A. NRC-Identified and Self Revealing Findings

No findings of significance were identified during this inspection.

B. Licensee-Identified Findings

None.

## REPORT DETAILS

### 1 REACTOR SAFETY

#### 1R05 Fire Protection

The purpose of this inspection was to review the Waterford Steam Electric Station, Unit 3, fire protection program (FPP) for selected risk-significant fire areas. The inspection was performed in accordance with Inspection Procedure (IP) 71111.05TTP, "Fire Protection-NFPA 805 Transition Period (Triennial)," dated 05/09/06, for a plant in transition to National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 Edition. The NRC reduced the scope of this inspection by not specifically targeting safe shutdown circuit configurations for inspection. Emphasis was placed on verification of the post-fire safe shutdown capability. The inspection was performed in accordance with the NRC regulatory oversight process using a risk-informed approach for selecting the fire areas and attributes to be inspected. The team used the Individual Plant Examination for External Events for Waterford Steam Electric Station, Unit 3, to choose risk-significant areas for detailed inspection and review. Inspection Procedure 71111.05TTP, "Fire Protection-NFPA 805 Transition Period (Triennial)," requires selecting a minimum of three fire areas for review. The three fire areas reviewed during this inspection were:

RAB 2            H&V Mechanical Room

RAB 7            Relay Room (+35' el)

RAB 8            Switchgear Room

For each of these fire areas, the inspection focused on fire protection features, systems and equipment necessary to achieve and maintain safe shutdown conditions, and licensing basis commitments.

Documents reviewed by the team are listed in the attachment.

#### .1 Shutdown From Outside Main Control Room

##### a. Inspection Scope

The team reviewed the functional requirements identified by the licensee as necessary for achieving and maintaining hot shutdown conditions to ensure that at least one post-fire safe shutdown success path was available in the event of fire in each of the selected areas and alternative shutdown for the case of control room evacuation. The team reviewed piping and instrumentation diagrams of systems credited in accomplishing safe shutdown functions to independently verify whether licensee's shutdown methodology had properly identified the required components. The team focused on the following functions that must be available to achieve and maintain safe shutdown conditions:

- Reactivity control capable of achieving and maintaining cold shutdown reactivity conditions,
- Reactor coolant makeup capable of maintaining the reactor coolant inventory,
- Reactor heat removal capable of achieving and maintaining decay heat removal,
- Supporting systems capable of providing other services necessary to permit extended operation of equipment necessary to achieve and maintain hot shutdown conditions,
- Verify that a safe shutdown can be achieved and maintained with and without off-site power.

A review was also conducted to ensure that all required components in the selected systems were included in the licensee's safe shutdown analysis. The team identified the systems required for each of the primary safety functions necessary to achieve and maintain shutdown conditions. These systems were then evaluated to identify the systems that interfaced with the selected fire areas and were the most risks significant systems required for reaching hot shutdown conditions.

b. Findings

No findings of significance were identified.

.2 Protection of Safe Shutdown Capabilities

a. Inspection Scope

For the selected fire areas/zones, the team evaluated the potential for fires, the combustible fire load characteristics, potential exposure fire severity, and the separation of systems necessary to achieve and maintain SSD.

In accordance with Inspection Procedure (IP) 71111.05TTP, Fire Protection (Triennial), dated May 9, 2006, for a plant in transition to NFPA Standard 805, the NRC reduced the scope of this inspection by only targeting safe shutdown circuit configurations for which the licensee has completed their NFPA 805 assessment. Since the licensee has not completed their NFPA 805 assessment for any fire area, there was no additional inspection of circuits performed.

b. Findings

Introduction. The team identified an apparent violation of License Condition 2.C.9, "Fire Protection (Section 9.5.1, SSER 8)," for failure to ensure that redundant trains of safe shutdown systems in the same fire area were free of fire damage. The licensee credited unapproved manual actions to mitigate the effects of fire damage in lieu of providing physical protection consistent with the technical requirements of 10 CFR Part 50, Appendix R, Section III.G.2. The team considered the manual actions



to be reasonable, therefore, the finding was determined to be of very low safety significance.

Description. License Condition 2.C. 9 states, "EOI shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility thru Amendment 36 and as approved in the SER through Supplements 9, subject to the following provision:

EOI may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdowns in the event of a fire."

In NUREG-0787, "Safety Evaluation Report Related to the Operation of Waterford Steam Electric Station, Unit No. 3," Supplement No. 5, the NRC staff evaluation of Safe Shutdown Capability noted, "In SSER No. 3, the staff reported that the one of the redundant trains needed for safe shutdown would be kept free of fire damage by providing separation, fire protection (fire detection, suppression, fire barriers), repairs for cold shutdown equipment, and/or an alternate shutdown capability."

The NRC staff also stated in the conclusion of SSER N0. 5, "The technical requirements set forth in Appendix R, as well as the criteria of BTP 9.5-1, have been used as guidelines in the fire protection evaluation above. By letter dated November 10, 1981, the applicant committed to meet the technical requirements of Appendix R to 10 CFR Part 50. The staff evaluated this commitment, along with specific commitments described in this SSER. Subsequently, the staff concluded that the fire protection program, with the accepted deviations listed below is in conformance with the guidelines of Appendix A to BTP 9.5-1, the requirements of Appendix R, and GDC 3, and is, therefore, acceptable."

At the time of the inspection, the fire protection program relied on manual actions for fires outside of the control room for achieving and maintaining hot shutdown as documented in calculation EC-F00-026, "Appendix R Revalidation Project Post Fire Safe Shutdown," and Procedure OP-901-524, "Fire in Areas Affecting Safe Shutdown." An example is establishing a charging flow path for the case of a fire in Fire Area RAB 8 (Switchgear Room). If a fire occurred in Fire Zone RAB 8B (Train B Switchgear Room), operators are required to manually close valve CVC-183 in Fire Area RAB 31 to isolate the Volume Control Tank and open breaker CVCEBKRA 38 in Fire Zone RAB 8C to fail air operated valve CVC-209 (Charging Header Isolation) in the required open position.

Analysis. This finding is of greater than minor safety significance because it impacted the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to external events (such as fire) to prevent undesirable consequences. The team reviewed Procedure OP-901-524, "Fire in Areas Affecting Safe Shutdown" and walked down the manual actions directed in the procedure with licensee operations personnel. The team found that the manual operator actions were reasonable (as defined in Enclosure 2 of Inspection Procedure 71111.05TTP), and could be performed within the analyzed time limits. Since the manual operator actions were considered reasonable, the significance

determination process was not entered. The team determined that this finding is of very low safety significance in accordance with the guidance in Enclosure 2 to Inspection Procedure 71111.05TTP.

Enforcement. Waterford 3 License Condition 2.C.9 requires that the licensee shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report through Amendment 36 as approved in the SER through Supplement 9. As part of the approved Fire Protection Program, the licensee committed by letter dated November 10, 1981, to meet the technical requirements of Appendix R to 10 CFR 50. Section III.G.2 of Appendix R lists three options for satisfying the requirements for separation and protection of equipment needed to ensure safe shutdown remains free of fire damage. The requirements of this section do not allow using manual actions in lieu of protection and separation. Contrary to this, the team concluded that the licensee failed to protect and separate cables and equipment necessary to ensure safe shutdown in the event of a fire in multiple fire areas. Specifically, the licensee relied on manual actions to overcome the effects of spurious operations or circuit damage due to the effects of fire for the equipment required to achieve and maintain hot shutdowns in the event of a fire. The licensee had entered this issue into their corrective action program under Condition Report CR-WF3-2006-00346.

Because the licensee committed, prior to December 31, 2005, to adopting NFPA 805 and changing their Fire Protection Program license basis to comply with 10 CFR Part 50.48(c), this issue is covered by enforcement discretion in accordance with the NRC Enforcement Policy. Specifically, this issue would have been expected to be identified and addressed during the licensee's conversion to NFPA 805, was entered into the licensee's corrective action program and will be corrected, and was of very low safety significance. The manual actions are to remain in effect as compensatory measures until the issue is resolved and compliance restored. The team's review concluded that this violation meets the criteria for enforcement discretion for plants in transition to a risk-informed, performance-based fire protection program as allowed per 10 CFR Part 50.48(c). Since all the criteria were met, the NRC is exercising enforcement discretion for this issue.

### .3 Passive Fire Protection

#### a. Inspection Scope

For the selected fire areas, the team evaluated the adequacy of fire area barriers, penetration seals, and fire doors. The team observed the material condition and configuration of the installed barriers, seals, and doors. The team compared the as-installed configurations to the approved construction details. In addition, the team reviewed license documentation, such as NRC safety evaluation reports, and deviations from NRC regulations to verify that fire protection features met license commitments.

#### b. Findings

No findings of significance were identified.

#### .4 Active Fire Protection

##### a. Inspection Scope

For the selected fire areas, the team evaluated the adequacy of fire suppression and detection systems. The team observed the material condition and configuration of the installed fire detection and suppression systems. The team reviewed design documents and supporting calculations. In addition, the team reviewed license basis documentation, such as NRC safety evaluation reports, and deviations from NRC regulations to verify that fire suppression and detection systems met license commitments.

The team also observed an announced site fire brigade drill and the subsequent drill critique using the guidance in Inspection Procedure 71111.05AQ. Team members observed the fire brigade simulate fire fighting activities in plant Fire Zone NS-TB-003 (Turbine Building Mezzanine +40 East) at the hydrogen seal oil skid. The inspectors verified that the licensee staff identified deficiencies, openly discussed them in a self-critical manner at the drill debrief, and took appropriate corrective actions. Specific attributes evaluated were: (1) proper wearing of turnout gear and self-contained breathing apparatus; (2) proper use and layout of fire hoses; (3) employment of appropriate fire fighting techniques; (4) sufficient fire fighting equipment brought to the scene; (5) effectiveness of fire brigade leader communications, command, and control; (6) search for victims and propagation of the fire into other plant areas; (7) smoke removal operations; (8) utilization of pre-planned strategies; (9) adherence to the pre-planned drill scenario; and (10) drill objectives.

##### b. Findings

No findings of significance were identified.

#### .5 Protection From Damage From Fire Suppression Activities

##### a. Inspection Scope

For the sample areas, the team verified that redundant trains of systems required for hot shutdowns were not subject to damage from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems including the effects of flooding.

##### b. Findings

No findings of significance were identified.

#### .6 Alternative Shutdown Capability

##### a. Inspection Scope

The team reviewed the licensee's alternative shutdown methodology to determine if the licensee properly identified the components, systems, and instrumentation necessary to

achieve and maintain safe shutdown conditions from the auxiliary shutdown panel and alternative shutdown locations. The team focused on the adequacy of the systems selected for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring and support system functions. The team verified that hot and cold shutdown from outside the control room could be achieved and maintained with offsite power available or not available. The team verified that the transfer of control from the control room to the alternative locations was not affected by fire-induced circuit faults by reviewing the provision of separate fuses for alternative shutdown control circuits.

The team also reviewed the operational implementation of the licensee's alternative shutdown methodology. Team members observed a walk-through of the control room evacuation procedures with licensee personnel. The team observed operators simulate performing the steps of Procedure OP-901-502, "Evacuation of Control Room and Subsequent Plant Shutdown," Revision 10, which provided instructions for performing an alternative shutdown from the remote shutdown panel (LCP-43), and for manipulating equipment in the plant. The team verified that the minimum number of available operators, exclusive of those required for the fire brigade, could reasonably be expected to perform the procedural actions within the applicable plant shutdown time requirements and that equipment labeling was consistent with the procedure. Also, the team verified that procedures, tools, dosimetry, keys, lighting, and communications equipment were available and adequate to support successfully performing the procedure as intended. The team also reviewed records for operator training conducted on this procedure.

b. Findings

No findings of significance were identified.

.7 Circuit Analyses

This segment is suspended for plants in transition to NFPA 805.

.8 Communications

a. Inspection Scope

The team reviewed the adequacy of the communication system to support plant personnel in the performance of alternative safe shutdown functions and fire brigade duties. The team verified that plant telephones, page systems, sound powered phones, and radios were available for use and maintained in working order. The team reviewed the electrical power supplies and cable routing for these systems to verify that either the telephones or the radios would remain functional following a fire. The team discussed system design, testing, and maintenance with the system engineer. Additionally, the team observed proper use and functioning of these communications systems during the fire drill conducted on August 23, 2006.

b. Findings

No findings of significance were identified.

.9 Emergency Lighting

a. Inspection Scope

The team reviewed the emergency lighting system required to support plant personnel in the performance of alternative safe shutdown functions to verify it was adequate to support the performance of manual actions required to achieve and maintain hot shutdown conditions, and for illuminating access and egress routes to the areas where manual actions are required. The locations and positioning of emergency lights were observed during a walk-through of Procedure OP-901-502, "Evacuation of Control Room and Subsequent Plant Shutdown," Revision 10, and Procedure OP-901-524, "Fires in Areas Affecting Safe Shutdown," Revision 0.

b. Findings

No findings of significance were identified.

.10 Cold Shutdown Repairs

a. Inspection Scope

The team reviewed licensee procedures to determine whether repairs were required to achieve cold shutdowns. The only repairs credited are the replacement of fuses for cold shutdown components that may have blown prior to transferring control to the remote shutdown panel, LCP-43, for a fire in the Control Room/Cable Vault. The team verified that the procedures, equipment, and materials to accomplish repairs of components required for cold shutdowns are available and accessible. The team also verified that damaged components can be made operable, and cold shutdowns achieved within required time limits.

b. Findings

No findings of significance were identified.

.11 Compensatory Measures

a. Inspection Scope

The team reviewed the licensee's program with respect to compensatory measures in place for out-of-service, degraded, or inoperable fire protection and post-fire safe shutdown equipment, systems or features.

The team reviewed the Technical Requirements Manual sections pertaining to fire protection program, Procedure FP-001-015, "Fire Protection Impairments," and a sample of fire impairments to determine whether the procedures adequately controlled

compensatory measures for fire protection systems, equipment and features (e.g., detection and suppression systems and equipment, and passive fire barriers).

The team reviewed Procedures DC-401, "Configuration Risk Management Program," W2.502, "Configuration Risk Management Program Implementation," and OI-037-000, "Operation's Risk Assessment Guideline" to determine whether the procedures adequately controlled compensatory measures for out-of-service, degraded, or inoperable equipment that could affect post-fire safe shutdown equipment, systems or features.

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

a. Inspection Scope

The team selected a sample of condition reports associated with the licensee's fire protection program to verify that the licensee had an appropriate threshold for identifying deficiencies. In addition the team reviewed the corrective actions proposed and implemented to verify that they were effective in correcting identified deficiencies. In this sample were condition reports written to address the following findings identified by the NRC in the 2003 Triennial Fire Protection Inspection:

- CR-WF3-2003-2439                      Correction of the method of monitoring the emergency lighting system against maintenance rule goals
- CR-WF3-2003-02441                  Failure to test certain Emergency Diesel Generator B Mini-Sequencer Contacts
- CR-WF3-2003-02735                  Resolution of the 13 examples of inadequate emergency lighting

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up (71153)

(Closed) Licensee Event Report (LER) 05000382/2006-001-00: Potential for Loss of Both Trains of Safe Shutdown Equipment From Damage Due to Fire

On June 12, 2006, the licensee determined, while reviewing a preliminary analysis of the feasibility of manual actions designated to be performed in Fire Area RAB-7 (relay room), that the manual actions were not feasible. This was due to postulated environmental conditions (smoke) that could be present in the fire area during a fire in any adjacent zone of the fire area. The preliminary analysis indicated that the manual

actions could not be performed within the time prescribed in the licensee's post-fire safe shutdown analysis. Furthermore, the preliminary analysis indicated that there could be damage to equipment in the room needed to achieve safe shutdowns, due to a hot gas layer in the room. Fire Area RAB 7 is divided into four fire zones by partial height walls. These partial height walls were approved in a deviation granted by the NRC in 1984. The licensee determined from fire modeling that a manual action required in 10 minutes may not be feasible with the amount of smoke in the area. The licensee's immediate corrective action was to initiate a fire watch in the fire area. However, since a continuous fire watch was already in place in Fire Area RAB 7, no additional action was needed. This issue was entered into the licensee's corrective action program as Condition Report CR-WF3-2006-01735.

Subsequently, the licensee determined that the manual action described in Procedure OP-501-524 was not required since it could be performed concurrently from the control room. The concern identified by the licensee in a preliminary analysis regarding potential damage to equipment due to a hot gas layer present throughout the room will be evaluated by the licensee in their transition to NFPA Standard 805.

This LER was reviewed and no findings of significance were identified. Based upon the interim enforcement policy, enforcement discretion would be granted for violations identified by the licensee in their evaluation of equipment damage due to a hot gas layer in Fire Area RAB 7 since the licensee is in transition to NFPA Standard 805. The team's review concluded that this finding meets the criteria for enforcement discretion for plants in transition to a risk-informed, performance-based fire protection program as allowed per 10 CFR 50.48(c). Since all the criteria were met, the NRC is exercising enforcement discretion for this issue. This LER is closed.

#### 4OA6 Management Meetings

##### Exit Meeting Summary

The team leader presented the inspection results to Mr. Bruce Williams, Director, Engineering, and other members of licensee management at the conclusion of the onsite inspection on August 25, 2006.

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

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B. Collyer, Programs-Fire Protection  
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G. Matharu, Systems Engineering  
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R. Putnam, Manager, Programs and Components  
J. Ridgel, Manager, Corrective Actions  
D. Rieder, Senior Engineer, Quality Assurance  
B. Williams, Director, Engineering

NRC

G. Larkin, Senior Resident Inspector  
D. Overland, Resident Inspector

**ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened

None

Opened and Closed

None

Closed

|                      |     |  |
|----------------------|-----|--|
| 05000382/2006-001-00 | LER | Potential For Loss of Both Trains of Safe Shutdown Equipment From Damage Due to Fire |
|----------------------|-----|--|



## LIST OF DOCUMENTS REVIEWED

The following documents were selected and reviewed by the team to accomplish the objectives and scope of the inspection.

### CALCULATIONS

| <u>Number</u> | <u>Title</u>   | <u>Revision</u> |
|---------------|--|-----------------|
| EC-F00-026    | Appendix R Revalidation Project Post Fire Safe Shutdown Analysis | 1               |
| EC-F04-001    | Transformer Containment Pits                                     | 0               |

### CONDITION REPORTS (CRs)

|                   |                   |                    |
|-------------------|-------------------|--------------------|
| CR-WF3-2003-02286 | CR-WF3-2005-01178 | CR-WF3-2006-02261* |
| CR-WF3-2003-02439 | CR-WF3-2006-00333 | CR-WF3-2006-02262  |
| CR-WF3-2003-02441 | CR-WF3-2006-00346 | CR-WF3-2006-02276  |
| CR-WF3-2003-02735 | CR-WF3-2006-01060 | CR-WF3-2006-02282* |
| CR-WF3-2005-01001 | CR-WF3-2006-01381 | CR-WF3-2006-02455* |
| CR-WF3-2005-04446 | CR-WF3-2006-01735 | CR-WF3-2006-02461* |

\*Initiated due to inspection activities.

### DRAWINGS

| <u>Number</u> | <u>Title</u>  | <u>Revision</u> |
|---------------|---|-----------------|
| 5817-6309     | Reactor Aux. Bldg - Relay Room Elv. +35'-0" Multi-Cycle System FP-M29           | 7               |
| 5817-6337     | Reactor Aux. Bldg Elv. +21'-0" Multi-Cycle System FP-M30A                       | 7               |
| 5817-6385     | Reactor Aux. Bldg - Switchgear Area "B" Elv. +21'-0" Multi-Cycle System FP-M25B | 7               |
| 5817-6529     | Reactor Aux. Bldg Elv. +46'-0" & +69'-0" Preaction System FP-M26                | 7               |
| 5817-6530     | Reactor Aux. Bldg Elv. +46'-0", +56'-0" & +69'-0" Preaction System FP-M26       | 8               |
| G153, Sheet 4 | Flow Diagram - Feedwater, Condensate & Air Evacuation Systems                   | 40              |

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| G160, Sheet 2 | Flow Diagram - Component Closed Cooling Water System                                    | 48 |
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| G290, Sheet 5 | Sound Powered Telephone Communication System Diagram                                    | 11 |
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| G357          | Control Room Lighting   | 22 |
| G-FP-0021     | Fire Detection System Raceway & Equipment Layout Reactor Auxiliary Building El. +21.00' | 0  |
| G-FP-0022     | Fire Detection System Raceway & Equipment Layout Reactor Auxiliary Building El. +21.00' | 0  |
| G-FP-0023     | Fire Detection System Raceway & Equipment Layout Reactor Auxiliary Building El. +35.00' | 1  |
| G-FP-0025     | Fire Detection System Raceway & Equipment Layout Reactor Auxiliary Building El. +46.00' | 0  |

|         |  |    |
|---------|--|----|
| E1646   | STM LINE 1 ISOLATION VA 2MS-V602A          | 5  |
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ENGINEERING REPORTS

ER-W3-2005-0125-000

FIRE IMPAIRMENTS

|        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|
| 05-334 | 06-074 | 06-089 | 06-111 | 06-161 | 06-165 | 06-166 |
|--------|--------|--------|--------|--------|--------|--------|

MISCELLANEOUS DOCUMENTS

| <u>Number</u>                 | <u>Title</u>  | <u>Revision</u>     |
|-------------------------------|---|---------------------|
|                               | Emergency Lighting Maintenance Rule Table   |                     |
|                               | Emergency Battery Lighting Test Data Verification Form for Fire Areas 2, 7, 8A, 8B, & 8C  |                     |
|                               | Individual Plant Examination of External Events   | July 1995           |
|                               | Safe Shutdown Cable Analysis Worksheets for Component Cooling Water Pumps A, B, and AB, Essential Chilled Water Pumps P1(3A-SA), P1(3B-SB), and P1(3C-SA/B), Emergency Feedwater Valve EFW-223B, EFW-224A, EFW-224B, and EFW-229A |                     |
| FSAR - 9.5.1                  | Final Safety Analysis Report - Section 9.5.1 - Fire Protection Program  | Revision 13 (04/04) |
| Lesson Plan<br>WLP-FPFB-FBL02 | Industrial Fire Brigade Leader Classroom  | 5                   |
| Lesson Plan<br>WLP-FPFB-FFS04 | Safety Systems Training   | 2                   |
| Lesson Plan<br>WLP-FPFB-FFR04 | Fire Field Refresher Training   | 6                   |
| Lesson Plan<br>WLP-FPFB-IFB01 | Fire Brigade Initial and Refresher Site Specific Classroom  | 9                   |
| Lesson Plan<br>WLP-OPS-PP051  | Off Normal Procedure OP-901-502 Control Room Evacuation and Subsequent Plant Shutdown   | 5                   |

|                                  |   |                  |
|----------------------------------|---|------------------|
| Letter W3P81-2344                | Waterford 3 SES, Docket No. 50-382, 10 CFR 50 Appendix R as a Licensing Requirement                                 | 11/10/1981       |
| Letter W3P81-2813                | Waterford SES Unit No. 3, Docket No. 50-382, FSAR Appendix 9.5 - Response to Fire Protection Supplemental Questions | 12/81/1981       |
| LO-WLO-2006-0061 CA#1            | Fire Protection Program Assessment  | May 15-19, 2006  |
| Pre-Fire Strategy RAB 2-001      | H&V Mechanical Room   | 7                |
| Pre-Fire Strategy RAB 7-001      | Relay Room  | 4                |
| Pre-Fire Strategy RAB 8A-001     | Switchgear Room "A"   | 4                |
| Pre-Fire Strategy RAB 8B,E,F-001 | Switchgear Room "B"   | 4                |
| Pre-Fire Strategy RAB 8C-001     | Switchgear Room "A/B"   | 4                |
| QA-9-2004-WF3-1                  | Quality Assurance Audit Report - Fire Protection  | 3/4/2004         |
| QA-9-2006-WF3-1                  | Quality Assurance Audit Report - Fire Protection Program  | 3/22/2006        |
| NFPA 13                          | Installation of Sprinkler Systems   | 1976             |
| TRM Section 3/4.3.3.8            | Technical Requirements Manual - Fire Detection Instrumentation  | Amendment No. 91 |
| TRM Section 3/4.7.10.1           | Technical Requirements Manual - Fire Suppression Water Systems  | Amendment No. 91 |
| TRM Section 3/4.7.10.2           | Technical Requirements Manual - Spray and/or Sprinkler Systems  | Amendment No. 91 |
| TRM Section 3/4.7.10.4           | Technical Requirements Manual - Fire Hose Stations  | Amendment No. 91 |
| TRM Section 3/4.7.10.5           | Technical Requirements Manual - Yard Fire Hydrants and Hydrant Hose Houses  | Amendment No. 91 |
| TRM Section 3/4.7.11             | Technical Requirements Manual - Fire Rated Assemblies   | Amendment No. 91 |
| TRM Section 3/4.7.12             | Technical Requirements Manual - Essential Services Chilled Water Systems Chillers - Appendix R                      | Amendment No. 47 |

WDRL-FBFD-06116 Fire Drill Critiques (15 total), 01/27/2006 to 06/24/2006

PROCEDURES

| <u>Number</u> | <u>Title</u>  | <u>Revision</u> |
|---------------|---|-----------------|
| DC-401        | Configuration Risk Management Program   | 0               |
| FP-001-014    | Duties of a Fire Watch  | 13              |
| FP-001-015    | Fire Protection Impairments   | 19              |
| FP-001-018    | Pre-Fire Strategies, Development and Revision   | 9               |
| FP-001-019    | Fire Brigade Equipment  | 12              |
| FP-001-020    | Fire Emergency / Fire Report  | 12              |
| ME-003-002    | Surveillance Procedure - Fire Detection Supervisory<br>Circuit Functional Test                        | 14              |
| ME-003-004    | Surveillance Procedure - Fire Dampers   | 6               |
| ME-003-005    | Surveillance Procedure - Fire Detection Thermistor<br>Wiring  | 9               |
| ME-003-006    | Fire Barrier Penetration Seals  | 9               |
| ME-003-012    | Surveillance Procedure - Cerberus Pyrotronics ID-60<br>Series Intelligent Ionization Detector Testing | 8               |
| ME-003-017    | Surveillance Procedure - Cerberus Pyrotronics Fire<br>Detector Testing                                | 7               |
| ME-003-100    | Surveillance Procedure - Fire Diesel Starting Battery   | 8               |
| MM-004-424    | Building Fire Hose Station Inspection and Hose<br>Replacement   | 10              |
| NTP-202       | Fire Protection Training  | 11              |
| OI-037-000    | Operation's Risk Assessment Guideline   | 2               |
| OP-901-502    | Evacuation of Control Room and Subsequent Plant<br>Shutdown   | 10              |
| OP-901-503    | Isolation Panel Fire  | 3               |
| OP-901-524    | Fire in Areas Affecting Safe Shutdown   | 0 & 1           |
| OP-903-053    | Fire Protection System Pump Operability Test  | 11              |

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|---------------------|---|----|
| OP-903-054          | Fire Protection Valve Lineup Check  | 9  |
| OP-903-056          | Fire Protection Functional Test   | 14 |
| OP-903-057          | Fire Protection System Flow Test  | 9  |
| OP-903-058          | Fire Hose Station Valve Cycling Check   | 7  |
| OP-903-059          | Sprinkler System Functional Test  | 7  |
| OP-903-060          | Fire Hose Station Inspection  | 8  |
| OP-903-077          | Fire Protection System Valve Cycling Check  | 7  |
| OP-904-005          | Sprinkler and Spray Systems Alarm Test  | 10 |
| OP-904-014          | Turbine Building / Outside Sprinkler System Manual Test                                     | 5  |
| PMC-003-002         | Installation and Rework of Penetration Seals, Conduit Seals, Fire Breaks and Water Barriers | 0  |
| STI-W3-2002-0003-01 | Emergency Lighting Test, Revision 1   | 1  |
| STI-W3-2005-0001-00 | FR Switch Operation Test," Revision 0   | 0  |
| UNT-005-013         | Fire Protection Program   | 9  |
| W2.502              | Configuration Risk Management Program Implementation  | 0  |