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January 22, 2013

10 CFR 50.54(q) & 72.44(f)

W3F1-2013-0002

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, Maryland
Washington, D.C. 20555

Subject: Emergency Plan Revision 044
Waterford Steam Electric Station, Unit 3 (Waterford 3)
Docket Nos. 50-382, 72-75
License No. NPF-38

Dear Sir or Madam:

Pursuant to 10CFR50.54(q)(5), 10CFR50 Appendix E(V), 10CFR50.4(b)(5)(ii), 10CFR72.44(f) and 10CFR 72.4, Entergy Operations Inc. (Entergy) hereby submits Revision 044 of the Waterford 3 Emergency Plan, including a summary and analysis of the changes, which became effective December 23, 2013.

The changes to the Waterford 3 Emergency Plan were evaluated by Entergy and determined to not reduce the effectiveness of the plan. Attachment 1 contains the Summary and Analysis of the Emergency Plan Changes. Attachment 2 contains the Waterford 3 Emergency Plan, Revision 044, which includes a brief listing of the changes.

There are no new regulatory commitments in this submittal.

If you have any questions or require additional information, please contact the Licensing Manager, Chester Fugate, at (504) 739-6685.

Sincerely,

A handwritten signature in black ink, appearing to read "BJP", followed by a long horizontal flourish.

BJP/JDW

Attachment 1 Summary and Analysis of the Emergency Plan Changes
Attachment 2 Waterford 3 Emergency Plan, Revision 044

AX45
NM5526
NRR
NM55

cc: (w/Attachments)

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Attachment 1
to W3F1-2013-0002

Summary and Analysis of the Emergency Plan Changes

(Attachment contains 14 pages)

**SUMMARY OF REVISION
WATERFORD 3 EMERGENCY PLAN
REVISION 044**

GENERAL COMMENTS

This revision is to satisfy the requirements of the on-shift ERO staffing analysis conducted in accordance with NEI 10-05 and required by 10CFR50 Appendix E, Section IV.A as documented in the Waterford 3 Station On-Shift Staffing Analysis Final Report Revision 0 December 2012. This revision also Removed "and the radio-paging transmitter" from Section 7.5.1.1 since this function is no longer applicable and removed "In addition, the O&M radio system can be accessed by the PABX. By dialing the assigned access code, any telephone in the station can be connected to the O&M frequencies" from Section 7.5.1.4.a since this function is no longer applicable.

TABLE OF CONTENTS

PAGE

COMMENTS

There are no changes to the Table of Contents of the Emergency Plan.

SECTION 1

PAGE

COMMENTS

There are no changes to Section 1 of the Emergency Plan.

SECTION 2

PAGE

COMMENTS

There are no changes to Section 2 of the Emergency Plan.

SECTION 3

PAGE

COMMENTS

There are no changes to Section 3 of the Emergency Plan.

SECTION 4

PAGE

COMMENTS

There are no changes to Section 4 of the Emergency Plan.

**SUMMARY OF REVISION
WATERFORD 3 EMERGENCY PLAN
REVISION 044**

SECTION 5

PAGE

COMMENTS

Table 5-4

Changed Emergency Coordinator to Emergency Director. This is an administrative change to be consistent with the implementation of Standard ERO. There is no change in responsibilities or duties of this position and therefore no change in the effectiveness of the Emergency Plan.

Added position of Remote Shutdown Operator to support evacuation of control room with fire. This addition will result in a change in the responsibilities for performing offsite communications in the event there is an evacuation of the control room due to a fire in the control room. The addition of a qualified individual to perform offsite notifications relieves the Shift Technical Advisor (STA) of a secondary responsibility of completing offsite notifications and therefore allows the STA to focus completely on plant oversight. Since the offsite communicator is qualified to perform offsite notifications, then there is no decrease in the effectiveness of the Emergency Plan.

Added a reference to the On-Shift ERO Staffing Analysis conducted in accordance with NEI 10-05 and required by 10CFR50 Appendix E, Section IV.A. This is an administrative change and therefore has no affect on the effectiveness of the Emergency Plan.

Table 5-1

Removed responsibilities for offsite notifications from the TSC Communicator in Table 5-1 to be consistent with the implementation of Standard ERO. Offsite communications is accomplished in the EOF by the Offsite Communicators. This change was implemented as a function of Standard ERO. Empirical data from response testing over the last 12 months indicate that the response times for EOF Offsite Communicators have met the requirements of the Emergency Plan. There is no change in the effectiveness of the Emergency Plan.

Added a reference to the On-Shift ERO Staffing Analysis conducted in accordance with NEI 10-05 and required by 10CFR50 Appendix E, Section IV.A. This is an administrative change and therefore has no affect on the effectiveness of the Emergency Plan.

Added position of Remote Shutdown Operator to support evacuation of control room with fire. The addition of a Remote Shutdown Operator to Table 5-1 will result in an increase in the number of on-shift staffing personnel and enhances overall emergency response, therefore the effectiveness of the Emergency Plan is not decreased by the addition of the Remote Shutdown Operator.

5-4

Added position of Remote Shutdown Operator to support evacuation of control room. This position is added to be consistent with Table 5-1 and Table 5-4. The addition of the Remote Shutdown Operator does not decrease the effectiveness of the Emergency because of the reasons previously stated.

**SUMMARY OF REVISION
WATERFORD 3 EMERGENCY PLAN
REVISION 044**

SECTION 6

PAGE

COMMENTS

There are no changes to Section 6 of the Emergency Plan.

SECTION 7

PAGE

COMMENTS

7-23, 7-25

Removed "and the radio-paging transmitter" from Section 7.5.1.1 since this function is no longer applicable; and removed "In addition, the O&M radio system can be accessed by the PABX. By dialing the assigned access code, any telephone in the station can be connected to the O&M frequencies" from Section 7.5.1.4.a since this function is no longer applicable. The proposed change does not affect the primary function of either the operations or maintenance radio systems. Both radio systems continue to provide radio communications for plant personnel during normal and emergency conditions. The proposed change more accurately describes the current capability of the Operations and Maintenance Radio System. The ability to access the operations or maintenance radios via the site PABX was removed during the last upgrade to the site PABX and/or radio systems. No decrease in normal or emergency communications among site personnel was discovered during plant drills, exercises, or actual events in the approximately 10 or more years since the capability was removed. This revision does not represent a reduction in effectiveness of the Emergency Plan

SECTION 8

PAGE

COMMENTS

There are no changes to Section 8 of the Emergency Plan.

SECTION 9

PAGE

COMMENTS

There are no changes to Section 9 of the Emergency Plan.

APPENDIX A

PAGE

COMMENTS

There are no changes to Appendix A of the Emergency Plan.

**SUMMARY OF REVISION
WATERFORD 3 EMERGENCY PLAN
REVISION 044**

APPENDIX B

PAGE

COMMENTS

There are no changes to Appendix B of the Emergency Plan.

APPENDIX C

PAGE

COMMENTS

There are no changes to Appendix C of the Emergency Plan.

APPENDIX D

PAGE

COMMENTS

There are no changes to Appendix D of the Emergency Plan.

APPENDIX E

PAGE

COMMENTS

There are no changes to Appendix E of the Emergency Plan.

APPENDIX F

PAGE

COMMENTS

There are no changes to Appendix F of the Emergency Plan.

APPENDIX G

PAGE

COMMENTS

There are no changes to Appendix G of the Emergency Plan.

**SUMMARY OF REVISION
WATERFORD 3 EMERGENCY PLAN
REVISION 044**

APPENDIX H

PAGE

COMMENTS

There are no changes to Appendix H of the Emergency Plan.

APPENDIX I

PAGE

COMMENTS

There are no changes to Appendix I of the Emergency Plan.

APPENDIX J

PAGE

COMMENTS

There are no changes to Appendix J of the Emergency Plan.

APPENDIX K

PAGE

COMMENTS

There are no changes to Appendix K of the Emergency Plan.

ATTACHMENT 9.1
SHEET 1 OF 3

REVISION 1

10CFR50.54(q) SCREENING

Procedure/Document Number: Emergency Plan	Revision: 044		
Equipment/Facility/Other: Waterford 3			
Title: Waterford 3 Emergency Plan			
Part I. Description of Activity Being Reviewed (event or action, or series of actions that may result in a change to the emergency plan or affect the implementation of the emergency plan):			
<ol style="list-style-type: none"> 1) Changed Emergency Coordinator to Emergency Director on Table 5-4. This is an administrative change to be consistent with the implementation of Standard ERO. 2) Removed responsibilities for offsite notifications from the TSC Communicator in Table 5-1 to be consistent with the implementation of Standard ERO as this task is performed by the EOF Offsite Communicators. 3) Revised Table 5-1 and Table 5-4 to include a reference to the On-shift ERO staffing Analysis conducted in accordance with NEI 10-05 and required by 10CFR50 Appendix E, Section IV.A. This is an administrative change. 4) Revised Table 5-1 to include the addition of Remote Shutdown Operator to the on-shift staff to support the Control Room Evacuation with fire. 5) Revised Table 5-4 to include the addition of a Remote Shutdown Operator to the on-shift staff to allow the Emergency Communicator to assume responsibilities previously assigned to the Shift Technical Advisor. 6) Added position of Remote Shutdown Operator to Section 5 to support evacuation of control room. 			
Part II. Activity Previously Reviewed? Is this activity fully bounded by an NRC approved 10 CFR 50.90 submittal or Alert and Notification System Design Report? If YES, identify bounding source document number/approval reference and ensure the basis for concluding the source document fully bounds the proposed change is documented below: Justification: <input type="checkbox"/> Bounding document attached (optional)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px; vertical-align: top;"> <input type="checkbox"/> YES 50.54(q)(3) Evaluation is NOT required. Enter justification below and complete Part VI. </td> <td style="width: 50%; padding: 5px; vertical-align: top;"> <input checked="" type="checkbox"/> NO Continue to next part </td> </tr> </table>	<input type="checkbox"/> YES 50.54(q)(3) Evaluation is NOT required. Enter justification below and complete Part VI.	<input checked="" type="checkbox"/> NO Continue to next part
<input type="checkbox"/> YES 50.54(q)(3) Evaluation is NOT required. Enter justification below and complete Part VI.	<input checked="" type="checkbox"/> NO Continue to next part		
Part III. Applicability of Other Regulatory Change Control Processes Check if any other regulatory change processes control the proposed activity. (Refer to EN-LI-100) NOTE: For example, when a design change is the proposed activity, consequential actions may include changes to other documents which have a different change control process and are NOT to be included in this 50.54(q)(3) Screening.			
APPLICABILITY CONCLUSION <input checked="" type="checkbox"/> If there are no controlling change processes, continue the 50.54(q)(3) Screening. <input type="checkbox"/> One or more controlling change processes are selected, however, some portion of the activity involves the emergency plan or affects the implementation of the emergency plan; continue the 50.54(q)(3) Screening for that portion of the activity. Identify the applicable controlling change processes below. <input type="checkbox"/> One or more controlling change processes are selected and fully bounds all aspects of the activity. 50.54(q)(3) Evaluation is NOT required. Identify controlling change processes below and complete Part VI.			
CONTROLLING CHANGE PROCESSES 10CFR50.54Q			
Part IV. Editorial Change Is this activity an editorial or typographical change such as formatting, paragraph numbering, spelling, or punctuation that does not change intent? Justification:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px; vertical-align: top;"> <input type="checkbox"/> YES 50.54(q)(3) Evaluation is NOT required. Enter justification and complete Part VI. </td> <td style="width: 50%; padding: 5px; vertical-align: top;"> <input checked="" type="checkbox"/> NO Continue to next part </td> </tr> </table>	<input type="checkbox"/> YES 50.54(q)(3) Evaluation is NOT required. Enter justification and complete Part VI.	<input checked="" type="checkbox"/> NO Continue to next part
<input type="checkbox"/> YES 50.54(q)(3) Evaluation is NOT required. Enter justification and complete Part VI.	<input checked="" type="checkbox"/> NO Continue to next part		

ATTACHMENT 9.1
SHEET 2 OF 3

REVISION 1

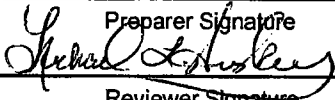

10CFR50.54(q) SCREENING

Procedure/Document Number: Emergency Plan		Revision: 044
Equipment/Facility/Other: Waterford 3		
Title: Waterford 3 Emergency Plan		
Part V. Emergency Planning Element/Function Screen (Associated 10 CFR 50.47(b) planning standard function identified in brackets) Does this activity affect any of the following, including program elements from NUREG-0654/FEMA REP-1 Section II?		
1. Responsibility for emergency response is assigned. [1]		<input checked="" type="checkbox"/>
2. The response organization has the staff to respond and to augment staff on a continuing basis (24/7 staffing) in accordance with the emergency plan. [1]		<input checked="" type="checkbox"/>
3. The process ensures that on shift emergency response responsibilities are staffed and assigned. [2]		<input checked="" type="checkbox"/>
4. The process for timely augmentation of onshift staff is established and maintained. [2]		<input checked="" type="checkbox"/>
5. Arrangements for requesting and using off site assistance have been made. [3]		<input type="checkbox"/>
6. State and local staff can be accommodated at the EOF in accordance with the emergency plan. [3]		<input type="checkbox"/>
7. A standard scheme of emergency classification and action levels is in use. [4]		<input type="checkbox"/>
8. Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications. [5]		<input checked="" type="checkbox"/>
9. Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway. [5]		<input type="checkbox"/>
10. The public ANS meets the design requirements of FEMA-REP-10, Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants, or complies with the licensee's FEMA-approved ANS design report and supporting FEMA approval letter. [5]		<input type="checkbox"/>
11. Systems are established for prompt communication among principal emergency response organizations. [6]		<input type="checkbox"/>
12. Systems are established for prompt communication to emergency response personnel. [6]		<input type="checkbox"/>
13. Emergency preparedness information is made available to the public on a periodic basis within the plume exposure pathway emergency planning zone (EPZ). [7]		<input type="checkbox"/>
14. Coordinated dissemination of public information during emergencies is established. [7]		<input type="checkbox"/>
15. Adequate facilities are maintained to support emergency response. [8]		<input type="checkbox"/>
16. Adequate equipment is maintained to support emergency response. [8]		<input type="checkbox"/>
17. Methods, systems, and equipment for assessment of radioactive releases are in use. [9]		<input type="checkbox"/>
18. A range of public PARs is available for implementation during emergencies. [10]		<input type="checkbox"/>
19. Evacuation time estimates for the population located in the plume exposure pathway EPZ are available to support the formulation of PARs and have been provided to State and local governmental authorities. [10]		<input type="checkbox"/>
20. A range of protective actions is available for plant emergency workers during emergencies, including those for hostile action events.[10]		<input type="checkbox"/>

ATTACHMENT 9.1
SHEET 3 OF 3

REVISION 1

10CFR50.54(q) SCREENING

Procedure/Document Number: Emergency Plan		Revision: 044
Equipment/Facility/Other: Waterford 3		
Title: Waterford 3 Emergency Plan		
21. The resources for controlling radiological exposures for emergency workers are established. [11]		<input type="checkbox"/>
22. Arrangements are made for medical services for contaminated, injured individuals. [12]		<input type="checkbox"/>
23. Plans for recovery and reentry are developed. [13]		<input type="checkbox"/>
24. A drill and exercise program (including radiological, medical, health physics and other program areas) is established. [14]		<input type="checkbox"/>
25. Drills, exercises, and training evolutions that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a formal critique process in order to identify weaknesses. [14]		<input type="checkbox"/>
26. Identified weaknesses are corrected. [14]		<input type="checkbox"/>
27. Training is provided to emergency responders. [15]		<input type="checkbox"/>
28. Responsibility for emergency plan development and review is established. [16]		<input type="checkbox"/>
29. Planners responsible for emergency plan development and maintenance are properly trained. [16]		<input type="checkbox"/>
APPLICABILITY CONCLUSION <input type="checkbox"/> If no Part V criteria are checked, a 50.54(q)(3) Evaluation is <u>NOT</u> required; document the basis for conclusion below and complete Part VI. <input checked="" type="checkbox"/> If any Part V criteria are checked, complete Part VI and perform a 50.54(q)(3) Evaluation.		
BASIS FOR CONCLUSION The change in the title of the Emergency Director (change 1) is an administrative change that allows consistency with the implementation of Standard Emergency Response Organization. This is only a title change and does not change any of the duties or responsibilities of the Emergency Director. The revision of Section 5.1.2.1, Table 5-1, and Table 5-4 to the Emergency Plan to include a reference to the On-shift ERO Staffing Analysis (change 3) does not impact any of the 10 CFR 50.47(b) planning standard functions or program elements from NUREG-0654/FEMA REP-1 Section II. The staffing analysis was conducted in accordance with NEI 10-05 and required by 10CFR50 Appendix E, Section IV.A. The staffing analysis provides a process for determining adequate on-shift staffing levels and the proper assignment of emergency tasks to the on-shift staff. Referencing the On-shift ERO Staffing Analysis in Section 5.1.2.1, Table 5-1, and Table 5-4 does not alter the requirement to maintain an on-shift emergency response organization or the requirement for the on-shift emergency responders to be assigned responsibility for emergency functions and tasks. Additionally, a previous staffing analysis has not been conducted for Waterford 3, therefore the inclusion of this analysis in the station Emergency Plan by reference does not represent a change to a previous staffing analysis. These changes are identified as an administrative change and no further evaluation of changes 1 and 3 is required. Emergency Planning 10CFR50.47 planning standard functions 1, 2 and 5 in Part V of this form are affected by this revision. A 10CFR 50.54(q) evaluation is required to determine if the effectiveness of the emergency plan is reduced and whether prior NRC approval is required.		
Part VI. Signatures:		
Preparer Name (Print) Michael L. Huskey	Preparer Signature 	Date: 1/17/13
(Optional) Reviewer Name (Print) N/A	Reviewer Signature	Date:
Reviewer Name (Print) James J. Lewis Nuclear EP Project Manager	Reviewer Signature <i>Per Telecon Jack Lewis</i>	Date: 1/22/13
Approver Name (Print) Aaron Ertel for Bryan J. Pellegrin EP manager or designee	Approver Signature 	Date: 1/22/13

ATTACHMENT 9.2
SHEET 1 OF 2

REVISION 1

10CFR50.54(q) EVALUATION

Procedure/Document Number: Emergency Plan	Revision: 044
Equipment/Facility/Other: Waterford 3	
Title: Waterford 3 Emergency Plan	
<p>Part I. Description of Proposed Change:</p> <ol style="list-style-type: none"> 1) Removed responsibilities for offsite notifications from the TSC Communicator in Table 5-1 to be consistent with the implementation of Standard ERO as this task is performed by the EOF Offsite Communicators. 2) Revised Table 5-1 to include the addition of Remote Shutdown Operator to the on-shift staff to support the Control Room Evacuation with fire. 3) Revised Table 5-4 to include the addition of a Remote Shutdown Operator to the on-shift staff to allow the Emergency Communicator to assume responsibilities previously assigned to the Shift Technical Advisor. 4) Added position of Remote Shutdown Operator to Section 5 to support evacuation of control room. 	
<p>Part II. Description and Review of Licensing Basis Affected by the Proposed Change:</p> <p>The proposed change will affect the Waterford 3 Emergency Plan. An Autonomy search of the Emergency Plan and SERs using search criteria "on-shift staffing", "on-shift staffing analysis", "eplan on-shift staffing analysis", "emergency coordinator", "emergency director", "emergency communicator", and "off-site emergency communicator" revealed 22 hits, none were directly relevant to this revision or conflicted with this revision.</p> <p>1) The removal of responsibilities of offsite notifications from the TSC Communicator: These changes were incorporated as a result of the implementation of standard emergency response organization. The implementation of standard ERO resulted in responsibility for offsite notification transferring from the Control Room to the Emergency Operations Facility (EOF) bypassing the Technical Support Center. This change was possible because the goals for declaring the TSC and EOF operational are the same with sufficient staffing at the EOF to perform offsite notifications within the required time. This change was previously reviewed in the 50.54(q) Evaluation of Emergency Plan Revision 40 which implemented Standard ERO.</p> <p>2, 3, & 4) The addition of two additional individuals, Remote Shutdown Operators, to the on-shift staffing requirements enhances the capabilities for on-shift staff to complete emergency actions for evacuation of the control room due to a fire. This updates the previously approved on-shift staffing and augmentation requirements.</p> <p>Historical EPlan Basis – Emergency Plan Revisions 5 and 6 received prior NRC approval, but due to the format and content of these revisions having such contrast with the current Emergency Plan, a review was not performed with respect to these changes. Emergency Plan Revision 029 received prior NRC approval for revisions to ERO response time requirements but may not be applicable to this review since only the Emergency Plan changes were reviewed and accepted by the NRC. In order to get a historical perspective of changes made to the Waterford 3 Emergency Plan, revisions 20, 30 & 39 of the Emergency Plan were reviewed to get a historical perspective of information contained within relating to changes 1 – 4. Prior to Emergency Plan Revision 40, responsibilities of Declarations, Offsite Notifications and Protective Action Recommendations were transferred from the Control Room to the TSC. Since the TSC and EOF have identical goals for declaring the facilities operational, Standard ERO implemented the transfer of responsibilities from the Control Room directly to the EOF. This does not affect any emergency planning requirements with respect to classification, dose assessment, offsite notification or protective action recommendations. Addition of two additional individuals, Remote Shutdown Operators, to Section 5 and Table 5-1. These positions did not exist in the Emergency Plan prior to Revision 44, and provide additional staffing to respond to any emergency, but in particular to an evacuation of the Control Room.</p>	

Part III. Describe How the Proposed Change Complies with Relevant Emergency Preparedness Regulation(s) and Previous Commitment(s) Made to the NRC:

10 CFR 50.47(b)(1) – Assignment of Responsibility/Organizational Control

- Responsibility for emergency response is assigned.
- The response organization has the staff to respond and to augment staff on a continuing basis (i.e., 24/7 support) in accordance with the emergency plan.

Site Compliance (1): The removal of offsite notifications from the TSC Communicator in Table 5-1 simply transfers the responsibilities to the Emergency Operations Facility where declarations and notifications are accomplished. The completion of offsite notifications remain consistent with previous requirements in that qualified individuals will continue to perform this task therefore the responsibility for emergency response remains assigned. The transfer of offsite notifications from the TSC Communicator to the EOF Offsite Communicator ensures that the response organization has the staff to respond and to augment staff on a continuing basis in accordance with the emergency plan.

Site Compliance (2): This revision results in the addition of Remote Shutdown Operators to Table 5-1 of the Emergency Plan. The revision to Table 5-1 does not result in a reduction in the required minimum on-shift staffing nor does it lessen any requirements to support emergency functions or tasks. Table 5-1 will continue to list the station minimum staff requirements and augmentation capabilities to respond to an evacuation of the control room due to a fire in the control room. The revision to Table 5-1 will result in an increase in the number of on-shift staff available to respond to an evacuation of the control room due to a fire in the control room therefore the additional staff ensures that responsibility for emergency response remains assigned and that the response organization continues to have the staff to respond and to augment staff on a continuing basis in accordance with the emergency plan.

Site Compliance (3): The addition of the Remote Shutdown Operators allows the Emergency Communicator to perform offsite notifications in the event there is an evacuation of the control room due to a fire in the control room. This removes a burden of the task of secondary performer of offsite communications from the Shift Technical Advisor. The addition of these individuals enhances and strengthens the response organization's ability to ensure responsibility for emergency response is assigned. The addition of these individuals enhances the ability of the response organization to respond and to augment staff on a continuing basis in accordance with the emergency plan.

Site Compliance (4): This revision will result in the addition of Remote Shutdown Operators to Section 5 of the Emergency Plan. The revision to Section 5 does not result in a reduction in the required minimum on-shift staffing nor does it lessen any requirements to support emergency functions or tasks. Section 5 will continue to list the station minimum staff requirements and augmentation capabilities to respond to an evacuation of the control room due to a fire in the control room. The revision to Section 5 will result in an increase in the number of on-shift staff available to respond to an evacuation of the control room due to a fire in the control room. The addition of the Remote Shutdown Operators enhances and strengthens emergency response.

Part III. Describe How the Proposed Change Complies with Relevant Emergency Preparedness Regulation(s) and Previous Commitment(s) Made to the NRC: (CONT)

10 CFR 50.47(b)(2) – Onsite Emergency Organization – The process ensures that on-shift emergency responders' responsibilities are staffed and assigned.

Site Compliance (1): The removal of offsite notifications from the TSC Communicator in Table 5-1 simply transfers the responsibilities to the Emergency Operations Facility where declarations and notifications are accomplished. The completions of offsite notifications remain consistent with previous requirements in that qualified individuals will continue to perform this task therefore does not affect on shift emergency response responsibilities. This revision does not affect timely augmentation of on-shift staff since the augmentation time for the EOF offsite communicator is identical to that of the TSC Communicator.

Site Compliance (2): This revision will result in the addition of Remote Shutdown Operators to Table 5-1 of the on-shift staff to support the Control Room Evacuation with fire. The addition of Remote Shutdown Operators ensures that on-shift emergency responders' responsibilities are staffed and assigned. Table 5-1 will continue to list the station minimum staff requirements and emergency responder responsibilities. The addition of Remote Shutdown Operators to Table 5-1 will result in an increase in the number of on-shift staffing and does not affect timely augmentation of on-shift staff.

Site Compliance (3): This revision will result in a change in the responsibilities for performing offsite communications in the event there is an evacuation of the control room due to a fire in the control room. The addition of a qualified individual to perform offsite notifications relieves the Shift Technical Advisor of a secondary responsibility of completing offsite notifications and therefore allows the STA to focus completely on plant oversight. On-shift emergency response responsibilities continue to be staffed and assigned.

Site Compliance (4): The addition of the Remote Shutdown Operators to Section 5 is an enhancement to the on-shift emergency response staff. The Remote Shutdown Operators do not affect augmentation of on-shift staff since this position is not involved in augmenting the on-shift staff.

10 CFR 50.47(b)(5) – Procedures have been established for notification of State and Local agencies

Site Compliance (1): The removal of offsite notifications from the TSC Communicator in Table 5-1 simply transfers the responsibilities to the Emergency Operations Facility where declarations and notifications are accomplished. The completions of offsite notifications remain consistent with previous requirements in that qualified individuals will continue to perform this task and therefore does not affect on shift emergency response responsibilities. This revision does not affect the time requirements for the notification of offsite agencies as this requirement is the same for any Emergency Response Facility responsible for offsite notifications.

Site Compliance (2): The addition of the Remote Shutdown Operators allows the Emergency Communicator to perform offsite notifications in the event there is an evacuation of the control room due to a fire in the control room. This removes a burden of the task of secondary performer of offsite communications from the Shift Technical Advisor and improves efficiency by allowing the Emergency Communicator to focus on the same responsibilities during an evacuation of the Control Room.

Site Compliance (3): This revision will result in a change in the responsibilities for performing offsite communications in the event there is an evacuation of the control room due to a fire in the control room. The addition of a qualified individual to perform offsite notifications relieves the Shift Technical Advisor of a secondary responsibility of completing offsite notifications and therefore allows the Emergency Communicator to continue performing offsite notifications.

Site Compliance (4): The addition of the Remote Shutdown Operators to Section 5 is an enhancement to the on-shift emergency response staff. The Remote Shutdown Operator allows a qualified individual, Emergency Communicator, to continue performing offsite notifications.

Part IV. Description of Emergency Plan Planning Standards, Functions and Program Elements Affected by the Proposed Change:

10 CFR 50.47(b)(1) – Assignment of Responsibility/Organizational Control

- Responsibility for emergency response is assigned.
- The response organization has the staff to respond and to augment staff on a continuing basis (i.e., 24/7 support) in accordance with the emergency plan.

Sections IV.A.1–IV.A.9 of Appendix E to 10 CFR 50 provides supporting requirements. Informing criteria appears in Section II.A of NUREG-0654 and the emergency plan.

10 CFR 50.47(b)(2) – Onsite Emergency Organization

- The process ensures that on-shift emergency responders' responsibilities are staffed and assigned.

Sections IV.A.2.a–c, IV.A.3, and IV.C of Appendix E to 10 CFR 50 provide supporting requirements. Informing criteria appears in Section II.B of NUREG-0654 and the emergency plan.

10 CFR 50.47(b)(5) - Procedures have been established for notification of State and Local agencies

- Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing follow-up notifications.

Sections IV.D.1 and IV.D.3 of Appendix E to 10 CFR 50 provides supporting requirements. Informing criteria appears in Section II.E of NUREG-0654 and the emergency plan.

Part V. Description of Impact of the Proposed Change on the Effectiveness of Emergency Plan Functions:

The removal of offsite notifications from the TSC Communicator in Table 5-1 (change 1) simply transfers the responsibilities to the Emergency Operations Facility where declarations and notifications are performed by the EOF Offsite Communicators. The completion of offsite notifications remains consistent with previous requirements in that qualified individuals will continue to perform this task and therefore this change does not reduce the effectiveness of the emergency plan. ERO response time is not affected by the removal of offsite notifications from the TSC Communicator since the response time requirement of 75 minutes for the EOF Offsite Communicator is the same as that of the TSC Communicator. The required number of communicators in Table 5-1 does not change. This change was previously reviewed in the 50.54(q) Evaluation of Emergency Plan Revision 40 which implemented Standard ERO.

The proposed change to remove the TSC Communicator from Table 5-1 in the Waterford 3 Emergency Plan continues to meet the planning standards outlined in 10 CFR 50.47(b)(1), (2) & (5). The effectiveness of the emergency plan is not reduced because the required number of communicators and response remain the same. The emergency plan changes can be incorporated without prior NRC approval.

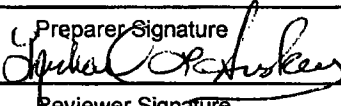
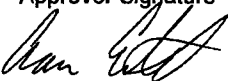
This revision will result in the addition of Remote Shutdown Operators to Tables 5-1 and 5-4 and section 5 of the Emergency Plan of the on-shift staff to support the Control Room Evacuation with fire. In the event of a Control Room Evacuation with fire, the Emergency Communicator currently responds to perform actions in the plant, requiring the STA to perform offsite communications. This change allows the Emergency Communicator to retain his responsibilities, including offsite notifications that needed to be previously assigned to the Shift Technical Advisor in the fire event. The addition of a qualified individual to perform offsite notifications relieves the Shift Technical Advisor of a secondary responsibility of completing offsite notifications with a Control Room Evacuation with fire and therefore allows the STA to focus completely on plant oversight. The addition of Remote Shutdown Operators enhances the effectiveness of the emergency plan because it provides an additional resource for emergency response and eliminates an STA collateral duty. This change does not affect ERO time response since this is an on-shift position.

The proposed change to add the Remote Shutdown Operators continues to meet the planning standards outlined in 10 CFR 50.47(b)(1), (2) and (5). The effectiveness of the emergency plan is not reduced because this change provides an additional resource for emergency response and eliminates an STA collateral duty. The emergency plan changes can be incorporated without prior NRC approval.

ATTACHMENT 9.2
SHEET 2 OF 2

REVISION 1

10CFR50.54(q) EVALUATION

Procedure/Document Number: Emergency Plan		Revision: 044
Equipment/Facility/Other: Waterford 3		
Title: Waterford 3 Emergency Plan		
Part VI. Evaluation Conclusion Answer the following questions about the proposed change.		
1. Does the proposed change comply with 10 CFR 50.47(b) and 10 CFR 50 Appendix E?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
2. Does the proposed change maintain the effectiveness of the emergency plan (i.e., no reduction in effectiveness)?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
3. Does the proposed change constitute an emergency action level scheme change?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If questions 1 or 2 are answered NO, or question 3 answered YES, reject the proposed change, modify the proposed change and perform a new evaluation or obtain prior NRC approval under provisions of 10 CFR 50.90. If questions 1 and 2 are answered YES, and question 3 answered NO, implement applicable change process(es). Refer to step 5.6[8].		
Part VII. Signatures		
Preparer Name (Print) Michael L. Huskey	Preparer Signature 	Date: 1/17/13
(Optional) Reviewer Name (Print) N/A	Reviewer Signature	Date:
Reviewer Name (Print) Jack Lewis Nuclear EP Project Manager	Reviewer Signature <i>Per Telecon Jack Lewis</i>	Date: 1/22/13
Approver Name (Print) Aaron Ertel for Bryan J. Pellegrin EP Manager or designee	Approver Signature 	Date: 1/22/13

Attachment 2

to W3F1-2012-0002

Waterford 3 Emergency Plan, Revision 044

(Attachment contains 267 pages)

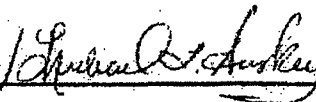
WATERFORD 3 SES EMERGENCY PLAN

REVISION 044

EFFECTIVE DATE: 12/23/12

PREPARED BY/DATE:

Michael L. Huskey

 12-12-12

APPROVED BY/DATE:

Bryan J. Pellegrin

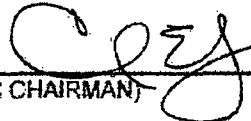
(EMERGENCY PLANNING MANAGER)

 12/20/12

APPROVED BY/DATE:

Carl E. Rich Jr.

(OSRC CHAIRMAN)

 12/20/12

APPROVED BY/DATE:

Kimberly S. Cook

(GENERAL MANAGER PLANT OPERATIONS)

 12-22-12

SAFETY RELATED PROCEDURE

Normal Review Class (check one):

☒ OSRC☐ QUALIFIED REVIEW

PROCEDURE NUMBER: N/A

REVISION: 044

TITLE: Waterford 3 Emergency Plan

PROCEDURE OWNER (Position Title): Emergency Planning Manager

TERM (check one): ☒ PERMANENT ☐ TEMPORARY

Effective Date / Milestone (if applicable):

Expiration Date / Milestone (if applicable): N/A

PROCEDURE ACTION (check one):

☒ Revision ☐ Deletion ☐ New Procedure**DESCRIPTION AND JUSTIFICATION:**

- 1) Changed Emergency Coordinator to Emergency Director on Table 5-4. This is an administrative change to be consistent with the implementation of Standard ERO.
- 2) Removed responsibilities for offsite notifications from the TSC Communicator in Table 5-1 to be consistent with the implementation of Standard ERO as this task is performed by the EOF Offsite Communicators.
- 3) Revised Table 5-1 and Table 5-4 to include a reference to the On-shift ERO staffing Analysis conducted in accordance with NEI 10-05 and required by 10CFR50 Appendix E, Section IV.A. This is an administrative change.
- 4) Revised Table 5-1 to include the addition of Remote Shutdown Operator to the on-shift staff to support the Control Room Evacuation with fire.
- 5) Revised Table 5-4 to include the addition of Remote Shutdown Operator to the on-shift staff to assume responsibilities previously assigned to the Shift Technical Advisor.
- 6) Added position of Remote Shutdown Operator to Section 5 to support evacuation of control room.
- 7) Removed "and the radio-paging transmitter" from Section 7.5.1.1 since this function is no longer applicable.
- 8) Removed "In addition, the O&M radio system can be accessed by the PABX. By dialing the assigned access code, any telephone in the station can be connected to the O&M frequencies" from Section 7.5.1.4. a since this function is no longer applicable.

☐ Request/Approval Page Continuation Sheet(s) attached.**REVIEW PROCESS**

(check one):

☒ Normal☐ Editorial Correction
(Revisions only)☐ Technical Verification
(Revisions only)

REVIEW AND APPROVAL ACTIVITIES		PRINT NAME OR SIGNATURE	DATE
PREPARER		Michael L. Huskey	12-10-12
EC SUPERVISOR Administrative Review and Approval		(sign) N/A	
CROSS-DISCIPLINE and INTERNAL REVIEWS (List Groups, Functions, Positions, etc.)	Operations	Paul Wood	12-13-12
		N/A	
		N/A	
		N/A	
PROCESS APPLICABILITY DETERMINATION	Performed <input checked="" type="checkbox"/> PA Exclusion <input type="checkbox"/>	Aaron Ertel	12-12-12
TECHNICAL	Review <input checked="" type="checkbox"/> Verification <input type="checkbox"/>	Ronald J. Perry	12-13-12
QUALIFIED REVIEWER	Review <input type="checkbox"/>	N/A	
GROUP/DEPT. HEAD	Review <input checked="" type="checkbox"/> Approval <input type="checkbox"/>	(sign) Bryan J. Pellegrini	12/20/12
GM, PLANT OPERATIONS	Review <input type="checkbox"/> Approval <input type="checkbox"/>	(sign) [Signature]	12/22/12
VICE PRESIDENT, OPERATIONS	Approval <input type="checkbox"/>	(sign) N/A	

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Appendix D	Louisiana Peacetime Radiological Response Plan (Provided as a separate document)
Appendix E	Louisiana Peacetime Radiological Response Plan - Attachment 1 (Provided as a separate document)
Appendix F	Memorandum of Understanding with the Louisiana Department of Environmental Quality (Deleted, superseded by State Law)
Appendix G	Typical Emergency Response Equipment Lists
Appendix H	Procedure Cross Reference Between the Emergency Plan Implementing Procedures and the Emergency Plan
Appendix I	Emergency Medical Assistance Program (EMAP)
Appendix J	NUREG-0654 Cross Reference
Appendix K	Waterford 3 Steam Electric Station Alert/Notification System Report (Summary) (Report provided as a separate document)

WATERFORD 3 SES EMERGENCY PLAN

1.0 GLOSSARY

1.1 Key Term Index

The following is a list of key terms and their definitions, as used in the Waterford Steam Electric Station Unit No. 3 Emergency Plan. Terms capitalized within these definitions are defined elsewhere in this Glossary. Footnotes are located at the end of Section 1.1.

- 1.1.1 Accident - An unforeseen and unintentional event which may result in an emergency.
- 1.1.2 Activation - Actions taken to staff and setup an emergency facility for operation. Includes notification of emergency personnel, equipment setup and equipment operability testing.
- 1.1.3 Adverse Meteorology - The five percent probability atmosphere dispersion condition which corresponds to a one hour X/Q value of 6.3×10^{-4} sec/m³ at the EXCLUSION AREA BOUNDARY.¹
- 1.1.4 Alert - Events are in process or have occurred which involve an actual or potential substantial degradation of the level of the safety of the Waterford 3 Steam Electric Station (W3SES) or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of intentional malicious dedicated efforts of a hostile act. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.⁷
- 1.1.5 Assessment Actions - Those actions taken during or after an ACCIDENT to obtain and process information necessary to make decisions in order to implement specific emergency actions.²
- 1.1.6 Augmentation - Actions taken to support onshift personnel prior to emergency facilities becoming OPERATIONAL.
- 1.1.7 Clean Area - Any area or room which contains contamination levels less than the limits specified for a CONTAMINATION AREA.
- 1.1.8 Committed Dose Equivalent (CDE) - The dose equivalent to organs or tissues of reference that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.
- 1.1.9 Committed Effective Dose Equivalent (CEDE) - Sum of the products of the weighting factors applicable to each of the body organs or tissues which are irradiated and the COMMITTED DOSE EQUIVALENTS for these organs or tissues.
- 1.1.10 Company Spokesperson - Designated individual operating from the JIC with the primary responsibility for the content and timing of all information releases.
- 1.1.11 Contamination Area - An area where removable surface contamination is greater than or equal to 1000 dpm/100 cm² beta gamma or greater than or equal to 20 dpm/100 cm² alpha but is less than 100,000 dpm/100 cm² beta gamma.
- 1.1.12 Control Room (CR) - An area at Waterford 3 located at + 46.0 ft. MSL elevation of the Reactor Auxiliary Building (RAB) where the reactor and its auxiliary systems are controlled.

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- 1.1.13 Control Room Supervisor - An individual who is part of the station supervisory staff, is licensed by the NRC as a Senior Reactor Operator and is authorized to direct the manipulation of reactor controls. The Control Room Supervisor (CRS) is accountable to the SHIFT MANAGER. He is responsible for directing the activities in the CONTROL ROOM.
- 1.1.14 Corrective Actions - Those emergency measures taken to mitigate or terminate an EMERGENCY situation at or near the source of the problem in order to prevent an uncontrolled release of radioactive material, e.g., reactor shutdown, equipment repair, etc.
- 1.1.15 Duty Plant Manager (DPM) - Designated individual in plant management assigned in accordance with the current duty roster the duties of the General Manager Plant Operations for weekends, backshift and periods when the General Manager Plant Operations is unavailable.
- 1.1.16 Emergency - Situation or condition which may result in damage to property or undue risk to the health and safety of the general public and/or site personnel
- 1.1.17 Emergency Actions - Those emergency measures taken to assess an emergency situation and insure appropriate CORRECTIVE and/or PROTECTIVE ACTIONS.
- 1.1.18 Emergency Action Level (EAL) - A pre-determined, site-specific, observable threshold for a plant INITIATING CONDITION that places the plant in a given EMERGENCY CLASS. An EAL can be: an instrument reading; an equipment status indicator; a measurable parameter (onsite or offsite); a discrete, observable event; results of analyses; entry into specific emergency operating procedures; or another phenomenon which, if it occurs, indicates entry into a particular EMERGENCY CLASS.
- 1.1.19 Emergency Class - One of a minimum set of names or titles, established by the Nuclear Regulatory Commission (NRC), for grouping off-normal nuclear power plant conditions according to (1) their relative radiological seriousness, and (2) the time-sensitive onsite and off-site radiological emergency preparedness actions necessary to respond to such conditions. The existing radiological emergency classes, in ascending order of seriousness, are called: (1) NOTIFICATION OF UNUSUAL EVENT (UNUSUAL EVENT), (2) ALERT, (3) SITE AREA EMERGENCY, and 4) GENERAL EMERGENCY. Hereinafter may be referred to as Emergency Classification.
- 1.1.20 Emergency Director (ED) - The designated individual in the onshift (and NEARSITE) emergency organization with overall responsibility and authority for ONSITE emergency response including initial OFFSITE PROTECTIVE ACTION RECOMMENDATIONS and OFFSITE notifications
- 1.1.21 Emergency Core Cooling System (ECCS) - System which includes the pertinent pumps, piping, valves, etc., of the Decay Heat Removal System, Core Flooding System and the make-up portion of the Make-up and Purification System.
- 1.1.22 Emergency Operations Center (EOC) - Designated State and local emergency management headquarters facilities especially designed and equipped for the purpose of exercising effective coordination and control over disaster operations carried out within their jurisdiction.²

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- 1.1.23 Emergency Operations Facility (EOF) - Designated facility for the management of overall Waterford 3 emergency response, coordination of OFFSITE radiological and environmental assessments, determination of OFFSITE PROTECTIVE ACTION RECOMMENDATIONS and OFFSITE notifications. The capability to perform the following functions is required in order to declare the EOF OPERATIONAL:
- Management of overall licensee emergency response,
 - Coordination of radiological and environmental assessment,
 - Determination of recommended public protective actions, and
 - Coordination of emergency response activities with Federal, State and local agencies.³
- 1.1.24 Emergency Plan (EP) - The ENTERGY OPERATIONS, INC. plan for response to emergencies at Waterford 3.
- 1.1.25 Emergency Planning Coordinator (EPC) - Individual responsible for the overall coordination of emergency planning required at the Waterford 3 SES. The Emergency Planning Manager is the designated Emergency Planning Coordinator.
- 1.1.26 Emergency Planning Zone (EPZ) - Two Emergency Planning Zones have been established. The first is an area about 10 miles in radius around the Waterford 3 SES for which emergency planning consideration of the PLUME EXPOSURE PATHWAY has been given in order to assure that prompt and effective actions can be taken to protect the public in the event of an ACCIDENT. The second is an area approximately 50 miles in radius around the Waterford 3 SES for which emergency planning consideration of the INGESTION EXPOSURE PATHWAY has been given.⁴
- 1.1.27 Emergency Plan Implementing Instructions - Specific procedures providing step-by-step actions for using the INITIATING CONDITIONS to classify an emergency condition. These procedures also provide step-by-step actions for implementing the EMERGENCY PLAN at each EMERGENCY CLASSIFICATION.
- 1.1.28 Emergency Plan Implementing Procedures - Specific procedures providing step-by-step actions to implement emergency plans, in order to mitigate or terminate an EMERGENCY situation
- 1.1.29 Emergency Plan Supporting Procedures - Specific procedures outlining the actions necessary to maintain the state of emergency readiness as defined in the EMERGENCY PLAN.
- 1.1.30 Emergency Response Data System (ERDS) - A direct, near real-time, electronic data link between the Waterford 3 plant computer system and the NRC Operations Center that provides for the automated transmission of a limited data set of selected parameters.
- 1.1.31 Entergy Corporation - Entergy Louisiana, LLC, and ENTERGY OPERATIONS, INC., parent company
- 1.1.32 Entergy Operations, Inc. - Company responsible for operating the Waterford 3 Steam Electric Station
- 1.1.33 Essential Personnel - Those individuals who are assigned and trained to perform emergency duties as outlined within the Waterford 3 SES EMERGENCY PLAN.

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- 1.1.34 Exclusion Area (EA) or Exclusion Zone (EZ) - Area surrounding the reactor in which ENTERGY OPERATIONS, INC. has the authority to determine all activities including exclusion or removal of personnel and property from the area.⁵
- 1.1.35 Exclusion Area Boundary (EAB) - The border of the EXCLUSION AREA or an area corresponding to a distance of 914 meters from the Waterford 3 reactor.
- 1.1.36 General Emergency - Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or security events that result in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.⁷
- 1.1.37 Governor's Office of Homeland Security & Emergency Preparedness (GOHSEP) - The Louisiana Governor's Office of Homeland Security & Emergency Preparedness
- 1.1.38 High Contamination Area - An area where the removable surface contamination is greater than or equal to 100,000 dpm/100 cm² beta gamma.
- 1.1.39 High Radiation Area - An area, accessible to individuals, in which radiation levels could result in an individual receiving a deep dose equivalent of greater than or equal to 100 millirem (1 mSv) in 1 hour at 30 centimeters (~12 inches) from the radiation source or from any surface that the radiation penetrates.⁵
- 1.1.40 Hostile Action - An act toward a Nuclear Power Plant or its personnel that includes the use of violent force to destroy equipment, take hostages, and/or intimidate the licensee to achieve an end. This includes attack by air, land, or water using guns, explosives, projectiles, vehicles, or other devices used to deliver destructive force.⁷
- 1.1.41 Hostile Force - One or more individuals who are engaged in a determined assault, overtly or by stealth and deception, equipped with suitable weapons capable of killing, maiming, or causing destruction.⁸
- 1.1.42 Implementing Documents - The EMERGENCY PLAN IMPLEMENTING PROCEDURES, plant procedures, Departmental Procedures, Training lesson plans or any other document which is used to implement the emergency response philosophy as described in the EMERGENCY PLAN.
- 1.1.43 Ingestion Exposure Pathway - The mechanism by which radiation is dispersed through the environment subjecting the general public to exposure principally from ingestion of contaminated water or food, such as milk or fresh vegetables
- 1.1.44 Initiating Condition (IC) - One of a predetermined subset of nuclear power plant conditions where either the potential exists for a radiological emergency, or such an emergency has occurred.
- 1.1.45 Joint Information Center (JIC) - The facility which serves as the single-point contact for disseminating Plant information to the public.
- 1.1.46 Locked High Radiation Area - An area, accessible to individuals, in which radiation levels could result in an individual receiving a deep dose equivalent greater than or equal to 1000 mR/hr (10 mSv) in one hour at 30 cm (~12 inches) from the radiation source or from any surface that the radiation penetrates.⁵

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- 1.1.47 Louisiana Peacetime Radiological Response Plan - State of Louisiana Emergency Response Plan for all radiological emergencies in the State or near its borders
- 1.1.48 Louisiana Peacetime Radiological Response Plan Waterford 3 Attachment - State of Louisiana Emergency Response Plan with specific reference to actions to be carried out by St. Charles and St. John the Baptist Parishes in response to a situation at Waterford 3.
- 1.1.49 Louisiana Department of Environmental Quality (LDEQ) – State of Louisiana department with jurisdiction over matters affecting the environment including the regulation and control of radiation and development and implementation of emergency response plans for fixed nuclear facility accidents.
- 1.1.50 Low Population Zone (LPZ) - The area immediately surrounding the EXCLUSION AREA which contains residents, the total number and density of which are such that there is a reasonable probability that appropriate PROTECTIVE ACTIONS could be taken in their behalf in the event of a serious ACCIDENT.
- 1.1.51 Non-Essential Personnel - Those individuals (including members of the general public who may be in public access areas within the EXCLUSION and OWNER CONTROLLED AREAS) who are not assigned to the emergency organization and have access to the Waterford 3 Site.
- 1.1.52 Notification of Unusual Event - Events are in process or have occurred which indicate a potential degradation of the level of the safety of the W3SES or indicate a security threat to facility protection. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs. Hereinafter defined for the Waterford 3 SES as an UNUSUAL EVENT⁷.
- 1.1.53 Nuclear Auxiliary Operators (NAO) - Individuals who operate plant systems outside the CONTROL ROOM to assist the REACTOR OPERATOR in carrying out their duties.
- 1.1.54 Offsite - Any area outside of the plant perimeter fence
- 1.1.55 Onsite - Any area within the plant perimeter fence
- 1.1.56 Operable/Operability - A system, subsystem, train, component or device shall be operable or have operability when it is capable of performing its specified function(s), and when all necessary attendant instrumentation, controls, electrical power, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).
- 1.1.57 Operational - Status of an emergency facility declared by the appropriate facility manager upon determining that the facility is adequately staffed and equipment is setup and available to perform the emergency functions assigned to that facility. This definition meets the intent of the term "fully operational" as described in Supplement 1 to NUREG-0737. Hereinafter OPERATIONAL and "fully operational" may be used interchangeably.
- 1.1.58 Operational Modes -
 - Mode 1 Power Operation
 - Mode 2 Startup

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Mode 3 Hot Standby

Mode 4 Hot Shutdown

Mode 5 Cold Shutdown

Mode 6 Refueling

Defueled Although not an Operational Mode, "defueled" is listed here because it is a plant condition used in the EALs.

See Waterford 3 Technical Specifications, Table 1.2 for more detailed information.

- 1.1.59 Operational Support Center (OSC) - ONSITE assembly area located in the Maintenance Support Building where Waterford 3 operations support personnel will muster for subsequent assignment to duties in support of emergency operations. The capability to perform the following functions is required in order to declare the OSC OPERATIONAL:
- Provide a location where plant logistic support can be coordinated during an emergency, and
 - Restrict CONTROL ROOM access to those support personnel specifically requested by the SHIFT MANAGER.³
- 1.1.60 Owner Controlled Area (OCA) - The external area contiguous to the PROTECTED AREA extending outward to Entergy Louisiana, LLC Property lines.
- 1.1.61 Personnel Monitoring Equipment - Devices designed to be worn or carried by an individual for the assessment of dose equivalent (e.g., pocket dosimeters, direct reading electronic dosimeters, DLRs, etc.).⁵
- 1.1.62 Plume Exposure Pathway - The means by which a radioactive plume can expose the general public and/or ONSITE personnel to radiation. The time of potential exposure could range from hours to days. The principal exposure sources from this pathway are: (1) external exposure to gamma radiation from the radioactive plume and from deposited material, and (2) inhalation exposure from the passing radioactive plume.
- 1.1.63 Population Center Distance - The distance from the reactor to the nearest boundary of a densely populated center containing more than 25,000 residents.⁵
- 1.1.64 Projected Dose - Estimate of the radiation dose that affected populations may potentially receive if PROTECTIVE ACTIONS are not taken.⁶
- 1.1.65 Protected Area - The area encompassed by physical barriers (the security fence) and to which access is controlled into the VITAL AREAS of the Plant.
- 1.1.66 Protective Actions (PA) - Action(s) taken to avoid or reduce the possibility of exposure to the PROJECTED DOSE.⁶
- 1.1.67 Protective Action Guides (PAG) - Projected radiological dose or dose commitment values to individuals in the general population and to emergency workers that warrant PROTECTIVE ACTIONS before or after a release of radioactive material.⁶
- 1.1.68 Protective Action Recommendation (PAR) - The PROTECTIVE ACTIONS given to OFFSITE agencies that are deemed appropriate by Waterford 3 SES emergency response personnel to protect the health and safety of the public.

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- 1.1.69 Radiation Area - An area, accessible to individuals, in which radiation levels could result in an individual receiving a deep dose equivalent greater than or equal to 5 mRem (0.05mSv) in 1 hour at 30 cm (= 12 inches) from the radiation source or from any surface that the radiation penetrates.
- 1.1.70 Radiologically Controlled Area (RCA) - Any area where full radiological controls are in effect (i.e., Provides controlled personnel access/egress and contamination monitoring for personnel and/or equipment upon exit), for the purpose of providing protection and information to the individual. These areas normally include but are not limited to the following: The Reactor Containment Building, Fuel Handling Building and portions of the Reactor Auxiliary Building.
- 1.1.71 Reactor Operator (RO) - An individual, licensed by the NRC as a Reactor Operator or Senior Reactor Operator, who is authorized to manipulate the reactor controls.
- 1.1.72 Recovery - Those actions taken after the EMERGENCY to restore the plant as nearly as possible to its pre-emergency condition
- 1.1.73 Recovery Manager - Individual responsible for overall RECOVERY activities
- 1.1.74 Restricted Area - As applicable to 10CFR20, Restricted Area is defined as that area enclosed by the Security PROTECTED AREA fence and the fenced in area enclosing the Low Level Radioactive Waste Facility.
- 1.1.75 Shift Manager (SM) - An individual who is part of the station supervisory staff, is licensed by the NRC as a Senior Reactor Operator and is authorized to direct the manipulation of the reactor controls. The SM is designated by the Operations Manager to be the senior member of the shift organization. As such, the Shift Manager is the senior ENTERGY OPERATIONS, INC. management representative with respect to plant operation and is the General Manager Plant Operations representative on shift. He is directly responsible for all activities on site.
- 1.1.76 Site Area Emergency - Events are in process or have occurred which involve an actual or likely major failures of plant functions needed for protection of the public or security events that result in intentional damage or malicious acts;
(1) toward site personnel or equipment that could lead to the likely failure of or;
(2) that prevents effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.⁷
- 1.1.77 Site Evacuation - A controlled, preplanned evolution, which can be initiated by the EMERGENCY COORDINATOR, that ensures all NON-ESSENTIAL PERSONNEL are safely and expeditiously evacuated from the WATERFORD 3 SES SITE area to predetermined OFFSITE assembly areas.
- 1.1.78 State - The State of Louisiana
- 1.1.79 Technical Support Center (TSC) - ONSITE facility located at the +46.0 ft. MSL elevation in the Reactor Auxiliary Building, separate from the CONTROL ROOM which provides plant management and technical support to the reactor operating personnel in the CONTROL ROOM during emergency conditions. The capability to perform the following functions is required in order to declare the TSC OPERATIONAL:

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- Provide plant management and technical support to plant operations personnel during emergency conditions.
 - Relieve the reactor operators of peripheral duties and communications not directly related to reactor system manipulations.
 - Prevent congestion in the CONTROL ROOM.
 - Perform EOF functions as necessary until these functions are transferred to the EOF.³
- 1.1.80 Total Effective Dose Equivalent (TEDE) - The sum of the effective dose equivalent or the deep dose equivalent (for external exposures) and the COMMITTED EFFECTIVE DOSE EQUIVALENT (for internal exposures).
- 1.1.81 Unrestricted Area - Any area, access to which is neither limited nor controlled by ENTERGY OPERATIONS, INC., in order to protect individuals from exposure to radiation and radioactive materials.⁵
- 1.1.82 Unusual Event - Events are in process or have occurred which indicate a potential degradation of the level of the safety of the W3SES or indicate a security threat to facility protection. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.⁷
- 1.1.83 Very High Radiation Area - An area, accessible to individuals, in which radiation levels could result in an individual receiving an absorbed dose in excess of 500 rads in one hour at 1 meter (~ 3ft.) from the radiation source or any surface that the radiation penetrates⁵.
- 1.1.84 Vital Areas - Any area which contains VITAL EQUIPMENT.⁵
- 1.1.85 Vital Equipment - Any equipment, system, device or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation. Equipment or systems which would be required to function to protect public health and safety following such failure, destruction or release are also considered to be vital.⁵
- 1.1.86 Waterford 3 SES Site - That area bounded by the plant perimeter fence.

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Footnote References for Definitions -

- ¹ Final Safety Analysis Report (FSAR) Waterford Steam Electric Station, Unit No. 3.
- ² NUREG 0654/FEMA-REP-I, Rev. I, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants
- ³ NUREG 0696, Functional Criteria for Emergency Response Facilities, NRC, 1981.
- ⁴ NUREG 0396 (EPA 520/I-78-016), Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants..
- ⁵ Title 10, Code of Federal Regulations.
- ⁶ EPA 400-R-92-001, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents.
- ⁷ NRC Bulletin 2005-02, Emergency Preparedness and Response Actions for Security Based Events.
- ⁸ NEI-99-01, Methodology for Development of Emergency Action Levels

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1.2 Abbreviations Listing

- 1.2.1 CCW - Component Cooling Water
- 1.2.2 CDE - Committed Dose Equivalent
- 1.2.3 CEDE - Committed Effective Dose Equivalent
- 1.2.4 CFR - Code of Federal Regulations
- 1.2.5 CR - Control Room
- 1.2.6 CRS - Control Room Supervisor
- 1.2.7 CRT - Cathode Ray Tube
- 1.2.8 CVCS - Chemical Volume Control System
- 1.2.9 DA - Dose Assessor
- 1.2.10 DLR - Dosimeter of Legal Record
- 1.2.11 DOE - Department of Energy
- 1.2.12 EA - Exclusion Area
- 1.2.13 EAB - Exclusion Area Boundary
- 1.2.14 EAL - Emergency Action Level
- 1.2.15 ECCS - Emergency Core Cooling System
- 1.2.16 ED - Emergency Director
- 1.2.17 EFAT - Emergency First Aid Team
- 1.2.18 EMA - Emergency Management Agency
- 1.2.19 EMAP - Emergency Medical Assistance Program
- 1.2.20 ENS - Emergency Notification System
- 1.2.21 EOC - Emergency Operations Center
- 1.2.22 EOF - Emergency Operations Facility
- 1.2.23 EP - Emergency Plan
- 1.2.24 EPA - Environmental Protection Agency
- 1.2.25 EPM - Emergency Plant Manager
- 1.2.26 EPIP - Emergency Plan Implementing Procedure
- 1.2.27 EPZ - Emergency Planning Zone
- 1.2.28 EZ - Exclusion Zone
- 1.2.29 FEMA - Federal Emergency Management Agency
- 1.2.30 FSAR - Final Safety Analysis Report

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- 1.2.31 GOHSEP – Governor’s Office of Homeland Security & Emergency Preparedness
- 1.2.32 HPN - Health Physics Network
- 1.2.33 IC - Initiating Condition
- 1.2.34 INPO - Institute of Nuclear Power Operations
- 1.2.35 IPARMS - In-Plant Airborne Radiation Monitoring System
- 1.2.36 JIC – Joint Information Center
- 1.2.37 LPZ - Low Population Zone
- 1.2.38 LDEQ - Louisiana Department of Environmental Quality
- 1.2.39 LSP - Louisiana State Police
- 1.2.40 MARMOND - Meteorological and Radiation Monitoring Data Processing System
- 1.2.41 MSL - Mean Sea Level
- 1.2.42 NAO - Nuclear Auxiliary Operator
- 1.2.43 NIMS – National Incident Management System
- 1.2.44 NRC - Nuclear Regulatory Commission
- 1.2.45 NWS - National Weather Service
- 1.2.46 OSC - Operational Support Center
- 1.2.47 OSRC - Onsite Safety Review Committee
- 1.2.48 OTA - Offsite Technical Advisor
- 1.2.49 PA - Protective Action
- 1.2.50 PAG - Protective Action Guides
- 1.2.51 PAR - Protective Action Recommendation
- 1.2.52 RAB - Reactor Auxiliary Building
- 1.2.53 RAC - Radiological Assessment Coordinator
- 1.2.54 RAP - Radiation Assistance Program
- 1.2.55 RC – Radiological Coordinator
- 1.2.56 RCA – Radiologically Controlled Area
- 1.2.57 RCC – Rad/Chem Coordinator
- 1.2.58 RCS - Reactor Coolant System
- 1.2.59 RO - Reactor Operator
- 1.2.60 RPS - Reactor Protective System
- 1.2.61 SES - Steam Electric Station

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- 1.2.62 SDS - Satellite Display System
- 1.2.63 SI - Safety Injection System
- 1.2.64 SM - Shift Manager
- 1.2.65 SRD - Self-Reading Dosimeter
- 1.2.66 SRO - Senior Reactor Operator
- 1.2.67 SSEB - Southern States Energy Board
- 1.2.68 SSS - Security Shift Supervisor
- 1.2.69 STA - Shift Technical Advisor
- 1.2.70 TEDE - Total Effective Dose Equivalent
- 1.2.71 TLD - Thermoluminescent Dosimeter
- 1.2.72 TSC - Technical Support Center
- 1.2.73 W3SES - Waterford 3 Steam Electric Station
- 1.2.74 X/Q - Wind Dispersion Factor (χ/Q)

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2.0 APPLICABILITY AND SCOPE

2.1 Purposes and Objectives

The purpose of emergency preparedness is to provide direction for response to emergencies varying in severity from personnel injuries to situations involving real or potential offsite radiological hazards and to ensure that necessary equipment, supplies and essential services are available.

The following plan has been developed for the Waterford Steam Electric Station Unit No. 3 (W3SES), as a detailed expansion of the Final Safety Analysis Report, Section 13.3. Section 13.3 of the FSAR is provided in order to satisfy submittal requirements of Section 50.34 to Title 10 of the Code of Federal Regulations (10 CFR 50.34) "Contents of Applications; Technical Information". Further, this document satisfies the criteria of NUREG 0654/FEMA-REP-1, Rev. 1 "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants."

Supplemental guidance has been provided by additional documents, samples of which are listed below:

- a. NUREG 0737
- b. NUREG 0696
- c. REG Guide 1.97

The primary objective of emergency planning is to develop and maintain a plan and implementing procedures to ensure emergency preparedness and provide a means for mitigating the consequences of emergencies in order to protect the health and safety of the general public and site personnel, and to prevent damage to property.

As such, objectives of the Emergency Plan are as follows:

- a. To establish procedures to identify and classify emergency conditions.
- b. To establish procedures to reclassify an emergency condition should the severity increase or decrease.
- c. To detail the normal and emergency operating organizations and to assign responsibilities in order to direct the response to an emergency situation or radiological incident.
- d. To provide guidelines and specific details of offsite support organizations' assistance (to include governmental organizations) and availability.
- e. To evaluate the necessity for public protective actions deemed appropriate to protect the general public and site personnel.
- f. To terminate or mitigate the consequences of an emergency both onsite and offsite.
- g. To establish and provide specific details on emergency facilities, assessment facilities, communication systems availability, and their utilization by normal and emergency operating organizations.
- h. To provide for the training of all essential personnel.
- i. To outline the most effective course of action in order to protect the general public and site personnel in the event of an emergency.

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2.2 Location Description

The Waterford Steam Electric Station Unit No. 3 (W3SES), is owned by Entergy Louisiana, LLC., and operated by Entergy Operations, Inc. It is a pressurized water reactor steam supply system furnished by ABB Combustion Engineering and is designed for a core thermal output of 3716 megawatts.

The Waterford property is shown on Figure 2-1. The property is owned by Entergy Louisiana, LLC., and includes 3,561.3 acres. The Waterford 3 site is defined as that area bounded by the plant perimeter fence. The Waterford 3 site is shown in Figure 2-3. The site area includes station structures for Waterford 3 and a branch of the Riverland Credit Union. It does not include any recreational or other industrial structures. It does include certain facilities for temporary housing which may be used by transient population as conditions warrant. On the Waterford property, approximately one mile southwest of the Waterford 3 site, the James M. Cain Energy Education Center is located (see Figure 2-1). The James M. Cain Energy Education Center is accessed from LA 3127 and houses the Waterford 3 Emergency Operations Facility (EOF). This area includes certain facilities for temporary housing which may be used by transient population as conditions warrant.

The Waterford 3 site is located on the west (right descending) bank of the Mississippi River between Baton Rouge, Louisiana, and New Orleans, Louisiana. The site is in the northwestern section of St. Charles Parish, Louisiana, near the towns of Killona and Taft. Figure 2-7 shows the site in relation to the region within 50 miles; Figure 2-6 shows the area within 10 miles of the site.

The Waterford 3 site is located adjacent to the Mississippi River, at River Mile 129.6. The River itself is the most prominent natural feature of the region. Other important natural features include Lac des Allemands, about 5.5 miles southwest of the site, and Lake Pontchartrain, about 7 miles northeast of the site. The land slopes gently from its high points near the River (+10 to 15 ft. MSL) to extensive wetlands located about 1.5 to 2.5 miles inland from the River.

Most of the man-made features are located on the narrow strip of dry land between the Mississippi River and the wetlands. Near the Waterford site are several large industrial facilities, including Waterford SES Units 1 and 2 (0.4 mile west-northwest of Waterford 3), Little Gypsy SES Units 1, 2 and 3 (0.8 mile north-northeast of the site, across the River), Mosaic Phosphates, a fertilizer manufacturer (0.6 mile east-southeast). The above-mentioned generating stations are owned by Entergy Louisiana, LLC., and operated by Entergy Services, Inc. Other large industries are located along the Mississippi River both north and south of the site as far as Baton Rouge and New Orleans. These industries are predominantly refineries, petrochemical manufacturers, sugar manufacturers, and grain elevators.

Transportation facilities near the Waterford site include the Mississippi River (0.2 mile from the site), Louisiana Highway 18 (0.1 mile north-northeast), Louisiana Highway 3127 (1.1 miles south-southwest), Louisiana Highway 628 (0.7 mile north-northeast, across the River) and the Union Pacific Railroad (0.5 mile south-southwest).

Important urban centers in the region of the site include New Orleans (25 miles east-southeast) and Baton Rouge (50 miles west-northwest). Communities near the site include Killona (0.9 mile west-northwest), Montz (1.0 mile north), Norco (1.9 miles east), Destrehan (7.0 miles northeast), Hahnville (3.7 miles east-southeast), and LaPlace (4.7 miles north). All except LaPlace are located in St. Charles Parish. LaPlace is located in St. John the Baptist Parish.

WATERFORD 3 SES EMERGENCY PLAN

2.2 (Cont'd.)

Other prominent man-made features include the Mississippi River levee system, which at its closest point is 0.1 mile from the Waterford site, and the Bonnet Carre Spillway, a flood control structure 1.3 miles east-northeast of the site.

2.3 Population Distribution

A 2-mile radius surrounding the Waterford 3 site has been defined as the Low Population Zone (LPZ). The residents in this area are distributed such that there is a reasonable probability that appropriate protective measures could be taken in their behalf in the event of a serious accident. There are no schools within this zone. The Nelson Coleman St. Charles Parish Correctional Center, a 600-bed facility operated by the St. Charles Parish Sheriff's Department is in this zone. There are seven chemical plants located in this zone. These plants are located to the East and Southeast of Waterford-3. Figure 2-2 shows the cultural features of this zone including the locations of the chemical plants.

The area within 10 miles of the plant includes St. Charles and St. John the Baptist Parishes. The estimated 2000 population in St. Charles and St. John the Baptist Parishes is 91,116 persons concentrated mainly in towns along the banks of the Mississippi River. St. Charles Parish has an estimated 10 mile EPZ population of 48,072 persons, while St. John the Baptist Parish's estimated 10 mile EPZ population is 43,044. These population figures reflect the total population within the risk Parishes that is expected to evacuate in a Waterford-3 emergency whether or not they are located within the 10 mile radius.

Figure 2-4 shows a population breakdown by compass sector and distance within 10 miles of the plant. The additional population located outside the 10 mile radius is conservatively included in the 5-10 mile ring.

Between 10 and 50 miles from Waterford 3, estimated 2000 population is 1,853,458 persons or 95.3 percent of the population within 50 miles of the plant. Figure 2-5 shows a population breakdown by compass sector and distance within 50 miles of the plant.

2.4 Planning Description

Entergy Operations, Inc., in defining the Emergency Planning Zones (EPZ) for the Waterford 3 Steam Electric Station, has taken into consideration the information and data provided above, organizational capabilities, methods of implementation of the W3SES Emergency Plan and the availability of onsite and offsite emergency facilities and equipment.

Two primary zones have been identified for the purpose of development and implementation of the emergency plan. The first EPZ established has a radius of about 10 miles and is referred to as the plume exposure pathway emergency planning zone. Within this zone evacuation and/or sheltering may be used as immediate protective actions to protect the general public. The principal concern with the plume exposure pathway is that of external exposure and/or exposure to the thyroid due to inhalation and ingestion.

The second EPZ established has a radius of about 50 miles and is referred to as the ingestion exposure pathway emergency planning zone. Beyond the 10-mile radius, this pathway is most significant. The principal concern with the ingestion exposure pathway is from ingestion of contaminated water or foods such as milk or fresh vegetables.

Figures 2-6 and 2-7 indicate the areas involved or within the 10-mile and 50-mile EPZ, respectively.

WATERFORD 3 SES EMERGENCY PLAN

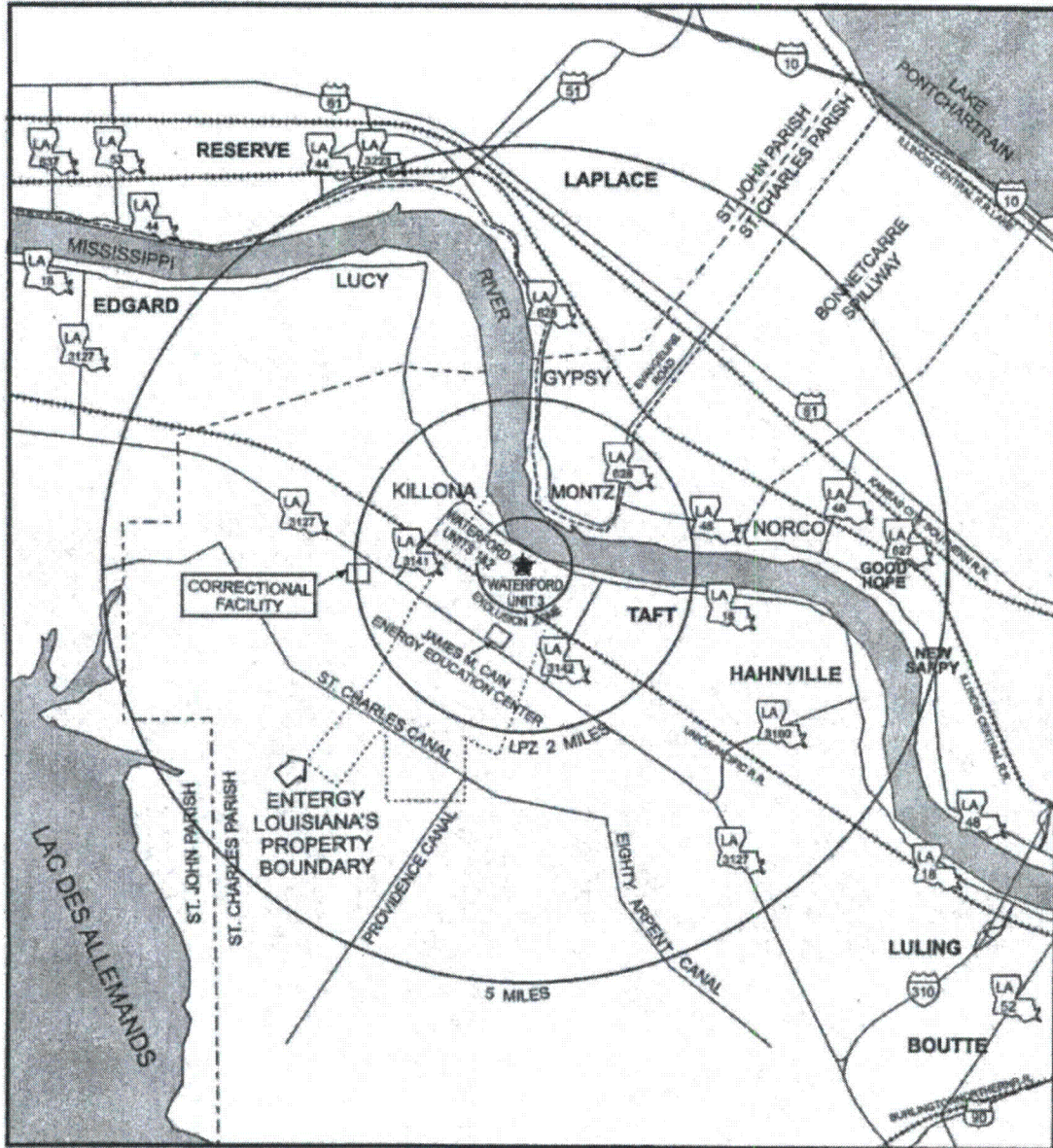
2.5 Plan Interrelationships

The W3SES Emergency Plan should not be used alone in response to an emergency, but in conjunction and coordination with procedures, other plans and emergency arrangements.

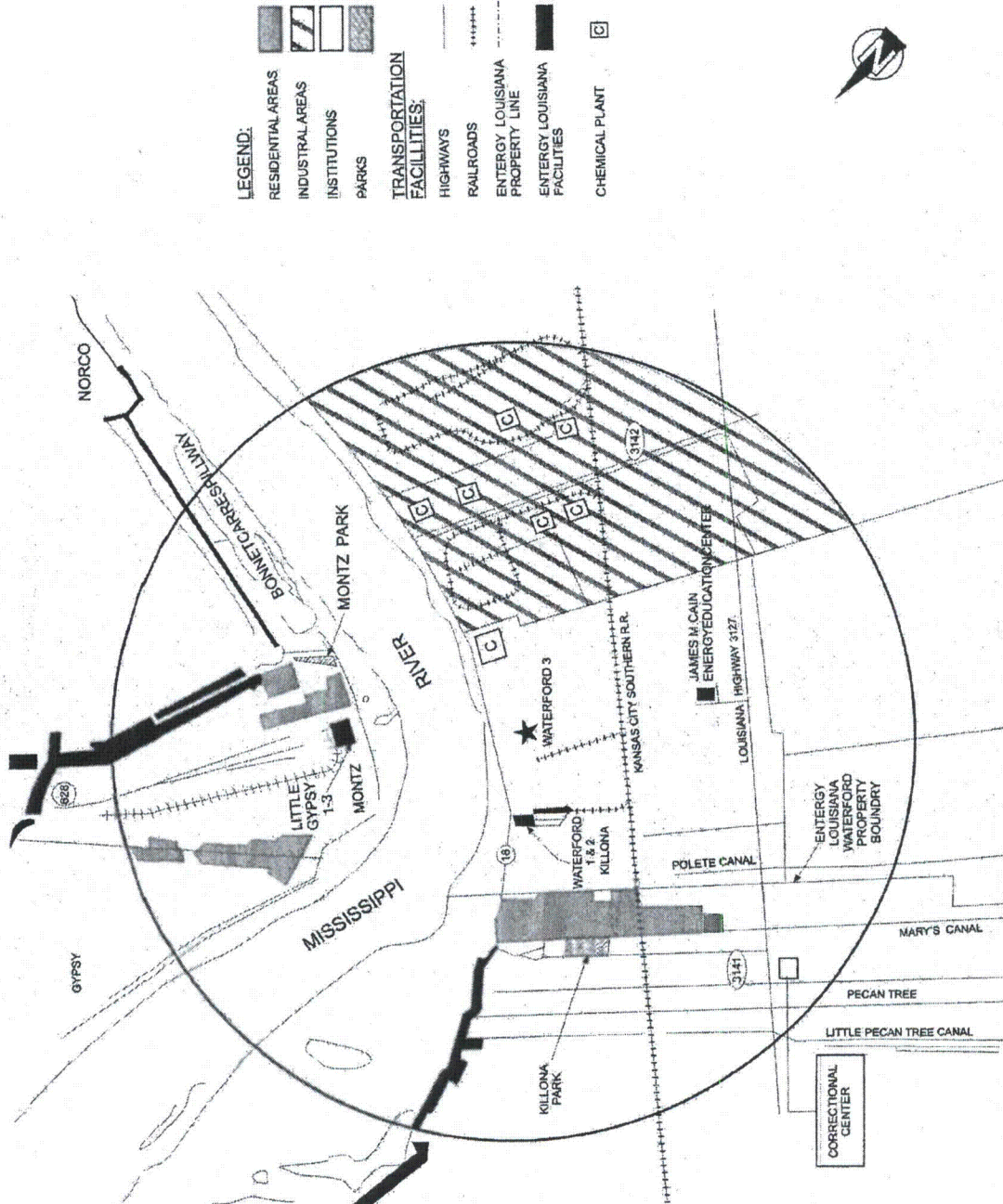
These interrelationships are summarized as follows:

- a. Emergency Plan Implementing Procedures provide detailed actions to be taken by individuals in response to onsite emergency situations. These procedures direct the implementation of the Emergency Plan. Implementing Procedures incorporate certain aspects of the site's operating procedures, radiological control procedures and industrial security procedures, where they are required for clarification.
- b. Emergency Operating Procedures are utilized to control plant operations during abnormal conditions.
- c. Security Plan and Procedures have been coordinated to ensure that appropriate emergency actions can be taken. For example, the Security Plan and Procedures have provisions for emergency response personnel and vehicle access when required by the Emergency Plan Implementing Procedures.
- d. The W3SES Radiation Protection Procedures define administrative controls and procedures such as radiological control limits and precautions, use of personnel monitoring devices and protective clothing, personnel decontamination, etc. The procedures also provide instructions on performing surveys, analyzing samples, operating radiation protection equipment, etc. The pertinent information and details provided in these documents have either been incorporated into the W3SES Emergency Plan and/or Implementing Procedures, or have been appropriately referenced.
- e. Coordination and liaison with offsite organizations and agencies having radiological emergency responsibilities insures compatibility and proper interfacing with this plan.
- f. Governmental agency interrelationships with the W3SES Emergency Plan include:
 1. St. Charles Parish Emergency Operations Plan.
 2. St. John the Baptist Parish Preparedness Plan for Emergency Operations.
 3. State of Louisiana, Louisiana Peacetime Radiological Response Plan and Waterford 3 Attachment.
 4. U.S. Nuclear Regulatory Commission, Region IV Response Plan.
 5. U.S. Department of Energy, Federal Radiological and Monitoring Assessment Plan.
 6. Federal Emergency Management Agency, Region VI, Emergency Response Team Plan.

**W3 SES EMERGENCY PLAN
FIGURE 2-1
WATERFORD PROPERTY**



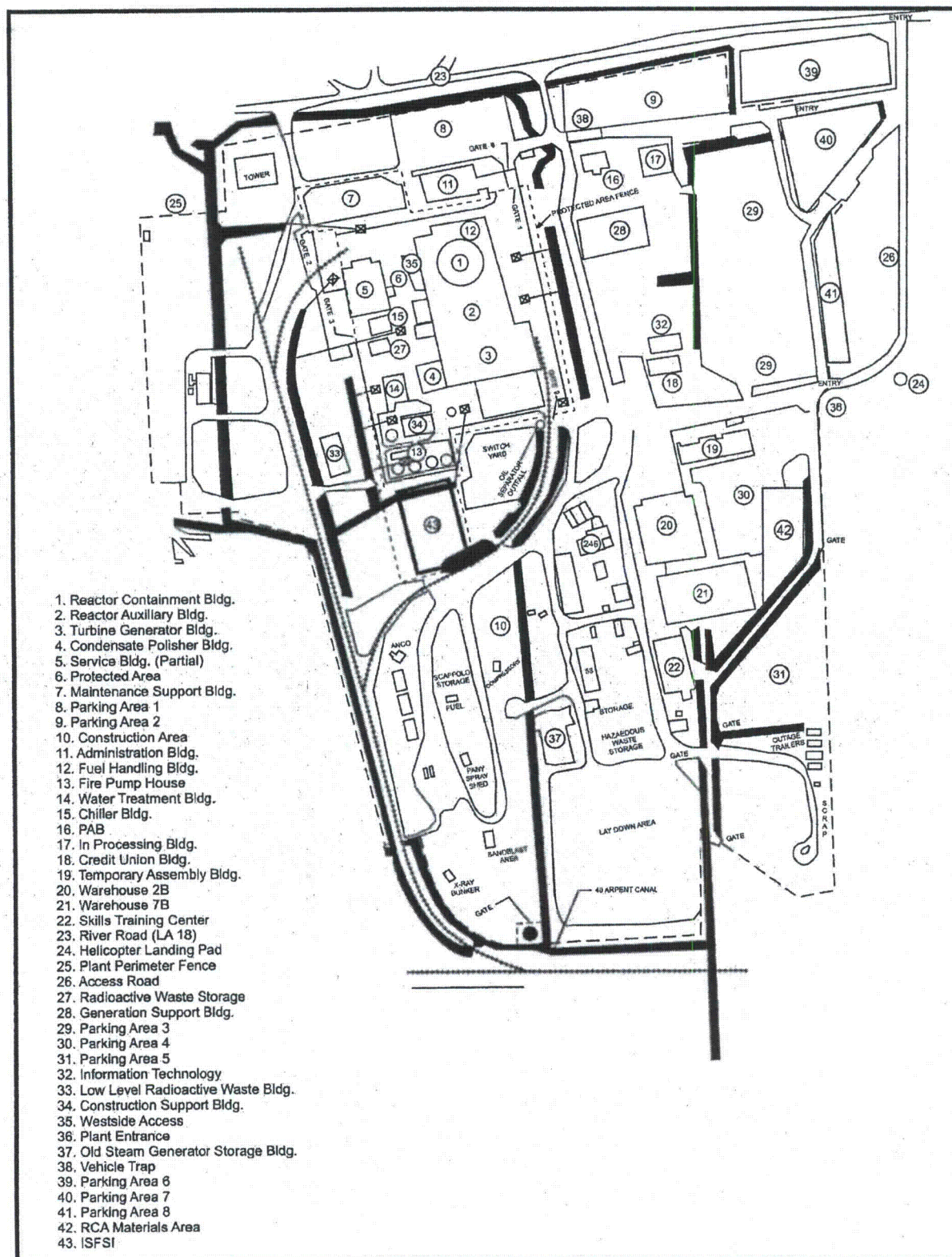
**W3 SES EMERGENCY PLAN
FIGURE 2-2
LOW POPULATION ZONE CULTURAL FEATURES**



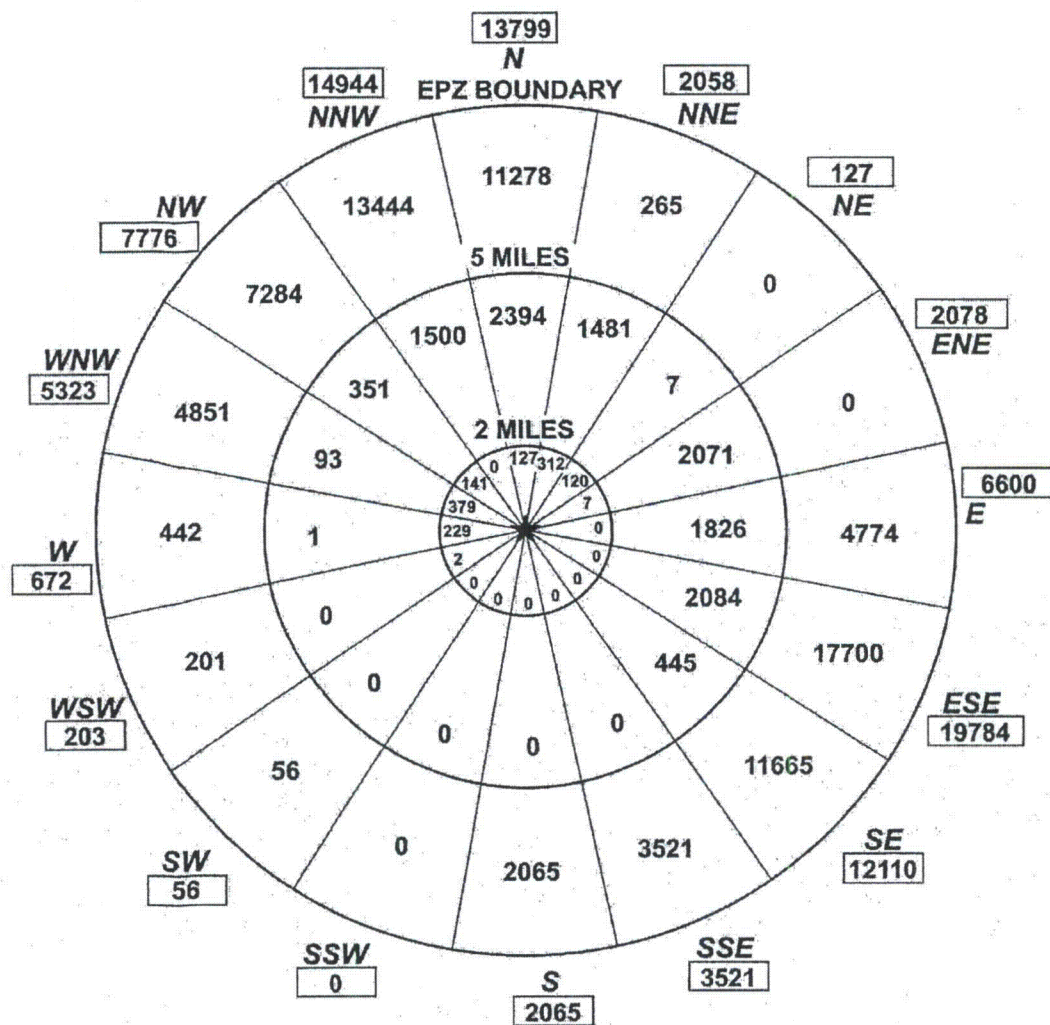
W3 SES EMERGENCY PLAN

FIGURE 2-3

WATERFORD 3 SITE



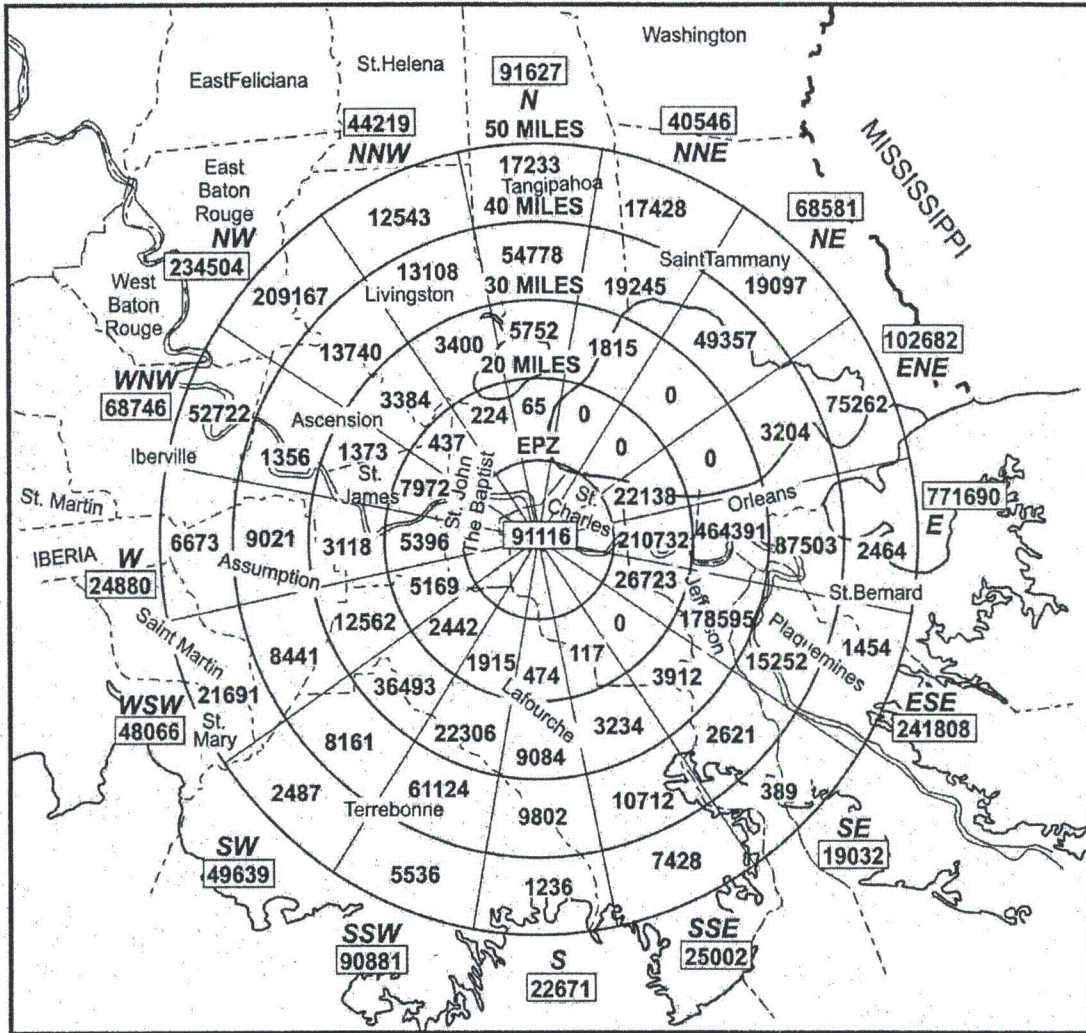
**W3 SES EMERGENCY PLAN
FIGURE 2-4
PERMANENT RESIDENTS WITHIN 10 MILE EPZ**



91116
TOTAL SEGMENT POPULATION
0 TO EPZ BOUNDARY

POPULATION TOTALS			
RING	RING POPULATION	TOTAL	CUMULATIVE POPULATION
0-2 MI	1317	2 MI	1317
2-5 MI	12253	5 MI	13570
5-EPZ	77546	EPZ	91116

**W3SES EMERGENCY PLAN
FIGURE 2-5
PERMANENT RESIDENTS WITHIN 50 MILE EPZ**

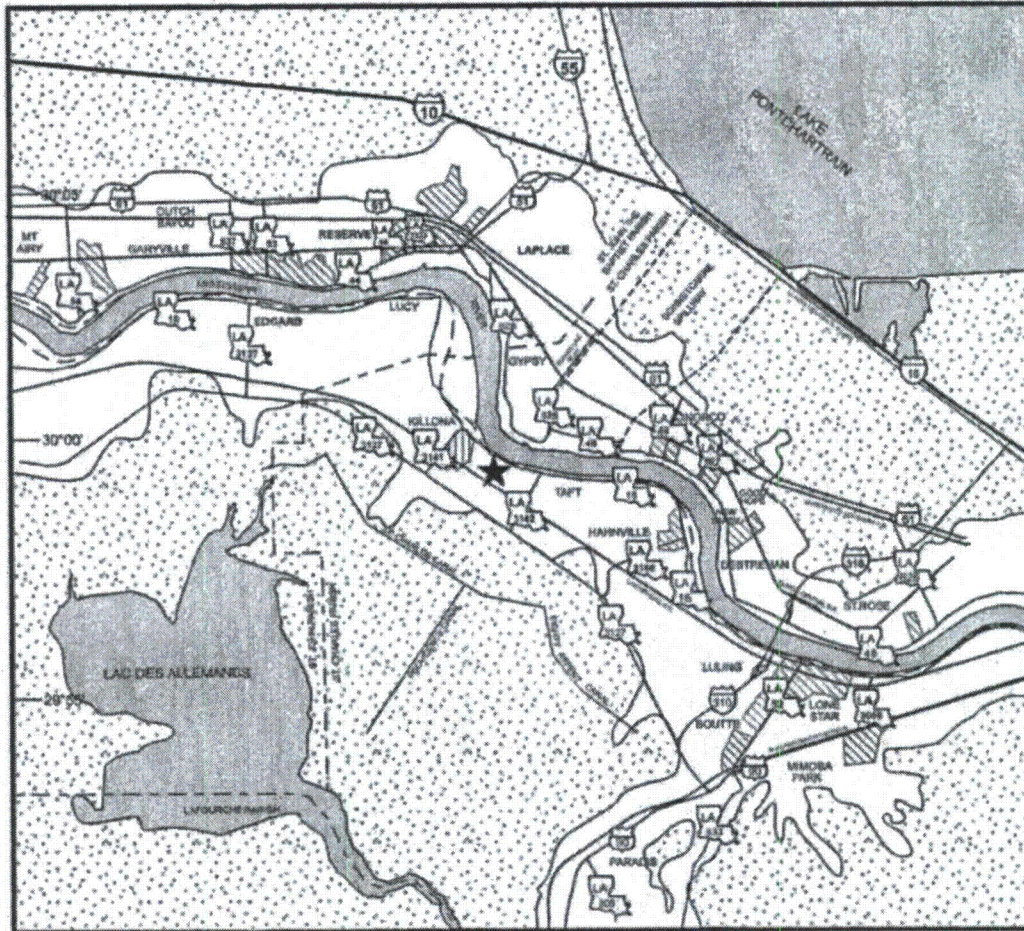


1944574
TOTAL SEGMENT POPULATION
0 TO 50 MILES

POPULATION TOTALS

RING	RING POPULATION	CUMULATIVE POPULATION
0-10 (EPZ)	91116	91116
10-20	283804	374920
20-30	749419	1124339
30-40	367425	1491764
40-50	452810	1944574

W3 SES EMERGENCY PLAN
FIGURE 2-6
THE REGION WITHIN 10 MILES OF WATERFORD 3

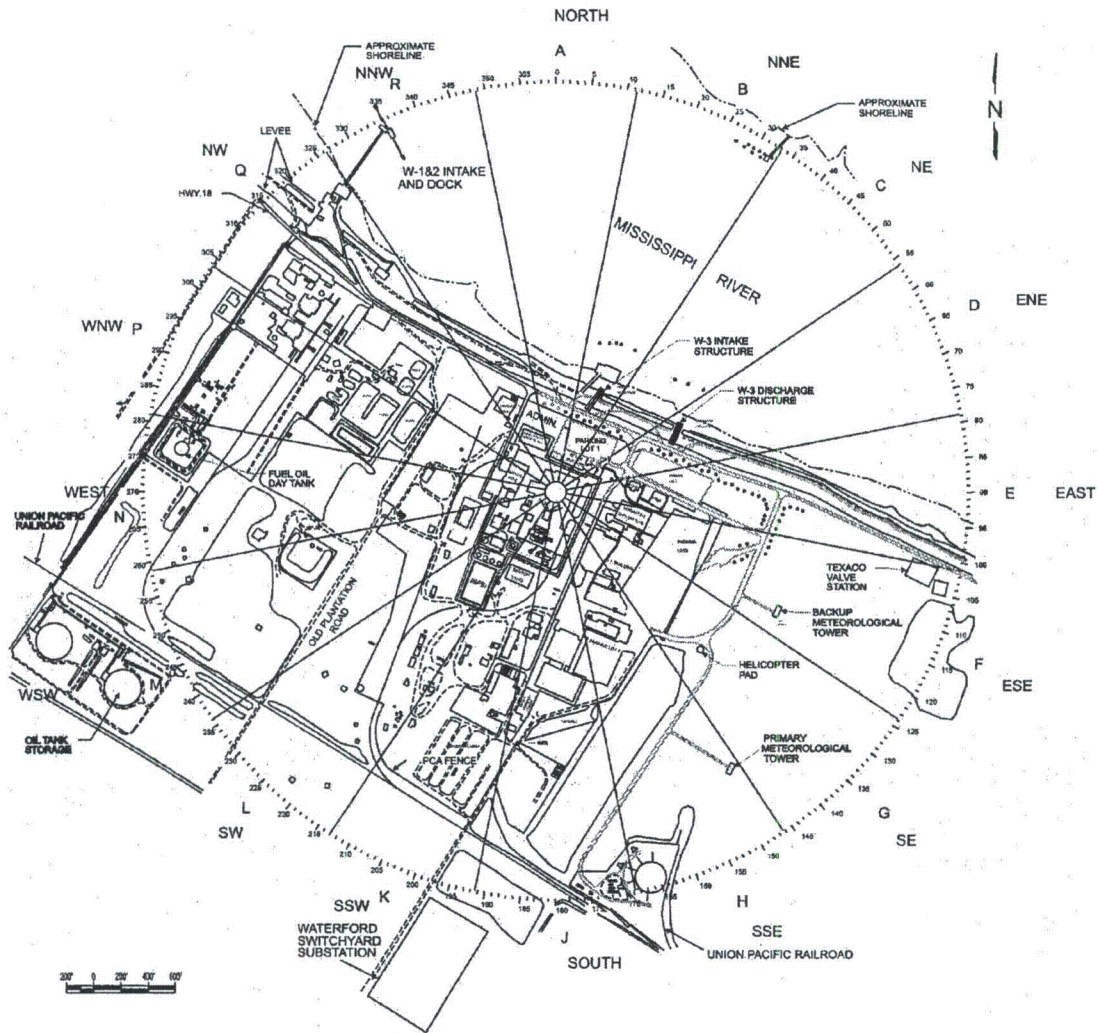


- LEGEND**
- ★ WATERFORD 3 SITE
 - ROADS
 - ▨ SETTLED AREAS
 - - - LEVEES
 - WATER BODIES
 - - - PARISH BOUNDARIES
 - ▤ WET LANDS

THE REGION WITHIN 50 MILES OF WATERFORD 3



W3 SES EMERGENCY PLAN
FIGURE 2-8
EXCLUSION AREA BOUNDARY
(EMERGENCY PLANNING SITE BOUNDARY)



WATERFORD 3 SES EMERGENCY PLAN

3.0 SUMMARY OF THE EMERGENCY PLANNING PROGRAM

The W3SES Emergency Planning Program consists of three coordinated documents. A description of each document, and a content outline of the Emergency Plan and Implementing Document are listed below.

Final Safety Analysis Report Section 13.3. This document clearly states Entergy Operations, Inc. policies and commitments to nuclear accident response, satisfying submittal requirements of 10CFR50.34, and Appendix E to 10CFR50.

Emergency Plan This document establishes the concepts, evaluation and assessment criteria and protective actions necessary in order to limit and mitigate the consequences of potential or actual emergencies. It incorporates necessary prearrangements, direction and organizations to mitigate the consequences of a W3SES emergency in order to protect the health and safety of the general public and site personnel.

a. Emergency Plan content

In general the Emergency Plan contains information concerning:

1. Detection of an emergency.
2. Classification of an emergency.
3. Notification of responding organizations.
4. Activation of responding organizations.
5. Assessment actions.
6. Protective actions.
7. Corrective actions.
8. Rescue and reentry operations.
9. Recovery operations.
10. Emergency preparedness maintenance.

Emergency Plan Implementing Document. These documents provide detailed significant information for the use of the various emergency response and maintenance organizations. Also, it consolidates and integrates specific material detailed in such documents as the Waterford 3 Emergency Plan, and State and Parish Emergency Plans.

a. Implementing Document Content

In general the Implementing Document provides procedures or instructions which describe:

1. The criteria or specific emergency action levels to be used to recognize and declare each emergency classification.
2. W3SES emergency communications and notifications system.

WATERFORD 3 SES EMERGENCY PLAN

3.0 (Cont'd.)

3. Emergency actions to be taken by appropriate plant personnel to assess the emergency conditions and provide steps to be taken to correct and/or mitigate the situation.
4. Detailed emergency organizations, duties and responsibilities of essential personnel, facilities, equipment, etc., necessary to implement the Emergency Plan.
5. Actions to be taken for emergency assistance.
6. Actions necessary to maintain a state of emergency readiness.

3.1 Classification and Implementation

3.1.1 Emergency Classifications

Emergencies are grouped into a four-level, mutually exclusive classification scheme. The four classes of emergencies are: (1) Unusual Event, (2) Alert, (3) Site Area Emergency and (4) General Emergency.

Section 4.0 contains a more detailed discussion of the classifications of emergencies. It also contains examples of specific initiating emergency conditions and emergency action levels.

3.1.2 Implementation

The Emergency Plan establishes an organization capable of responding to the entire spectrum of emergencies from minor localized emergencies to major emergencies involving action by the offsite response agencies. Implementation of the Emergency Plan and its associated Implementing Document is accomplished through organizational control and coordination of emergency response organizations. Provisions are made for rapid notification of appropriate portions of the response organization and for expanding the response organization if the situation dictates.

3.1.2.1 Emergency Coordination - Initial

Initial authority and responsibility to coordinate the implementation of the Emergency Plan is with the Shift Manager (SM) who becomes the Emergency Director (ED). The SM also has the responsibility and authority for coordinating all emergency management activities until relieved by the EOF Emergency Director, who then becomes the ED.

Upon arrival of the Duty EOF Emergency Director, the overall authority and responsibility to coordinate the implementation of the Emergency Plan are transferred from the SM to the Duty EOF Emergency Director. The Duty EOF Emergency Director, as the Emergency Director, has the responsibility and authority for coordinating all emergency management activities. Onsite responsibilities are carried out by the Emergency Plant Manager who reports to the Emergency Director. Responsibilities of the Emergency Director include:

WATERFORD 3 SES EMERGENCY PLAN

3.1.2.1 (Cont'd.)

- a. Accident Assessment - Assessment is based on plant systems, data, effluent parameter values, other specific information and judgment of the Emergency Plant Manager who reports to the Emergency Director. It also considers reports from emergency teams and from supporting organizations which continue throughout the emergency.
- b. Accident Control - The normal operating organization is initially responsible for implementing emergency actions in accordance with assigned response functions. Emergency response functions are also assigned to additional plant staff personnel who are rapidly alerted and mobilized to augment, or relieve, the operating personnel of emergency duties as deemed appropriate by the Emergency Plant Manager who reports to the Emergency Director and in accordance with the Emergency Plan Implementing Procedures.
- c. Personnel Protection - Every effort will be made to minimize the risk to persons onsite and offsite.

- (1) Onsite - Personnel will be evacuated from any high radiation or hazardous area.

Personnel entering high radiation areas to perform emergency functions will utilize appropriate radiation protection equipment, and exposure will be as low as reasonably achievable. The Emergency Plant Manager and Emergency Director are responsible for authorizing emergency workers to receive doses in excess of 10CFR20 limits and, to the extent practicable, coordinating with the NRC prior to issuing such authorization.

Onsite facilities are available for monitoring, decontamination, and first aid. In addition, special arrangements have been made with local hospitals for the treatment of injured and/or contaminated or overexposed personnel.

- (2) Offsite - When an event occurs which falls within one of the four emergency classes described in Section 3.1.1, Louisiana Department of Environmental Quality (LDEQ), Governor's Office of Homeland Security & Emergency Preparedness (GOHSEP) and the risk parishes (St. Charles and St. John the Baptist) Office of Emergency Preparedness will be contacted and appropriate protective action recommendations made.

If protective actions for the public are in order, the Emergency Director will make appropriate recommendations to the risk parishes (St. Charles and St. John the Baptist), the Governor's Office of Homeland Security & Emergency Preparedness and the Louisiana Department of Environmental Quality.

WATERFORD 3 SES EMERGENCY PLAN

3.1.2.2 Emergency Coordination - Support

When required, additional support is provided by the Waterford 3 Nearsite Emergency Organization, which is responsible for coordinating offsite emergency management activities and providing or obtaining assistance for the Waterford 3 Onsite Emergency Organization.

The Emergency Director directs the Nearsite Emergency Organization. He is responsible for activating and directing the Emergency Operations Facility and ensuring that the functional groups provide a coordinated response in support of the Onsite Emergency Organization.

3.1.2.3 Offsite Agency Support

The Emergency Director is initially responsible for notifying and coordinating the response of the local services support groups and agencies.

When the emergency situation warrants, the EOF Emergency Director will declare the Emergency Operations Facility operational and assume the responsibility for offsite agency coordination.

The Secretary of the Department of Environmental Quality, through the Louisiana Department of Environmental Quality (LDEQ), is responsible for recommendation of the necessary protective actions specified in the State of Louisiana Peacetime Radiological Response Plan and its Waterford 3 Attachment, including notification and coordination of Federal, State and local assistance agencies.

Section 5.0 contains a more detailed description of the duties and responsibilities of the above organizations and individuals.

- 3.2 **Response Actions** - Specific measures are taken for each of the four classes of emergency defined in Section 4.0 of this plan. The performance of these emergency measures follows a predetermined logic. In all cases, emergency measures begin with recognition, assessment and declaration of the emergency. This includes prompt action to evaluate any potential risk to public health and safety. Notification and activation of onsite and offsite response organizations follows. Upon notification, Utility response organizations have the capability to immediately support and perform tasks delineated in the Implementing Document, while offsite response organizations have the authority and capability to take immediate predetermined actions based on Utility information and recommendations. Detailed explanations of emergency measures for both onsite and offsite organizations are found in Section 6.0 of this Emergency Plan.
- 3.3 **Recovery Actions** - Recovery actions are directed toward restoring the plant to pre-emergency conditions once corrective and protective actions have established control of the emergency situation. A recovery organization will be established by combining resources of both onsite and offsite emergency organizations. The structure of this organization will be determined by the nature and magnitude of the emergency. For example, for events of a minor nature, normal plant organizations may be adequate, whereas a significantly larger event may require Federal and private support. Detailed explanations of Recovery concepts are found in Section 9.0 of this Emergency Plan.
- 3.4 **Maintenance of the Planning Program** - Planning program maintenance consists of mechanisms designed to ensure a high state of emergency preparedness. All aspects of onsite and offsite response are regularly reviewed and tested in accordance with appropriate procedures and applicable State and Federal regulations.

WATERFORD 3 SES EMERGENCY PLAN

3.4 (Cont'd)

Almost all of the various departments at W3SES are involved in the planning program maintenance mechanism. The Vice President, Operations, Waterford 3, however, has ultimate responsibility for Emergency Plan management and direction. Actual maintenance coordination is the responsibility of the Emergency Planning Coordinator. He shall ensure, as a minimum, the following:

1. Emergency Plan and Implementing Document are reviewed on an "on-going basis."
2. Emergency Plan, Implementing Document and FSAR Section 13.3 are reviewed for correctness and compliance with applicable State and Federal regulations at least annually.
3. Ensure NRC review of revisions, as required.
4. Ensure a comprehensive training program is maintained for all onsite and offsite response personnel.
5. All emergency-oriented equipment, emergency kits, communications devices, radiation monitoring devices, designated vehicles, etc., are complete, maintained in operating condition, and calibrated where necessary.
6. Practice drills are held on a regular basis, in order to perform training and locate deficiencies.
7. Communications links are tested at required intervals.
8. Offsite warning systems are tested at required intervals and are maintained in operating condition.
9. Letters of agreement between the Utility and offsite agencies/organizations are reconfirmed annually.
10. A review/audit of emergency preparedness is conducted by persons who have no direct responsibility for the implementation of the emergency preparedness program. A review will be performed as necessary, based on an assessment by the licensee against performance indicators, and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect emergency preparedness, but no longer than 12 months after the change. In any case, all elements of the emergency preparedness program must be reviewed at least once every 24 months.

All deficiencies found during inventories, inspections, drills, audits, etc., will either be resolved immediately or documented for corrective action by the Emergency Planning Coordinator. A report of each inventory, inspection, drill, audit, etc., including documented deficiencies will be prepared and reviewed by the Emergency Planning Coordinator (or designee). As required by the Emergency Plan Supporting Procedures, the Emergency Planning Coordinator will submit appropriate reports to management. Cognizant department heads will assign personnel to correct deficiencies and shall ensure that corrective actions are initiated within 30 days of the assignment of the deficiency to their department.

The Emergency Planning Coordinator shall ensure all elements of the onsite and offsite emergency organization receive the appropriate controlled revisions to the Emergency Plan and Implementing Document in a timely manner.

WATERFORD 3 SES EMERGENCY PLAN

4.0 CLASSIFICATION OF EMERGENCIES

For the purpose of classifying emergencies, Waterford 3 and the State of Louisiana utilize a method outlined in NEI 99-01, in which emergencies are grouped into a four-level response scheme. This approach to classification has been expanded and detailed to encompass the entire spectrum of possible emergency situations that may arise at Waterford 3. Each of the four classifications is associated with a particular set of immediate actions to be taken. The Waterford-3 Emergency Action Levels are reviewed with State and Parish authorities on an annual basis.

The four emergency classes are: (1) Unusual Event, (2) Alert, (3) Site Area Emergency and (4) General Emergency. Each represents a predetermined response approach, for both onsite as well as offsite personnel and for agencies, consistent with Federal guidelines for minimum level protective action mobilization.

The emergency classifications have not been selected so as to infer any immediate need to implement protective actions, but rather to ensure that adequate time is available to confirm in-plant readings through implementation of assessment measures. However, distinct ties between the emergency classification scheme and protective action recommendations to offsite agencies at a General Emergency are found in the Implementing Procedures. Dose assessment values, along with other plant status assessment findings, are reported to offsite officials as inputs for their decision methodology relating to whether protective actions for the public are to be implemented. The plant method for relating radionuclide releases to protective action guidelines (PAGs) is specified in the Emergency Plan Implementing Procedures.

Waterford-3 maintains the capability to assess, classify and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an emergency action level has been exceeded. Additionally, personnel are trained to promptly declare the emergency condition as soon as possible following identification of the appropriate emergency classification level.

4.1 Waterford 3 Classification System

The four emergency classes for Waterford 3 are as stated above: Unusual Event, Alert, Site Area Emergency and General Emergency. Each classification is characterized by Initiating Conditions (ICs). ICs consist of plant conditions and specific plant parameters (i.e., instrument readings and system status indications, etc.) that are used to denote the emergency classification and require the implementation of emergency measures such as notifications and mobilization of resources.

Generally, the ICs pertain to degradation of the reactor coolant system and/or its safety-related systems. Many of the ICs refer to the plant Technical Specifications or are based on problems arising within the Protected Area or vital areas.

Many accidents may be classified at first in a lower category and then escalated to a higher classification if the situation deteriorates; however, a conservative philosophy for classification is used to declare the highest classification for which an IC has been exceeded. For example, a Site Area Emergency is declared immediately if a Site Area Emergency IC is exceeded, without having previously declared an Unusual Event or Alert. Also, following the restoration of normal plant conditions from an upper grade emergency, declassification of the emergency should take place with an associated reduction in the emergency response organizations.

The classification system for Waterford 3 is intended to provide early and prompt notification of events which could lead to serious consequences, both onsite and/or offsite, such that appropriate response actions can be taken.

WATERFORD 3 SES EMERGENCY PLAN

4.1.1 Unusual Event

This classification is characterized by events in progress or which have occurred indicating a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

Its purpose is to: (1) ensure that the first step in any response later found to be necessary has been carried out (i.e., offsite notification), (2) bring the operating staff to a state of readiness and (3) provide systematic handling of Unusual Event information traffic and decision-making.

The occurrence of an Unusual Event normally involves only response from the plant staff personnel, but can involve assistance from offsite groups such as medical facilities, law enforcement agencies and fire departments. Agreements have been reached with these groups to provide assistance, if required. The Louisiana Department of Environmental Quality, Governor's Office of Homeland Security & Emergency Preparedness, St. Charles Parish, St. John the Baptist Parish and NRC would receive notification of an Unusual Event.

The initiating conditions are listed in Table 4-1; however, the Shift Manager can declare an Unusual Event if in his judgment the plant status warrants such a declaration. Training stresses the need to analyze all minor events in the light of their potential for further degradation of the level of safety of the plant and not to hesitate to declare this particular emergency class.

Actions to be taken for this emergency class are described in detail in Section 6.0 of this plan.

4.1.2 Alert

This classification is characterized by events in progress or which have occurred involving an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of hostile action. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.

Its purpose is to: (1) assure that emergency personnel are readily available to respond if the situation becomes more serious, or available to perform confirmatory radiation monitoring if required, and (2) provide offsite authorities current status information.

An Alert involves activation of the Onsite Emergency Organization and the Nearsite Emergency Organization. The Louisiana Department of Environmental Quality, Governor's Office of Homeland Security & Emergency Preparedness, St. Charles Parish, St. John the Baptist Parish, NRC and other offsite agencies would be notified. Agreements have been reached with these offsite groups to provide assistance, if required.

The initiating conditions are listed in Table 4-1; however, the Shift Manager/Emergency Director can declare an Alert if in his judgment the plant status warrants such a declaration. The Emergency Director specifically considers escalation from the Unusual Event to the Alert class if, in his judgment, the situation is not likely to be resolved rapidly or it is likely to deteriorate.

WATERFORD 3 SES EMERGENCY PLAN

4.1.3 Site Area Emergency

This classification is characterized by events in progress or which have occurred involving actual or likely major failures of plant functions needed for protection of the public or security events that results in intentional damage or malicious acts; 1) toward site personnel or equipment that could lead to the likely failure of or; 2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.

Its purpose is to: (1) ensure that response centers are manned; (2) ensure that monitoring teams are dispatched, as appropriate; (3) ensure that personnel required for evacuation of nearsite areas are at duty stations, if the situation becomes more serious; (4) provide consultation with offsite authorities; and (5) provide updates for the public through offsite authorities.

A Site Area Emergency involves response from all Waterford 3 emergency organizations as well as assistance from other offsite organizations. The Louisiana Department of Environmental Quality, Governor's Office of Homeland Security & Emergency Preparedness, St. Charles Parish, St. John the Baptist Parish, NRC and other offsite agencies would be notified. The initiating conditions are listed in Table 4-1; however, the Emergency Director, when the EOF becomes operational and responsibility is transferred, declares a Site Area Emergency when in his judgment plant conditions exist that warrant the activation of emergency response centers and precautionary public notification.

4.1.4 General Emergency

This classification is characterized by events in progress or which have occurred involving actual or imminent substantial core degradation or melting with potential for loss of containment integrity or security events that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

Its purpose is to: (1) initiate predetermined protective actions for the public, (2) provide continuous assessment of the information from licensee and offsite organization measurements, (3) initiate additional measures as indicated by actual or potential releases, (4) provide consultation with offsite authorities and (5) provide updates for the public through offsite authorities.

A General Emergency involves response from offsite agencies in accordance with the Louisiana Peacetime Radiological Response Plan. The Louisiana Department of Environmental Quality, Governor's Office of Homeland Security & Emergency Preparedness, St. Charles Parish, St. John the Baptist Parish, NRC, and other offsite agencies will be notified. The Nearsite Emergency Organization response would be as described in Section 6.0.

The initiating conditions are listed in Table 4-1; however, the EOF Emergency Director, when the EOF becomes operational and responsibility is transferred, declares a General Emergency if in his judgment the plant status warrants such a declaration.

WATERFORD 3 SES EMERGENCY PLAN

4.2 State and Parish Classification System

The State of Louisiana, St. Charles Parish, and St. John the Baptist Parish within the 10-mile Emergency Planning Zone of Waterford 3 use the same system to classify incidents from a fixed nuclear reactor facility as the one described above for Waterford 3 (i.e., Unusual Event, Alert, Site Area Emergency and General Emergency).

They are correlated to the EPA Protective Action Guidelines, and in a sense mainly apply to radiological offsite emergencies. However, response actions developed for this category of emergency may enhance and even improve upon response capabilities of the State and local governments for other types of emergencies that may occur.

The State of Louisiana has prepared a Peacetime Radiological Response Plan that in its entirety is a supplement to the Louisiana Emergency Operations Plan. The Louisiana Peacetime Radiological Response Plan - Attachment 1, maintained as a separate document, is site-specific to Waterford 3 and is intended to provide offsite coordination of emergency response.

4.3 Spectrum of Postulated Accidents

A broad range of possible off-normal and accident conditions has been postulated and taken into consideration in deriving response actions to occur at the Waterford site. These include radiological and non-radiological events that range from minor occurrences, which may be anticipated during the life of the plant, to highly improbable events, which could affect members of the general public.

Chapter 15 of the Waterford 3 Steam Electric Station Final Safety Analysis Report (FSAR) contains a summary of the events that have been postulated for the site.

4.3.1 Classification of Postulated Accidents

The events postulated in Chapter 15 of the Waterford 3 Steam Electric Station FSAR may be categorized by one of the four emergency classifications. In many cases, the classification assigned initially may undergo escalation to the next higher classification depending on the severity of the accident. A complete discussion of these events may be found in the FSAR.

The operating shift personnel under the direction of the Shift Manager perform the initial assessment and classification of potential in-plant and offsite consequences. These assessment times should last no longer than 15 minutes. The shift personnel then activate the Onsite Emergency Organization in accordance with the level of emergency response required, thereby providing additional manpower as the emergency evolves.

WATERFORD 3 SES EMERGENCY PLAN

4.3.1 (Cont'd.)

Maps indicating the EAB, 10-mile EPZ, and the 50-mile EPZ are included in Section 7 of the Emergency Plan. Table 4-3 relates these accidents to detection capabilities.

4.3.2 Detection of Postulated Accidents

The detection of abnormal conditions, abnormal situations and accidents by station personnel may be a result of alarms, instrumentation readings, activation of interlocks, offsite information, personal observation, recognition through experience or a combination thereof. The first person to detect such conditions has been trained to immediately notify the Shift Manager who is charged with the responsibility for initial evaluation and classification of the emergency.

Table 4-4 lists hypothesized accidents, and the important instrumentation that is utilized to detect each of the various classifications of accidents.

4.3.3 Toxic Chemical Releases

A comprehensive evaluation of the quantities and location of toxic chemicals stored or transported in the vicinity of the site has been performed and presented in detail in Section 2.2 of the FSAR. Approximately 200 sources of potentially toxic chemicals were identified. An analysis to determine the possible concentration of these chemicals that would occur onsite and in the Control Room as a result of a postulated release to the environment was performed. The analysis included an estimate of the concentration onsite and in the Control Room as a function of time after release for a broad range of meteorological conditions.

For those chemicals which are presented in Table 2.2.4 of the FSAR, special design and/or emergency planning provisions have been made to: (1) ensure the safety of workers, and (2) ensure the habitability of the Control Room. For those events where the acute toxicity limits could be exceeded in the Control Room and the time between human detection and the acute toxicity limits is less than two minutes, special design provisions for automatic Control Room isolation and monitoring of the toxic chemicals have been provided. Only sources of chlorine and anhydrous ammonia have this potential, and both chlorine and ammonia detectors have been provided which can automatically isolate the Control Room and record chemical concentrations at their locations. The detectors and their mode of operation are described in subsection 6.4.4.2 of the FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-1

SUMMARY OF INITIATING CONDITIONS

Category A – Abnormal Radiation Levels/Radiological Effluents

This category encompasses the spectrum of potential uncontrolled radionuclide releases via liquid or gaseous effluents for all modes of operation. It also includes other incidents related to high levels of radioactivity, but which may not result in a release to the environment. Potential sources of radionuclide releases are from the Reactor Auxiliary Building (RAB), Reactor Containment Building (RCB) and Fuel Handling Building (FHB). Monitored gaseous release paths include the plant vent stack, FHB exhaust plenums and secondary steam piping. Monitored liquid release paths include the liquid waste management discharge, circulating water discharge, dry cooling tower sumps and industrial waste sump. The ICs within this category are keyed to Radiation Monitoring System (RMS) indications, radiological survey results and offsite dose assessment calculations.

The initiating conditions within this category are as follows:

UNUSUAL EVENT

1. Any release of gaseous or liquid radioactivity to the environment > 2 times the radiological effluent ODCM limits for ≥ 60 minutes.
2. Unplanned rise in plant radiation levels.

ALERT

1. Any release of gaseous or liquid radioactivity to the environment > 200 times the radiological effluent ODCM limits for ≥ 15 minutes.
2. Damage to irradiated fuel or loss of water level that has resulted or will result in uncovering of irradiated fuel outside the reactor vessel.
3. Rise in radiation levels within the facility that impedes operation of systems required to maintain plant safety functions.

SITE AREA EMERGENCY

1. Offsite dose resulting from an actual or imminent release of gaseous radioactivity > 100 mR TEDE or 500 mR CDE Thyroid for the actual or projected duration of the release.

GENERAL EMERGENCY

1. Offsite dose resulting from an actual or imminent release of gaseous radioactivity > 1000 mR TEDE or 5000 mR CDE Thyroid for the actual or projected duration of the release using actual meteorology.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-1 (Continued)

SUMMARY OF INITIATING CONDITIONS

CATEGORY C – Cold Shutdown/Refueling System Malfunction

This category encompasses the spectrum of events related to the reactor and its supporting systems that may occur in the shutdown and refueling modes. These include RCS leakage and loss of reactor vessel inventory events as well as those events dealing with power losses.

This category also encompasses events that directly affect the integrity of the reactor core when in cold shutdown or refueling. This includes inadvertent criticality and loss of decay heat removal capability.

The initiating conditions within this category are as follows:

UNUSUAL EVENT

1. RCS leakage.
2. Unplanned loss of RCS/reactor vessel inventory.
3. Unplanned loss of decay heat removal capability with irradiated fuel in the reactor vessel.
4. AC power capability to safety busses reduced to a single power source ≥ 15 minutes such that any additional single failure would result in station blackout.
5. Loss of required DC power ≥ 15 minutes.
6. Inadvertent criticality.
7. Loss of all onsite or offsite communications capabilities.

ALERT

1. Loss of RCS/reactor vessel inventory.
2. Inability to maintain plant in cold shutdown.
3. Loss of all offsite and all onsite AC power to safety busses ≥ 15 minutes.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-1 (Continued)

SUMMARY OF INITIATING CONDITIONS

CATEGORY C – Cold Shutdown/Refueling System Malfunction (Cont'd)

SITE AREA EMERGENCY

1. Loss of RCS/reactor vessel inventory affecting core decay heat removal capability.

GENERAL EMERGENCY

1. Loss of RCS/reactor vessel inventory affecting fuel clad integrity with containment challenged.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-1 (Continued)

SUMMARY OF INITIATING CONDITIONS

CATEGORY E – ISFSI Malfunction

This category addresses events of sufficient magnitude that a loaded spent fuel dry cask storage confinement boundary is damaged or violated.

UNUSUAL EVENT

1. Damage to a loaded cask confinement boundary.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-1 (Continued)

SUMMARY OF INITIATING CONDITIONS

CATEGORY F – Fission Product Barrier Degradation

This category addresses losses and potential losses of the three fission product barriers – fuel clad, RCS and containment. The category is designed for events in the power operations, startup, hot standby and hot shutdown modes of operation.

The initiating conditions within this category are as follows:

UNUSUAL EVENT

1. Any Loss or any potential loss of containment.

ALERT

1. Any Loss or any potential loss of either fuel clad or RCS.

SITE AREA EMERGENCY

1. Loss or potential loss of any two barriers.

GENERAL EMERGENCY

1. Loss of any two barriers and loss or potential loss of the third barrier.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-1 (Continued)

SUMMARY OF INITIATING CONDITIONS

CATEGORY H - Hazards and Other Conditions Affecting Plant Safety

This category encompasses the spectrum of man-caused or non-naturally occurring hazards that jeopardize the level of safety of the plant in all modes of operation. The ICs are keyed to offsite notifications or personal observation and assessment.

This category also encompasses the spectrum of naturally occurring events that jeopardize the level of safety of the plant. The ICs are keyed to specific instrument indications, offsite notifications or personal observation and assessment.

This category also encompasses the spectrum of security infractions as addressed in the Security Contingency Plan. The ICs are keyed to notification from the security force or another credible source of a site specific credible threat.

This category is the location for the miscellaneous ICs that are provided to allow for Emergency Director judgment classifications.

The initiating conditions within this category are as follows:

UNUSUAL EVENT

1. Confirmed security condition or threat which indicates a potential degradation in the level of safety of the plant.
2. Other conditions exist which in the judgment of the Emergency Director warrant declaration of an Unusual Event.
3. Fire within the Protected Area not extinguished within 15 minutes of detection or explosion within the Protected Area.
4. Release of toxic, corrosive, asphyxiant or flammable gases deemed detrimental to normal plant operations.
5. Natural or destructive phenomena affecting the Protected Area.

ALERT

1. Hostile Action within the Owner Controlled Area or airborne attack threat.
2. Other conditions exist which in the judgment of the Emergency Director warrant declaration of an Alert.
3. Control Room evacuation has been initiated.
4. Fire or Explosion affecting the operability of plant safety systems required to establish or maintain safe shutdown.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-1 (Continued)

SUMMARY OF INITIATING CONDITIONS

CATEGORY H - Hazards and Other Conditions Affecting Plant Safety (Cont'd)

ALERT (Cont'd)

5. Access to a Vital Area is prohibited due to toxic, corrosive, asphyxiant or flammable gases which jeopardize operation of operable equipment required to maintain safe operations or safely shutdown the reactor.
6. Natural or destructive phenomena affecting Vital Areas.

SITE AREA EMERGENCY

1. Hostile Action within the Protected Area.
2. Other conditions exist which in the judgment of the Emergency Director warrant declaration of a Site Area Emergency.
3. Control Room evacuation has been initiated and plant control cannot be established.

GENERAL EMERGENCY

1. Hostile Action resulting in loss of physical control of the facility.
2. Other conditions exist which in the judgment of the Emergency Director warrant declaration of a General Emergency.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-1 (Continued)

SUMMARY OF INITIATING CONDITIONS

CATEGORY S – System Malfunction

This category encompasses the spectrum of events related to the reactor and its supporting systems that may occur in the power operations, startup, hot standby and hot shutdown operating modes. In general, the ICs relate to equipment or system malfunctions or failures. The ICs include RCS leakage, loss of Control Room instrument indications and failure of the Reactor Protection System as well as those events dealing with power losses. This category also includes inadvertent criticality and loss of decay heat removal capability ICs.

The initiating conditions within this category are as follows:

UNUSUAL EVENT

1. Loss of all offsite AC power to safety busses \geq 15 minutes.
2. Unplanned loss of safety system annunciation or indication in the Control Room \geq 15 minutes.
3. RCS Leakage.
4. Loss of all onsite or offsite communications capabilities.
5. Fuel clad degradation.
6. Inadvertent criticality.
7. Inability to reach required operating mode within Technical Specification limits.

ALERT

1. AC power capability to safety busses reduced to a single power source \geq 15 minutes such that any additional single failure would result in station blackout.
2. Automatic trip fails to shutdown the reactor and the manual actions taken from the reactor control console are successful in shutting down the reactor.
3. Unplanned loss of safety system annunciation or indication in the Control Room with either (1) a Significant Transient in progress, or (2) compensatory indicators unavailable.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-1 (Continued)

SUMMARY OF INITIATING CONDITIONS

CATEGORY S – System Malfunction (Continued)

SITE AREA EMERGENCY

1. Loss of all offsite and all onsite AC power to safety busses \geq 15 minutes.
2. Automatic trip fails to shutdown the reactor and manual actions taken from the reactor control console are not successful in shutting down the reactor.
3. Loss of all vital DC power \geq 15 minutes.
4. Inability to monitor a Significant Transient in progress.

GENERAL EMERGENCY

1. Prolonged loss of all offsite and all onsite AC power to safety busses.
2. Automatic trip and all manual actions fail to shutdown the reactor and indication of an extreme challenge to the ability to cool the core exists.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-2

EXCLUSION AREA BOUNDARY CALCULATED EXPOSURES

Information which resided here in earlier revisions has been deleted. This information is located in the Waterford 3 FSAR Chapter 15.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-3
MONITORS

Event. FSAR Accidents	Type	Range	Function	Readout Location	Location	Isotopic Concentrations or Dose Rate at Monitor Location
1. Increase in Heat Removal by the Secondary System						
a) Inadvertent opening of a Steam Generator Atmospheric Dump Valve and concurrent loss of offsite power	Main Steam Line Monitors	1 - 10 ⁵ mR/hr	Monitor Main Steam Activity. Alarm in Control Room.	Alarm and continuously records in Control Room.	On +46 MSL upstream of Atmospheric Dump Valves and Relief Valves.	10 mR/hr (10 ⁴ Ci of noble gas and iodines released from the affected Steam Generator in 0-2 hour period).
b) Steam System Piping Failure with Concurrent Loss of Offsite Power and Iodine Spike	Main Steam Line Monitors	1 - 10 ⁵ mR/hr	Monitor Main Steam Activity. Alarm in Control Room.	Alarm and continuously records in Control Room.	On +46 MSL upstream of Atmospheric Dump Valves and Relief Valves.	10 mR/hr (10 ⁴ Ci of noble gas and iodines released from the affected Steam Generator in 0-2 hour period).
2. Reactivity and Power Distribution Anomalies						
a) Control Element Assembly (CEA) Ejection	1. Area monitors ARM-IRE-5024S through 5027S (see Table 12.3-2 FSAR)	20 to 5 x 10 ⁵ mR/hr	Isolate containment purge.	Continuously record and alarm locally and in Control Room.	On +21 and +46 ft. MSL of containment on outer wall of steam generator shield (see Figures 12.3-6 and 7 of FSAR).	10 ⁸ mR/hr (10 ⁸ Ci mixed in 10 ⁶ ft. ³ with 0.5 MeV/dis and 0.1 finite cloud correction).
	2. SBVS exhaust monitor (same as Plant Stack monitor).	10 ⁻⁷ to 10 ⁻¹ uCi/cc of noble gases; 10 ⁻⁹ to 10 ⁻³ uCi/cc of iodines.	Continuous monitor of plant discharge. Terminate Containment Purge.	Continuously record and alarm locally and in Control Room.	Plant Stack downstream of filters.	10 ⁻¹ uCi/cc of NG 10 ⁻³ uCi/cc of iodines (10 ⁷ Ci of NG and 10 ⁷ Ci of iodines mix in 10 ⁶ ft. ³ and leak at 0.5%/day into an annulus exhaust of 10 ⁴ cfm and DF=100)
	3. Containment Atmosphere Monitors (see Item 1 of Table 12.3-3 of FSAR).	10 ⁻⁷ to 10 ⁻¹ uCi/cc of noble gases; 10 ⁻⁹ to 10 ⁻³ uCi/cc of iodines.	Monitor and record airborne activity. Alarm locally and in Control Room.	Alarm and continuously record in Control Room. Alarm locally.	Continuously draws air sample from containment air, RAB -4 west side wing area.	Noble gases: 300 uCi/cc Iodines: 300 uCi/cc (10 ⁷ Ci of NG and 10 ⁷ Ci of iodines in 10 ⁶ ft. ³ at t=0).
	4. Plant Stack Wide Range Gas Accident Monitor.	10 ⁻⁷ to 10 ⁵ uCi/cc of noble gases.	Monitor Plant Stack Gas activity.	Continuously record and alarm in Control Room.	On +46 MSL Plant Stack downstream of filters.	10 ⁻¹ uCi/cc of NG.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-3 (Continued)
MONITORS

<u>Event</u> <u>FSAR Accidents</u>	<u>Type</u>	<u>Range</u>	<u>Function</u>	<u>Readout</u> <u>Location</u>	<u>Location</u>	<u>Isotopic Concentrations or</u> <u>Dose Rate at Monitor Location</u>
	5. Containment High Range Accident Monitors.	1 - 10 ⁸ R/hr.	Monitor containment accident conditions.	Continuously record and alarm in Control Room.	+99 ft. MSL containment at 90° and 270°.	10 ⁵ R/hr.
3. Decrease in Reactor Coolant System Inventory						
a) Failure of Letdown Line Outside Containment with Spike	1. Area monitors (see Table 12.3-2 of FSAR).	.01 to 1000 mR/hr.	Alarm at 5 mR/hr.	Alarm and continuously record in Control Room. Alarm locally.	-4 ft. MSL in the CVCS area of RAB (see Figure 12.3-3 of FSAR).	3 x 10 ⁵ mR/hr (10 ⁴ Ci in 10 ⁵ ft. ³ and 0.5 MeV/dis and 0.1 finite cloud correction).
	2. Plant Stack effluent monitor.	10 ⁻⁷ to 10 ⁻¹ uCi/cc of noble gases; 10 ⁻⁹ to 10 ⁻³ uCi/cc of iodines.	Continuous Plant Stack effluent monitor. Terminate containment purge.	Alarm and continuously record in Control Room. Alarm locally.	Plant Stack downstream of filters.	Noble gases: 3 uCi/cc Iodines: 0.3 uCi/cc (10 ⁴ Ci of NG and 10 ³ Ci of iodines in 10 ⁵ ft. ³ and no filter).
	3. Airborne duct monitor (see Item 8 of Table 12.3-3 of FSAR).	10 ⁻⁷ to 10 ⁻¹ uCi/cc of noble gases; 10 ⁻⁹ to 10 ⁻³ uCi/cc of iodines.	Alarm at 2 x 10 ⁸ uCi/cc of iodines in RAB.	Alarm and continuously record in Control Room Alarm locally.	RAB monitor B (west of col M-5A, see Figure 12.3-3 of FSAR).	Noble gases: 3 uCi/cc Iodines: 0.3 uCi/cc (same as above).
	4. Plant Stack Wide Range Gas Accident Monitor	10 ⁻⁷ to 10 ⁵ uCi/cc of noble gas.	Monitor Plant Stack Gas activity.	Continuously record and alarm in Control Room.	On +46 MSL Plant Stack downstream of filters.	3 uCi/cc of NG.
b) Loss of Coolant Accident	1. Area Monitors ARM-IRE-5024S to 5027S (see Table 12.3-2 of FSAR).	5 x 10 ⁵ mR/hr	Isolate containment purge.	Alarm and continuously record in Control Room. Alarm locally.	On +46 and +21 ft. MSL of outer wall of steam generator shield (see Figure 12.3-6 and 7 of FSAR).	10 ⁹ mR/hr (10 ⁹ Ci mixed in 10 ⁶ ft. ³ with 0.5 MeV/dis and 0.1 finite cloud correction).
	2. SBVS Exhaust Monitor (same as Plant Stack)	10 ⁻⁷ to 10 ⁻¹ uCi/cc of noble gases; 10 ⁻⁹ to 10 ⁻³ uCi/cc of iodines.	Monitor plant effluent. Terminate containment purge.	Alarm and continuously record in Control Room. Alarm locally.	Plant Stack downstream of filters.	Noble Gases: 10 uCi/cc Iodines: 0.1 uCi/cc (10 ⁹ Ci of NG and iodines in 10 ⁶ ft. ³ and leaking of 0.5%/day into an exhaust of 10 ⁴ cfm through SBVS filters with a DF=100).

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-3 (Continued)
MONITORS

<u>Event</u> <u>FSAR Accidents</u>	<u>Type</u>	<u>Range</u>	<u>Function</u>	<u>Readout</u> <u>Location</u>	<u>Location</u>	<u>Isotopic Concentrations or</u> <u>Dose Rate at Monitor Location</u>
c) Steam Generator Tube Rupture	3. Containment Atmosphere Monitors (see Item 1, Table 12.3-3 of FSAR).	10^{-7} to 10^{-1} uCi/cc of noble gases; 10^{-9} to 10^{-3} uCi/cc of iodines.	Monitor airborne activity. Alarm locally and in Control Room.	Alarm and continuously record in Control Room. Alarm locally.	Continuously draws air sample from containment air, RAB -4 west side wing area.	Noble Gases: 3×10^4 uCi/cc Iodines: 3×10^4 uCi/cc (10^9 of NG and iodines in 10^6 ft. ³ at t=0).
	4. Plant Stack Wide Range Gas Accident Monitor.	10^{-7} to 10^5 uCi/cc of noble gas.	Monitor Plant Stack Gas activity.	Continuously record and alarm in Control Room.	On +46 MSL Plant Stack downstream of filters.	10 uCi/cc of NG.
	5. Containment High Range Accident Monitors	1 - 10^8 R/hr.	Monitor containment accident conditions.	Continuously record and alarm in Control Room.	+99 ft. MSL containment at 90° and 270°.	10^6 R/hr.
	1. Main Steam Line Monitors	1 - 10^5 mR/hr.	Monitor Main Steam activity. Alarm in Control Room.	Alarm and continuously records in Control Room.	On +46 MSL upstream of Atmospheric Dump Valves and Relief Valves.	10 mR/hr (10^4 Ci of NG and Iodines released from the affected steam generator in 0-2 hour period).
	4. Radioactive release from a subsystem or component					
a) Gaseous Radwaste Tank Failure	1. Area monitors ARM-IRE-5022A and 5023 (see Table 12.3-2 of FSAR).	5022A: .1 - 10^4 mR/hr. 5023: .01 - 10^3 mR/hr.	Alarm at 30 mR/hr.	Continuously record and alarm locally and in Control Room.	Corridors north and west of gas decay tank cubicles, respectively (see Figure 12.3-4).	3×10^6 mR/hr (10^5 Ci in 10^5 ft. ³ with 0.5 MeV/dis and 0.1 finite cloud correction).
	2. Plant Stack effluent monitor.	10^{-7} to 10^{-1} uCi/cc of noble gases; 10^{-9} to 10^{-3} uCi/cc of iodines	Continuous monitor of plant effluent and terminate containment purge.	Continuously record and alarm locally and in Control Room.	Plant Stack downstream of filters.	Noble gases: 30 uCi/cc Iodines: 3×10^{-4} uCi/cc (10^5 Ci of NG and 1 Ci of iodines in 10^5 ft. ³).
	3. RAB airborne radiation duct monitors for noble gases, iodines and particulates Monitor A (See Table 12.3-3 of FSAR).	10^{-7} to 10^{-1} uCi/cc of noble gases; 10^{-9} to 10^{-3} uCi/cc of iodines	Alarm at 1×10^{-4} uCi/cc of noble gases.	Local and Control Room alarm and continuously record.	Located in ductwork of RAB elevation -4 ft. MSL.	Noble gases: 30 uCi/cc Iodines: 3×10^{-4} uCi/cc (10^5 Ci of NG and 1 Ci of iodines in 10^5 ft. ³).

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-3 (Continued)
MONITORS

<u>Event</u> <u>FSAR Accidents</u>	<u>Type</u>	<u>Range</u>	<u>Function</u>	<u>Readout</u> <u>Location</u>	<u>Location</u>	<u>Isotopic Concentrations or</u> <u>Dose Rate at Monitor Location</u>
	4. Plant Stack Wide Range Gas Accident Monitor.	10^{-7} to 10^5 uCi/cc of noble gases.	Monitor Plant Stack Gas activity.	Continuously record and alarm in Control Room.	On +46 MSL Plant Stack downstream of filters.	30 uCi/cc of NG.
b) Failure of Liquid Waste Tank	1. Area Monitor ARM-IRE-5009 (See Table 12.3-2 of FSAR).	.01 - 1000 mR/hr.	Local alarm at 5 mR/hr.	Continuously record and alarm locally and in Control Room.	In RAB, elevation -35 ft. MSL.	60 mR/hr (10 Ci of iodines with a PF = 0.1 and diluted in 10^4 ft. ³ and finite cloud correction of 0.1).
	2. Airborne monitor of activity in ductwork. Monitors for noble gases, iodines and particulates. Monitor A (see Table 12.3-3 of FSAR).	10^{-7} to 10^{-1} uCi/cc of noble gases; 10^{-9} to 10^{-3} uCi/cc of iodines.	Alarm at setpoint of 1×10^{-4} uCi/cc of noble gases.	Alarm and continuously record in Control Room. Alarm locally.	In RAB, elevation -4 ft. MSL.	3×10^{-5} uCi/cc iodines (10 Ci of iodines with a PF = 0.01 in 10^5 ft. ³).
	3. Plant Stack effluent monitor.	10^{-7} to 10^{-1} uCi/cc of noble gases; 10^{-9} to 10^{-3} uCi/cc of iodines.	Continuous monitor of plant discharge. Terminate containment purge.	Alarm and continuously record in Control Room. Alarm locally.	Plant Stack downstream of filters.	3.5×10^{-5} uCi/cc iodines (10 Ci of iodines PF = .01 diluted in 10^5 ft. ³ and no credit for filters.
c) Fuel Handling Accident	1. Area Monitor ARM-IRE-0300.1S, 0300.2S, 0300.3S and 0300.4S (see Table 12.3-2 of FSAR).	.1 - 10^4 mR/hr.	Isolate FHB and start emergency FHB exhaust filters.	Continuously record and alarm locally and in Control Room.	Adjacent to spent fuel pool	3×10^4 mR/hr (10^4 Ci in 10^6 ft. ³ with 0.5 MeV/dis and finite cloud correction of 0.1).
	2. Area monitors ARM-IRE-5010, 5011 and 5012 (see Table 12.3-2 of FSAR).	.01 - 10^3 mR/hr.	Alarm locally at 20, 20 and 30 mR/hr respectively.	Continuously record and alarm locally and in Control Room.	5010 adjacent to spent fuel storage pools; 5011 at new fuel vault; 5012 at fuel pool pump's hall wall near equipment hatch.	3×10^4 mR/hr (10^4 Ci in 10^6 ft. ³ with 0.5 MeV/dis and finite cloud correction of 0.1).

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-3 (Continued)
MONITORS

<u>Event</u> <u>FSAR Accidents</u>	<u>Type</u>	<u>Range</u>	<u>Function</u>	<u>Readout</u> <u>Location</u>	<u>Location</u>	<u>Isotopic Concentrations or</u> <u>Dose Rate at Monitor Location</u>
	3. FHB normal effluent monitor (see Items 3 and 4 of Table 12.3-3 of FSAR). Particulate, iodine and noble gas.	10^{-7} to 10^{-1} uCi/cc of noble gases; 10^{-9} to 10^{-3} uCi/cc of iodines.	Alarm locally and in Control Room.	Alarm and continuously record in Control Room. Alarm locally.	Normal exhaust prior to discharge to atmosphere.	Noble gases: 0.3 uCi/cc Iodines: 4×10^{-3} uCi/cc (10^4 Ci of NG and 10^4 Ci of iodines in pool, DF=100 for iodines and mixed in 10^6 ft ³).
	4. FHB Emergency Exhaust Wide Range Gas Monitor.	10^{-7} to 10^5 uCi/cc of noble gases.	Monitor FHB emergency exhaust activity.	Continuously record and alarm in Control Room.	+1 ft. MSL FHB floor level.	0.3 uCi/cc of NG.

WATERFORD 3 SES EMERGENCY PLAN
TABLE 4-4
INSTRUMENTS FOR ACCIDENT DETECTION

<u>Accident</u>	<u>Instruments</u>	<u>Range*</u>
1. Increase in Heat Removal	1. Power range monitor	0-200% full power
	2. SG pressure	0-1300 psig
	3. RCS cold leg temperature	465-615 °F (narrow) 50-750 °F (wide)
	4. Pressurizer pressure	0-3000 psia (narrow) 0-4000 psia (wide)
	5. Pressurizer level	0-100%
2. Decrease in Heat Removal by the Secondary System	1. SG Downcomer level	0-100%
	2. EFW flow	0-800 gpm
	3. RCS hot leg temperature	525-675 °F (narrow) 50-750 °F (wide)
	4. Power range monitor	0-200% full power
	5. Pressurizer pressure	0-3000 psia (narrow) 0-4000 psia (wide)
	6. Subcooled Margin Monitor	-200 to +50 °F -200 to +200 °F
3. Decrease in Reactor Coolant Flow Rate	1. RCS total flow rate	computer point
	2. Core D/P	0-100 psid
	3. RCP D/P	0-150 psid
	4. SG D/P	0-50 psid
4. Reactivity and Power Distribution Anomalies	1. RCS cold leg temperature	465-615 °F (narrow) 50-750 °F (wide)
	2. RCS hot leg temperature	525-675 °F (narrow) 50-750 °F (wide)
	3. Pressurizer pressure	0-3000 psia (narrow) 0-4000 psia (wide)
	4. Power range monitor	0-200% full power
	5. Neutron flux and rate of change of power	2x10 ⁻⁸ - 200% (LOG) -1 to +7 dpm

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-4 (Continued)

INSTRUMENTS FOR ACCIDENT DETECTION

<u>Accident</u>	<u>Instruments</u>	<u>Range*</u>
4. Reactivity and Power Distribution Anomalies (Cont'd)	6. Axial Shape Index	computer point
	7. Azimuthal Tilt	computer point
	8. Boric Acid Makeup Tank level	0-100%
	9. CEA position (deviation from group average position)	computer point
	10. RCS total flow rate	computer point
	11. RCP D/P	0-150 psid
	12. Pressurizer level	0-100%
	13. CTMT pressure	0-70 psia (narrow) -5-195 psia (wide)
	1. RCS average temperature	computer point
	2. RCS hot leg temperature	525-675 °F (narrow) 50-750 °F (wide)
5. Increase in Reactor Coolant System Inventory	3. Pressurizer pressure	0-3000 psia (narrow) 0-4000 psia (wide)
	4. Pressurizer level	0-100%
	5. Power range monitor	0-200% full power
	6. Equipment status lights	_____
	1. Pressurizer level	0-100%
	2. Pressurizer Relief Line Temperature	0-300 °F
6. Decrease in Reactor Coolant System Inventory	3. Quench Tank	
	Pressure	0-150 psig
	Level	0-100%
	Temperature	50-750 °F
	4. Pressurizer pressure	0-3000 psia (narrow) 0-4000 psia (wide)

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-4 (Continued)

INSTRUMENTS FOR ACCIDENT DETECTION

<u>Accident</u>	<u>Instruments</u>	<u>Range*</u>
6. Decrease in Reactor Coolant System Inventory (Cont'd)	5. Volume Control Tank level	0-100%
	6. Charging System flow	0-150 gpm
	7. Letdown flow	0-150 gpm
	8. CTMT sump level	0-16 feet (narrow) 0-30 feet (wide)
	9. Safety Injection-System	
	Sump level	0-16 feet
	HPSI Header pressure	0-2500 psig
	LPSI Header pressure	0-650 psig
	SIS Tank level	0-100% (wide) 71.2-90.2% (narrow)
	10. Main Steam line high radiation, or condenser exhaust high radiation	computer point
	11. CTMT pressure	
	Narrow range	0-30 psia
	Wide range	0-70 psia
	Wide range	-5-145 psia
	12. RPS reactor/turbine trip	1684 psia
7. Radioactive Release from a Subsystem or Component	13. SG Downcomer level	0-100%
	14. Condenser exhaust radiation monitor	computer point
	15. CTMT radiation monitor	computer point
	1. High radiation on ARMS	Panel CP-14
	2. CTMT radiation monitor	Panel CP-14
	3. CTMT stack air monitor	Panel CP-14
	4. Waste Gas system monitor	Panel CP-14

WATERFORD 3 SES EMERGENCY PLAN

TABLE 4-4 (Continued)

INSTRUMENTS FOR ACCIDENT DETECTION

<u>Accident</u>	<u>Instruments</u>	<u>Range*</u>
7. Radioactive Release from a Subsystem or Component (Cont'd)	5. FHB area exhaust monitor	Panel CP-14
	6. Refueling water storage pool level	0-100%
	7. SG Blowdown line activity monitor	Panel CP-14
8. Anticipated Transients without Scram	1. Reed Switch Position Transmitter	on/off
	2. Diversified Reactor Trip Actuation	0-4000 psig
	3. Diversified Emergency Feedwater Actuation	N/A

* Developed from a review of the installed Control Room instrumentation and the Final Safety Analysis Report, Tables 7.3-2 and 7.5-1, at Waterford 3 Steam Electric Station.

WATERFORD 3 SES EMERGENCY PLAN

5.0 ORGANIZATIONAL CONTROL OF EMERGENCIES

Of paramount importance in response to any emergency situation is a coordinated management approach providing technical and logistical direction to mitigate the consequences of an accident.

The Waterford 3 and Entergy Louisiana, LLC organizational structures are based on staffing the Emergency Facilities, discussed in Section 7.0, to respond to actions in three critical areas:

- Plant Control
- Site Response
- Nearsite/Offsite Response

The responsibilities associated with each Emergency Organization position are defined in this section.

The initial selection of personnel assigned emergency responsibilities is based, as much as possible, on the normal Waterford 3 organization. These are the personnel most knowledgeable of plant systems, personnel and their inter-relationships. The initial selection is followed by specific training in the assigned areas of emergency management as required by Section 8.0 of this document.

5.1 Waterford 3 Organizations

5.1.1 Normal Organizations

The Waterford 3 organization is headed by the Vice President, Operations, Waterford 3, as shown in figure 5-1A. This figure also illustrates that portion of the Waterford 3 organization responsible for monitoring the emergency preparedness program. A more detailed description of the normal Waterford 3 Organization is contained in FSAR Sections 13.1.1 and 13.1.2.

5.1.1.1 Normal Plant Operating Organization

The Normal Plant Operating Organization includes personnel from Plant Operations, Maintenance, Chemistry, Radiation Protection and Security. These personnel are onsite on a 24-hour basis, holidays included.

The Normal Plant Operating Organization is responsible for the day-to-day operation and maintenance associated with the Waterford 3 SES. The Plant Organization is headed by the General Manager Plant Operations who reports to the Vice President, Operations, Waterford 3.

5.1.1.2 Emergency Planning Support

The Entergy Director of Emergency Planning reports to the Senior Vice President, Entergy Nuclear Operations. The Waterford-3 Emergency Planning Manager reports directly to the Director of Emergency Planning. The Waterford-3 Emergency Planning Manager coordinates activities with the Director, Nuclear Safety Assurance who is the head of the Waterford-3 Nuclear Safety Assurance Organization. The Director, Nuclear Safety Assurance reports to the Vice President, Operations, Waterford 3.

WATERFORD 3 SES EMERGENCY PLAN

5.1.2 Emergency Organizations

Response to an abnormal or emergency situation occurs in a three-phase process. The initial immediate actions in response to an emergency are the responsibility of the Onshift Emergency Organization.

The second phase involves response by the Onsite Emergency Organization. In support of the Onshift Emergency Organization, the Onsite Emergency Organization is activated to aid and support the activities initiated by the Onshift Emergency Organization. The activation of additional Onsite personnel is in accordance with Table 5-1.

The third phase involves response by the Nearsite/Offsite organizations. This third response phase is discussed in Sections 5.1.2.3 and 5.1.2.4. Table 5-2 shows the functional responsibilities of the various Waterford 3 and non-Waterford 3 organizations. Table 5-3 shows the various Waterford 3 facilities and their responsibilities.

The specific organizations described below are the initial responders to an emergency. These organizations will be supplemented by additional personnel as necessary.

5.1.2.1 Onshift Emergency Organization

The Onshift Emergency Organization is comprised of normal operating shift personnel (Figure 5-1B). This organization has the responsibility for initial accident evaluation and assessment, initial notifications of offsite agencies and activation of additional resources (i.e., onsite and offsite emergency organizations and agencies).

The Onshift Emergency Organization (Figure 5-1C) under the direction of the SM, as Emergency Director, is staffed and equipped to be self-reliant for a sufficient period of time to allow for the activation and integration of additional personnel and teams.

The Onshift Emergency Organization is sufficient to respond entirely to the emergency classification of Unusual Event without the necessity of additional emergency organization augmentation.

Designated members of the Onshift Emergency Organization are sufficiently trained and qualified to perform emergency assignments designated by the Shift Manager/Emergency Director. The Emergency Director has the responsibility and flexibility to make assignments of shift personnel to emergency duties, in the manner which he deems necessary, in order to effectively respond to the emergency. Table 5-4 lists the shift personnel and their responsibilities. The Emergency Director may augment the onshift staff at any time during an emergency situation, regardless of the classification level.

WATERFORD 3 SES EMERGENCY PLAN

5.1.2.1 (Cont'd.)

Operations shift personnel are trained to perform offsite dose assessment calculations. The Shift Manager has primary responsibility for these calculations, but any member of the staff may perform them. Calculations will usually be performed by the Emergency Communicator (NAO).

- a. **SM -** Upon the classification of an emergency, the SM has the responsibility and authority of the Emergency - Director (ED). The SM announces the emergency to all site personnel, implements the proper Emergency Plan Implementing Procedures, ensures the initial notifications are made, recommends offsite protective measures and contacts the Duty Plant Manager. The SM continues as the Emergency Director until the Duty EOF Emergency Director arrives in the EOF and properly relieves the SM as Emergency Director. He shall keep the Duty Plant Manager apprised of the emergency situation.

- b. **CRS -** The CRS supervises, accounts for and directs the activities of the Reactor Operators and the Nuclear Auxiliary Operators in taking all necessary and appropriate actions to maintain safe plant conditions in accordance with approved procedures.

If for whatever reason the SM cannot immediately assume the responsibilities of the Emergency Director, the CRS has the authority to assume that position.

- c. **Shift Technical Advisor (STA) -** The STA provides advisory technical support to the SM in the areas of thermal hydraulics, reactor engineering and plant analysis with regards to safe operation of the unit. The STA shall meet the requirements of the Waterford 3 SES Technical Specifications. An individual with an SRO/STA qualification can satisfy the SM/STA or SRO/STA position simultaneously.
- d. **Reactor Operator -** During an emergency, two ROs are assigned to operate the primary plant systems and equipment and perform emergency actions under the direction of the CRS and in accordance with approved procedures.
- e. **Nuclear Auxiliary Operator -** During an emergency, five NAOs are assigned to fulfill the Nuclear Auxiliary responsibilities per station operating procedures and report to the CRS and perform emergency actions as directed by the Emergency Director.

WATERFORD 3 SES EMERGENCY PLAN

5.1.2.1 (Cont'd.)

- f. Emergency Communicator - An NAO will normally be assigned to assume the function of the Emergency Communicator, and perform the initial notifications, supplementary call-outs and maintain communications with offsite agencies in accordance with the Emergency Plan Implementing Procedures. The Emergency Communicator will maintain continuous contact with the NRC as directed by the NRC Headquarters Operations Center Duty Officer.

Another qualified individual may be assigned to this duty, at the discretion of the Emergency Director.

- g. Radiation Protection Technician - One Radiation Protection Technician on shift is a qualified Senior Health Physics Technician and provides emergency support as directed by the Emergency Director. Offsite monitoring capabilities are made available upon arrival of additional Radiation Protection technicians.
- h. Chemistry - The shift Chemistry Technician under the direction of the Emergency Director is responsible for carrying out all chemistry functions in accordance with the Emergency Plan Implementing Procedures.
- i. Maintenance Personnel - The shift maintenance personnel perform repair operations and provide general support as directed by the Emergency Director.
- j. Security Shift Supervisor (SSS) - The SSS and the Shift Security Organization operate by the requirements of the Security Plan and Emergency Plan Implementing Procedures. The SSS reports to the Emergency Director.
- k. *Remote Shutdown Operators – Individuals assigned to fulfill position specific responsibilities per station operating procedures. These individuals report to the Control Room Supervisor and perform emergency actions as directed by the Emergency Director during a control room evacuation due to fire or conditions requiring implementing such procedure.

5.1.2.1.1 Onshift Emergency Support Personnel

The duties and responsibilities of onshift support personnel and emergency teams are discussed in this section.

- a. Onshift Fire Brigade - The Fire Brigade is staffed by onshift personnel in accordance with the W3SES Fire Protection Program.

Detailed personnel assignments are made in accordance with the Implementing Procedures.

*The addition of the Remote Shutdown Operators to Minimum Staffing is effective on January 18, 2013.

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5.1.2.1.1a (Cont'd.)

The Fire Brigade responds to all fire alarms and reports to the location of the fire with its assigned equipment. The Fire Brigade may be supplemented by other off-duty qualified station personnel or outside fire companies in accordance with the Implementing Procedures.

- b. Onshift First Aid Team - Detailed personnel assignments are made in accordance with site procedures and are shown in Table 5-4.

The Onshift First Aid Team responds to emergencies, as appropriate, with its assigned equipment. All members are trained, as a minimum, to Red Cross multimedia standards.

Assistance is requested from outside organizations in accordance with the Implementing Procedures.

5.1.2.2 Onsite Emergency Organization

The Onsite Emergency Organization consists of those individuals who staff the Technical Support Center and Operational Support Center (see Sections 7.1.2 and 7.1.3) in the event of an emergency (as shown in Figure 5-2) and those support personnel who fulfill specific emergency support functions. Table 5-5 lists Technical Support Center Positions and their responsibilities. Table 5-6 provides the same information for the Operational Support Center.

a. Emergency Plant Manager (EPM)

The EPM has the direct responsibility for accident mitigation at the plant and performs these duties from the Technical Support Center (TSC). The EPM reports to the EOF Emergency Director. Responsibilities include:

1. Direct the activation, operation and deactivation of the TSC;
2. Provide information and recommendations to the ED regarding the declaration of an emergency;
3. Coordinate the activities of the CR, TSC and OSC;
4. Direct personnel assembly, accountability and evacuation of non-essential personnel;
5. Provide information and recommendations to the ED regarding plant activities;
6. Direct the organization and coordination of repair corrective action teams;
7. Direct protective actions at the site (non-delegable);
8. Authorize radiation exposure in excess of 10CFR20 limits and issuance of KI to onsite personnel (non-delegable);

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9. Make operational decisions involving the safety of the plant and its personnel and make recommendations to the Control Room Personnel;
10. Request offsite medical and fire fighting response (non-delegable);

b. TSC Manager

The TSC Manager reports to the EPM. Responsibilities include:

1. Assure staffing and activation of the TSC and to notify EPM when TSC operational conditions are met;
2. Perform technical assessments and communicates the conclusions to the EPM;
3. Assures that TSC logs are properly maintained;
4. Set priorities for the TSC personnel;
5. Assure accountability for TSC personnel.

c. TSC Communicator

The TSC Communicator reports to the TSC Manager. Responsibilities include:

1. Maintains facility log;
2. Maintains communications between the Emergency Response Facilities as necessary;
3. Support the EPM and TSC Manager as requested.
4. Emergency communications support

d. ENS Communicator

The ENS Communicator reports to the TSC Manager. Responsibilities include:

1. Establishes and maintains communications with the NRC via the ENS phone;
2. Monitor plant computer parameters and provide plant status to the NRC as requested.
3. Emergency communications support

e. Maintenance Coordinator

The Maintenance Coordinator reports to the TSC Manager. Responsibilities include:

1. Coordinates the request for repair and corrective teams with the OSC;
2. Prioritizes the requests with the TSC Manager;
3. Tracks activities of Fire Brigade and First Aid Team.

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f. Engineering Coordinator

The Engineering Coordinator reports to the TSC Manager. He is responsible for directing plant assessments and technical evaluations through the Engineering support team. Responsibilities include:

1. Provide technical guidance to support repair activities.
2. Coordinate Engineering work requests with the Engineering support team.

g. Radiological Coordinator

The Radiological Coordinator reports to the TSC Manager. Responsibilities include:

1. In-Plant radiological assessments and the development of Radiation Protection activities;
2. Keeping the TSC Manager informed of the radiological conditions;
3. Advise the TSC, OSC and EOF of changes in radiological release status;
4. Recommend authorization of personnel emergency exposure limits;
5. Advise the Emergency Plant Manager on the use and issuance of KI;
6. Coordinate with the Security Coordinator to determine the routes to be used for evacuation of non-essential personnel and BRE's;
7. Arranging for additional radiation protection personnel, as necessary.

h. Operations Coordinator

The Operations Coordinator reports to the TSC Manager. Responsibilities include:

1. Coordinate TSC efforts in determining the nature and extent of emergencies pertaining to equipment and plant facilities in support of Control Room actions;
2. Ensure the Control Room, TSC and EOF are informed of significant changes in event status;
3. Coordinate operations activities outside of the Control Room with the TSC Manager and OSC Manager.

i. Operations Communicator

The Operations Communicator transmits and receives information between the Control Room and the TSC.

The Operations Communicator performs these duties from the Control Room.

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j. Engineers (Mechanical/I&C/ Electrical)

The Engineers report to the Engineering Coordinator. The Engineers are responsible for responding to engineering requests from the Engineering Coordinator.

k. Reactor Engineer

The Reactor Engineer reports to the Engineering Coordinator and supports core thermal hydraulics functions. Additional responsibilities include:

1. Provide technical guidance to support repair activities;
2. Assist in Severe Accident Procedure implementation.

l. Radiological Coordinator Assistant

The RC Assistant is responsible for maintaining a log of the RC's activities, updating the status board and maintaining communications.

The RC Assistant performs these duties from the TSC and reports to the Radiological Coordinator.

m. TSC Chemistry Engineer

The TSC Chemistry Engineer is responsible for coordinating chemistry related emergency response activities.

The TSC Chemistry Engineer performs these duties from the TSC and reports to the Operations Coordinator.

n. TSC Status Board Keeper

The TSC Status Board Keeper maintains the plant conditions status board for the Operations Coordinator in the TSC and provides other assistance to the Operations Coordinator and TSC staff as needed.

o. OSC Manager

The OSC Manager has the overall responsibility for the activation and operation of the Operational Support Center. The OSC Manager reports to the EPM located in the TSC. Responsibilities include:

1. Directs the activation, operation and deactivation of the OSC;
2. Directs timely formation, briefing and debriefing of the repair/corrective action teams, search and rescue teams, onsite monitoring teams and mobilizing other required support personnel;
3. Ensures work task priorities are being maintained;
4. Maintains OSC accountability.

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p. OSC Log Keeper

The OSC Log Keeper reports to the OSC Manager.
Responsibilities include:

1. Maintain facility log;
2. Maintains communications with other emergency facilities;
3. Support the OSC Manager as requested.

q. Operations Support

The Operations Support position reports to the OSC Manager.
The Operations Support representative is responsible for:

1. Supporting the OSC in locations of plant equipment;
2. Identify potential Operations support needs.

r. Work Control Coordinator

The Work Control Coordinator reports to the OSC Manager.
Responsibilities include:

1. Direct the formation, briefing and debriefing of repair and corrective action teams and onsite monitoring teams;
2. Maintain communications with the Maintenance Coordinator in the TSC;
3. Ensures maintenance of OSC accountability.

s. Mechanical/I & C/ Electrical Maintenance Coordinators

The Mechanical, I&C, and Electrical Coordinators report to the Work Control Coordinator. Responsibilities include:

1. Assist the coordination of the formation, briefing and debriefing for the repair and corrective action teams responding to assigned tasks;
2. Ensures communications and continuous accountability with repair and corrective action teams.

t. Rad/Chem Coordinator

The Rad Chem Coordinator reports to the Work Control Coordinator. Responsibilities include:

1. Determining emergency radiological survey requirements;
2. Ensure use of protective clothing, respiratory protection and access control within the plant is deemed appropriate to control personnel exposures;
3. Ensures the dispatching of the onsite monitoring teams;
4. Ensures habitability of the OSC;

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5. Conduct/provide assistance for the rad briefings to support the dispatching of the repair/corrective action teams and chemistry/ RP sampling;
6. Communicate rad/chemistry sample results to the TSC and CR;
7. Coordinate the transport of potentially contaminated or highly exposed personnel to off-site medical facilities;
8. Determine the necessity for emergency exposure limits and KI issuance;
9. Provide radiological support for evacuations, medical response, fire response and search and rescue.

u. Security Coordinator

The Security Coordinator directs the W3SES Security Force in accordance with the Security Plan and coordinates security activities with offsite law enforcement officials. The Security Coordinator reports to the OSC Manager. Responsibilities include:

1. Overall coordination of the offsite assistance for the security related response;
2. Designated NIMS Liaison between the Incident Command Post and Site Organization as necessary;
3. Coordinate accountability.

v. Assembly Area Supervisor

The Assembly Area Supervisor directs the assembly of evacuated personnel, directs the arrangement of the assembly area to accommodate contaminated vehicles and personnel, and maintains communications with the OSC to provide additional personnel resources as required.

The Assembly Area Supervisor performs these duties from designated assembly areas and reports to the OSC Manager.

w. Onsite Emergency Support Personnel

The duties and responsibilities of support personnel and emergency teams are discussed in this section. During an emergency, operations support personnel and members of emergency teams activated by the EPM report to the locations designated.

1. Fire Brigade - The Fire Brigade responds, with assigned equipment, to all fire alarms. The Fire Brigade will take action to evaluate and mitigate the situation. The CRS has the initial responsibility for the Fire Brigade, but responsibilities will be assumed by the TSC Maintenance Coordinator (upon TSC activation) when the Brigade is dispatched to a fire.

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Detailed personnel assignments are made in accordance with the Implementing Procedures and the W3SES Fire Protection Program.

2. First Aid Team - The First Aid Team responds to emergencies, as appropriate, with its assigned equipment. All members are trained, as a minimum, to Red Cross multimedia standards.

Detailed personnel assignments are made in accordance with the Implementing Procedures.

Assistance is requested from outside organizations in accordance with the Implementing Procedures as necessary.

The OSC Manager has the initial responsibility for the First Aid Team, but responsibilities will be assumed by the TSC Maintenance Coordinator when the First Aid Team is dispatched to the scene of a medical emergency.

3. Search and Rescue Team - The Search and Rescue Team will be assembled, as directed by the EPM, whenever it is necessary to search for and, if required, to rescue personnel who are not accounted for or who need assistance.

Detailed assignments are made in accordance with the Implementing Procedures. The responsibilities associated with Search and Rescue operations may vary from locating missing individuals to rendering life-saving first aid. Teams assigned to such operations report to the OSC Manager.

4. Emergency Repair/Operations Team - Uncomplicated recovery, repair and operations, including reentry into plant areas, are conducted under the direction of the EPM. The EPM directs Emergency Repair/Operations Teams to be assembled from available personnel on the basis of knowledge of the plant, special qualifications, exposure history and other contributing factors required for the situation and conditions present. To the extent possible, these teams include individuals who are qualified in first aid and radiation protection. Long-term recovery operations and post-accident planning, reentry, and decontamination efforts are accomplished through the long-term Recovery Organization as discussed in Section 9.0.

Detailed assignments are made in accordance with the Implementing Procedures.

Emergency Repair/Operations teams report to the OSC Maintenance Coordinators.

5. Station Security Force - The Station Security Force, under all circumstances, operates by the requirements established in the Security Plan Procedures. The Station Security Force takes direction from the EPM in emergency situations.

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6. Radiological Monitoring Teams - Upon request from the Radiation Coordinator, the Rad/Chem Coordinator assembles Radiation Protection personnel into monitoring teams. These teams are then utilized in conducting radiological surveys, both onsite and offsite.

Detailed assignments are made in accordance with the Implementing Procedure.

7. Duty Emergency Planner - The Duty Emergency Planner is not a required ERO position, but may be manned to assist the ERO in their response if available. The Duty Emergency Planner may fill any ERO position consistent with their level of qualifications.

5.1.2.3 Nearsite Emergency Organization

The Nearsite Emergency Organization is activated to aid and support the activities initiated by the Onsite Emergency Organization.

The Nearsite Emergency Organization is responsible for offsite emergency management activities and provides assistance to, or obtains assistance for, the Onsite Emergency Organization as required. The Nearsite Emergency Organization (as shown in Figure 5-3) consists of those individuals who staff the Emergency Operations Facility (see Section 7.2.1) and those support personnel who fulfill specific emergency support functions. Table 5-7 lists the organization staffing and responsibilities.

a. Emergency Director (ED)

The Emergency Operations Facility Emergency Director is responsible for the direction of the total emergency response. The ED reports to the Chief Operating Officer of Entergy Operations Inc. The ED's responsibilities include:

1. Activation and operation of the EOF, assuming responsibility from the Shift Manager acting as the Emergency Director;
2. Classification and declaration of the emergency (non-delegable);
3. Make protective action recommendations (PAR's) to the offsite agencies (non-delegable);
4. Direct notification of the event to the offsite agencies (non-delegable);
5. Coordinate accident information with other offsite governmental agencies (NRC, etc.);
6. Request assistance from offsite agencies excluding requests for offsite medical or fire fighting assistance (non-delegable);
7. Authorize radiation exposure in excess of 10 CFR 20 limits for the EOF personnel and field monitoring personnel (non-delegable);
8. Approve press releases;

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9. Direct the activities of the EOF organization in support of the Technical Support Center and offsite agencies.
10. Ensure that Entergy Operations, Inc., and Entergy Louisiana, LLC, executive management are kept informed of the emergency situation.
11. EOF personnel safety.

b. EOF Manager

The EOF Manager reports to the ED and oversees the activities in the EOF. Responsibilities include:

1. Assures timely activation of the EOF;
2. Obtains additional resources as necessary to support EOF activities;
3. Assist offsite authorities responding to the EOF;
4. Ensures the offsite notifications are conducted within regulatory requirements.

c. Radiological Assessment Coordinator (RAC)

The Radiological Assessment Coordinator is responsible for conducting assessment activities for offsite radiological conditions. During operation of the EOF, the Radiological Assessment Coordinator reports to the ED. Responsibilities include:

1. Direct the activities of the Offsite Team Coordinator in the areas of offsite dose projection radiological field monitoring;
2. Provide input to the ED regarding protective actions and emergency classifications;
3. Provide radiological /radiation protection support to the TSC;
4. Keep the ED informed of offsite radiological conditions and their significance;
5. Ensures that Notification Message Forms are completed at pre-determined intervals;
6. Provide radiological support and control within the EOF;
7. Provide overall liaison and coordination of efforts with Louisiana Department of Environmental Quality Field response team Personnel.
8. Contact for NRC on health Physics Network (HPN) Line.

d. Technical Advisor (TA)

The Technical Advisor reports to the ED. Responsibilities include

1. Maintaining contact with the TSC and Control Room for information on plant status and emergency operations;
2. Monitor plant computer system parameters;

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3. Recommend actions on classification of emergencies.

e. EOF Administration/Logistics Coordinator

The Administration/Logistics Coordinator reports to the EOF Manager and is responsible for providing support to the Onsite and Nearsite Emergency Response Organization. Responsibilities include:

1. Support the physical activation and operation of the facility.
2. Provide and direct administrative services such as records management, clerical support.
3. Manage logistics for supporting the onsite and offsite emergency response such as additional support personnel or equipment, meals, lodging, and transportation.
4. Coordinate EOF security matters with Waterford 3 Security.
5. Procurement activities

f. Public Information Liaison

The Public Information Liaison reports to the EOF Manager and provides the primary interface between the JIC and EOF. Responsibilities include:

1. Ensuring JIC is provided with current plant status;
2. Reviews press releases and provide to the ED for approval.

g. Offsite Communicator

The Offsite Communicator reports to the EOF Manager, and transmits and receives information from offsite agencies. Responsibilities include:

1. Transmitting approved information to the offsite agencies as required by regulations;
2. Receiving and recording information from agencies.

h. EOF Communicator

The EOF Communicator reports to the EOF Manager. Responsibilities include:

1. Transmitting and receiving information from onsite Emergency Response Facilities;
2. Reviewing plant data and ensuring the EOF is notified of changing plant conditions.

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i. Lead Offsite Liaison

The Lead Offsite Liaison reports to the EOF Manager and coordinates activities the Offsite Liaisons located at State and Parish Emergency Operations Centers (EOC). Responsibilities include:

1. Maintains plant information with offsite agencies response centers through the Offsite Liaisons throughout the emergency;
2. Keeps the Offsite Liaisons briefed on the plant conditions.

j. Offsite Liaison

The Offsite Liaison reports to the Lead Offsite Liaison, but is located at an offsite response facility (State/Parish EOC). Responsibilities include:

1. Obtains plant information and keeps offsite agencies located in the EOC informed throughout the emergency;
2. Clarifies plant conditions for and responds to questions asked by offsite agencies.

k. Dose Assessor

The Dose Assessor reports to the Radiological Assessment Coordinator. Responsibilities include:

1. Calculate offsite dose projections;
2. Provide offsite dose projection information to the Offsite Team Controller.

l. Offsite Team Coordinator (OTC)

The Offsite Team Coordinator reports to the Radiological Assessment Coordinator (RAC). Responsibilities include:

1. Direct the activities of the EOF Field Team Communicator and Dose Assessor in the areas of offsite dose projections and radiological field monitoring.
2. Provide radiological support to the Technical Support Center as directed by the RAC.
3. Direct the activities of the offsite field monitoring teams.
4. Initiate Notification Message Forms as directed by the RAC.
5. Provide offsite dose projection information to the RAC.
6. Provide radiological support and control in the EOF as directed by the RAC.
7. Provide liaison and coordination of efforts in the area of field team data with Louisiana Department of Environmental Quality Field response team personnel.

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m. Offsite Team Communicator

The Offsite Communicator maintains radio communications contact with the Field Monitoring Teams. The Offsite Team Communicator reports to the Offsite Team Coordinator. Responsibilities include:

1. Maintain radio communications with offsite field monitoring teams;
2. Transmit directional guidance to offsite field monitoring teams from the Offsite Team Coordinator;
3. Maintain a record of communications with the field teams.

n. EOF Habitability Assessor

The EOF Habitability Assessor reports to the Radiological Assessment Coordinator. Responsibilities include:

1. Assist the RAC in maintaining communications with and coordinating the activities of the EOF dose assessment group;
2. Complete Notification Message Forms as directed by the RAC;
3. Support the radiological activities of the EOF;
4. Conducting radiological surveys, sampling and analysis activities in the EOF and advising the Radiological Assessment Coordinator of the results.

o. EOF Log Keeper

The EOF Logkeeper reports to the Administration/Logistics Coordinator and maintains a continuous log of EOF activities.

p. Licensing Coordinator

The Licensing Coordinator provides the interface with NRC site response personnel and coordinates licensing concerns. The Licensing Coordinator reports to the EOF Manager.

q. Entergy System Liaison

The Entergy System Liaison provides the primary interface between the Waterford 3 emergency response organization and other Entergy Corporation response organizations. The Entergy System Liaison reports to the EOF Manager. The Entergy System Liaison's responsibilities include:

1. Request assistance from other Entergy System Business Units.
2. Provide information and emergency status on a periodic basis to the Plant Managers of Waterford 1 & 2 and Little Gypsy.
3. Maintain liaison with the Gretna Transmission Operations Center.

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4. Ensure that notification has been made and ongoing information provided to American Nuclear Insurers (ANI) by the Corporate Emergency Center.
 5. Track the activities of, and perform accountability for, Transmission System personnel performing work at the Waterford 3 site and coordinate radiological support for their activities.
 6. Keep the Emergency Director and EOF staff informed of the activities of other Entergy response organizations.
 7. Confirm implementation of protective measures for Transmission System and Entergy Services - Fossil personnel working within the 10 mile EPZ.
 8. Coordinate Entergy System support for public reception centers.
 9. Keeps informed and works with the Governor of Louisiana, congressional representatives and members of the Louisiana Legislature and selected local governments, in response to an emergency.
- r. EOF Status Board Keeper
- The EOF Status Board Keeper maintains the plant conditions status board and provides other assistance to the EOF staff as needed.

5.1.2.4 Offsite Emergency Organization

The Offsite Emergency Organization is activated to provide support to the EOF. The Offsite Emergency Organization consists of those individuals who staff the Joint Information Center (as shown in Figure 5-4) (Section 7.2.2). Table 5-8 lists the organization staffing and responsibilities for the Joint Information Center.

The Joint Information Center (JIC) provides information to the public regarding the emergency situation. The JIC is generally activated and made operational at the Alert classification or above. Media calling the JIC will be read the latest information release concerning Waterford 3 SES. Information briefings will be conducted at the Joint Information Center for those media representatives present. Entergy will coordinate information releases with the NRC, FEMA, the State and Parishes.

Provisions are made at the Joint Information Center for monitoring radio and television broadcasts as well as clipping and retaining newspaper articles concerning emergency conditions.

If inaccurate information is being reported by the media, a designated member of the Joint Information Center staff will contact the news media involved.

Individual citizens who hear rumors or who hear contradictory information via the news media may feel compelled to call Entergy. These calls will be handled by Entergy's Customer Service Center which will provide current official information concerning conditions at Waterford 3.

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a. Company Spokesperson

The Company Spokesperson is responsible for overall public information. Responsibilities include:

1. Timing and content and distribution of news releases;
2. Coordinating news releases with the Emergency Director;
3. Ensures liaison with LDEQ, GOHSEP, St. Charles Parish, St. John the Baptist Parish and Federal agencies for the release of public information;
4. Ensures that news media briefings are held regularly during the course of the emergency;
5. Serves as the moderator and Entergy Company Spokesperson at media briefings;
6. Provides liaison with governmental organizations throughout the emergency;
7. Keeps the Entergy Corporate Emergency Center and Entergy Vice President, Communications informed throughout the emergency.
8. Disseminates information on Waterford-3 injured personnel.

b. JIC Technical Advisor

The JIC Technical Advisor reports to the Company Spokesperson and is responsible for answering technical questions from the new media regarding the emergency situation.

c. JIC Manager

The JIC Manager reports to the Company Spokesperson. Responsibilities include:

1. Activation, set-up and operation of the Joint Information Center;
2. Notification of the Entergy Corporate Emergency Center;
3. Contacts NRC Region IV Public Information Representatives to provide information on the emergency.
4. Ensures activation and operation of Rumor Control activities for response to questions from the general public;
5. Ensures activation and operation of media inquiry/monitoring activities for monitoring and response to media questions;
6. Facility Security activation.
7. Contacts Corporate Emergency Center to insure that Waterford-3 related governmental affairs activities are carried out.

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d. Information Coordinator

The Information Coordinator reports to the JIC Manager. Responsibilities include coordinating and preparation of press releases. Oversees media monitoring and inquiry response. Responsibilities include:

1. Drafting news releases;
2. Provides news bulletins for distribution to internal and external sources;
3. Supervises media monitoring and response activities;
4. Supervises public response activities;
5. Refers questions on radiation or nuclear technology from the Rumor Control Center to the Company Spokesperson.
6. Provides for the logistical arrangements and ongoing liaison for offsite agency representatives locating at the JIC.

e. Media Liaison

The Media Liaison reports to the JIC Manager and operates from the Briefing Room. Responsibilities include:

1. Ensures media is informed of protocol and schedules established for media briefings;
2. Distributes news bulletins to media;
3. Takes notes of unanswered questions at news briefings.

f. JIC Technical Assistant

The JIC Log keeper reports to the Information Coordinator. Responsibilities include:

1. Maintains contact with plant throughout the event;
2. Assists with drafting of news bulletins;
3. Support the JIC Manager as requested.

g. Logistics Coordinator

The Logistics Coordinator reports to the JIC Manager. Responsibilities include:

1. Activates and operates from the Briefing Room;
2. Ensures that the Briefing Room is fully functional;
3. Assures for security for the Briefing Room.

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h. Inquiry Response Coordinator

The Inquiry Response Coordinator reports to the Information Coordinator Responsibilities include:

1. Ensures response to media inquiries;
2. Ensures activation of rumor control activities for response to inquiries from the general public;
3. Ensures monitoring of media reports;
4. Tracks trends the public and media inquiry calls.

i. Press Release Writer

The Press Release Writer reports to the Information Coordinator and generates press releases as directed by the JIC Manager. In addition, the Press Release Writer maintains the facility log.

j. Media Monitoring Assistants

Media Monitor reports to the Inquiry Response Coordinator and monitors TV and radio broadcasts for inaccuracies. All inaccuracies will be reported to the Information Coordinator to ensure they are addressed in the media briefings. Persons filling this position also are available to respond to media inquiries.

k. Audio/Visual Operator

The Audio/Visual Operator reports to the Logistics Coordinator and is responsible for operation of audio/visual equipment in the Media Briefing Center and for recording media broadcasts of emergency related information.

l. Logistics Assistants

The Logistics Assistants report to the JIC Office Manager and provide assistance with JIC activation and general clerical support to the JIC staff including taking notes at news conferences.

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5.2 Supporting Organizations

Assistance in response to an emergency is provided to the Waterford 3 organization by Entergy Operations, Inc. Headquarters, as well as the Institute of Nuclear Power Operations. These organizations are structured to provide timely and effective activation of resources while allowing flexibility to meet the specific needs of the situation. In addition, several other organizations provide assistance in specialized areas of concern and are also discussed in this section.

5.2.1 Westinghouse Electric Company LLC

Entergy Operations, Inc. maintains an agreement with Westinghouse Electric Company LLC (formerly ABB Combustion Engineering) to ensure maintenance of the required state of emergency preparedness. Under a nuclear incident emergency assistance agreement, Westinghouse Electric provides a nuclear emergency response system which provides timely and effective support to Waterford 3 during an emergency or drill. Upon activation, Westinghouse Electric makes available to the maximum extent possible any support or resources which Waterford 3 reasonably requests. This support includes but is not limited to:

- a. Onsite technical advice/consultation
- b. Offsite analysis and evaluation support
- c. Onsite technical and construction support
- d. Overall support using Westinghouse management, engineering, manufacturing, transportation, procurement and construction resources.

5.2.2 Institute of Nuclear Power Operations (INPO)

INPO maintains the INPO Emergency Resources Manual which provides a consolidated listing of the signatories of the Nuclear Power Plant Emergency Response Voluntary Assistance Agreement. The Manual provides a listing of available resources throughout the industry which include personnel and equipment, technical analysis and evaluation capabilities, nuclear suppliers and technical experts.

The Institute of Nuclear Power Operations (INPO) will be able to provide the following emergency support functions:

- a. Assistance in locating sources of emergency manpower and equipment.
- b. Analysis of the operational aspects of the incident.
- c. Dissemination to member utilities of information concerning the incident that is applicable to their operations.
- d. Organization of industry experts who could advise Waterford 3 on technical matters.

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5.2.2 (Cont'd)

To support Waterford 3 in response to an emergency, INPO maintains the following emergency support capabilities:

- 5.2.2.1 Dedicated Emergency Call Number capable of activating designated INPO staff and activating INPO support functions 24 hours per day, seven days per week.
- 5.2.2.2 Designated INPO representative(s) who can be quickly dispatched to the utility emergency response organization to coordinate INPO support activities and information flow.
- 5.2.2.3 Twenty-four hour-a-day operation of an Emergency Response Center at INPO.

Upon request, one or more suitably qualified members of INPO technical staff report to the Emergency Director and assist his staff in coordinating INPO's response to the emergency as follows:

- a. Staffing a single position responsible to the Emergency Director as liaison for all INPO matters.
- b. Working with the INPO Duty Person in Atlanta to coordinate all requests for assistance, INPO response and related communications.
- c. Assisting as requested in initiating and updating entries into industry information systems concerning the accident status and related information of value to other utilities.
- d. Ensuring that all information concerning the emergency which is released by the INPO liaison is properly and formally cleared through appropriate Waterford 3 channels.

An INPO representative is capable of being dispatched in approximately a four-hour notice.

5.2.3 Entergy Operations, Inc. Headquarters

Entergy Operations, Inc. Headquarters can provide, if requested by Waterford 3, the following functions during the incident and recovery:

- a. Nuclear reactor physics and plant systems analysis.
- b. Vendor evaluations, NDE inspections and equipment/system walk down and verification.
- c. Secure offsite resources (engineering, construction, hardware, etc.), procurement activities.
- d. Provide support as requested to staff emergency news centers.
- e. Notify and interface with nuclear insurers in handling and processing claims.
- f. Project management functions including construction engineering, cost and scheduling, contract administration, field procurement and construction accounting.

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5.2.3 (Cont'd)

- g. Computer support for analysis including an Information Technology (IT) Representative that may be manned to assist the OSC in their response if available. When staffed, the IT Representative is responsible for coordinating, troubleshooting and repair of communications equipment and information systems hardware and software. The IT Representative is also responsible for coordinating computer applications support. The IT organization is an Entergy Corporation contract organization with personnel matrix to Entergy Operations Inc.
- h. Environmental affairs, power engineering and plant systems analyses.
- i. Notify and interface with INPO.
- j. Support for informing company employees during emergencies.
- k. Governmental Liaison

To support the ability to provide these functions, Entergy Corporation designates an Emergency Response Coordinator who will provide the interface between Entergy Operations, Inc., Headquarters and Waterford 3.

5.2.4 Entergy Services - Transmission System

Entergy Operations, Inc. maintains an emergency response agreement with Entergy Services - Transmission System to ensure maintenance of the required state of emergency preparedness. Under the terms of this agreement, Transmission System agrees to provide the following in the event of a Waterford 3 emergency:

- a. Electrical power distribution and transmission engineering support.
- b. Substation maintenance and repairs.
- c. Contact with the Gretna Transmission Operations Center and the System Operations Center.

Assurance that protective measures are implemented for Transmission System personnel working within the Waterford 3 10-mile Emergency Planning Zone. Assessment of the electrical system power demands for the New Orleans metropolitan area.

5.2.5 Entergy Services - Fossil

Entergy Operations, Inc. maintains an emergency response agreement with Entergy Services - Fossil to ensure maintenance of the required state of emergency preparedness. Under the terms of this agreement, Entergy Services - Fossil agrees to provide the following in the event of a Waterford 3 emergency: Confirmation of notification and implementation of protective actions for fossil generation plants located within the Waterford 3 10-mile Emergency Planning Zone.

5.2.6 American Nuclear Insurers

The American Nuclear Insurers organization is contacted by Entergy Corporation Headquarters whenever an Alert, Site Area or General Emergency is declared to provide the Waterford 3 organization with insurance coverage response, as appropriate.

WATERFORD 3 SES EMERGENCY PLAN

5.3 Governmental Organizations

Entergy Operations, Inc. works closely with the Federal, State and Parish agencies in coordinating emergency activities for the Emergency Planning Zones in order to ensure the health and safety of the general public. Each participating organization is assigned specific responsibilities and authority for both emergency planning and emergency response, as well as specific emergency-related notification and information reporting between Entergy Operations, Inc. and the various participating agencies.

Notifications and updates, as appropriate, are made to offsite agencies when emergency conditions exist at Waterford 3. The notification of, or reporting to, these agencies does not constitute a request for assistance; however, assistance is provided by these Federal, State, and local agencies if requested.

5.3.1 Local Parishes

In accordance with the Louisiana Emergency Assistance and Disaster Act of 1993, the Parish President is responsible for emergency operations. St. Charles Parish and St. John the Baptist Parish fall within the 10-mile Emergency Planning Zone for Waterford 3 and have prepared radiological emergency response plans which taken together constitute Attachment 1 to the Louisiana Peacetime Radiological Response Plan. These plans have been developed in coordination with the Waterford 3 Emergency Plan.

5.3.1.1 St. Charles Parish

a. St. Charles Parish Department of Emergency Preparedness

1. Establishes plans and procedures for response to accidents at Waterford 3.
2. Provides an Emergency Operations Center and a qualified staff capable of response at the time of an emergency.
3. Establishes and maintains a communications system adequate to conduct and coordinate emergency operations.
4. Coordinates protective response recommendations for the general public, institutionalized persons, and transients in the event of an accident.
5. Maintains a public alert/notification system to provide emergency information to the public on what their actions should be in the event of an accident.

b. St. Charles Parish Sheriff's Office

1. Coordinates law enforcement, security, traffic control and access control within the parish at the time of an emergency.

WATERFORD 3 SES EMERGENCY PLAN

5.3.1.2 St. John the Baptist Parish

a. St. John the Baptist Parish Civil Defense

- 1. Establishes plans and procedures for response to accidents at Waterford 3.**
- 2. Provides an Emergency Operations Center and a qualified staff capable of response at the time of an emergency.**

Establishes and maintains a communications system adequate to conduct and coordinate emergency operations.

- 4. Coordinates protective response recommendations for the general public, institutionalized persons, and transients in the event of an accident**
- 5. Maintains a public alert/notification system to provide emergency information to the public on what their actions should be in the event of an accident.**

b. St. John the Baptist Parish Sheriff's Office

- 1. Coordinates law enforcement, security, traffic control and access control functions within the parish at the time of an emergency.**

A more detailed description of the duties and responsibilities to be undertaken by these organizations is contained in Attachment 1 to the Louisiana Peacetime Radiological Response Plan.

5.3.2 State Agencies

The roles of the State agencies involved in response to emergencies at Waterford 3 are presented in this section:

5.3.2.1 Louisiana Department of Environmental Quality (LDEQ)

LDEQ serves as the lead State agency for the development and implementation of the State Plan. In this role, LDEQ coordinates planning efforts with all fixed nuclear facilities affecting Louisiana; provides assistance to Parish government in the development of technical aspects of plans and procedures; serves as the lead State technical response agency and coordinates, State, Federal and private technical response resources; conducts accident assessment including periodic estimates of total population exposure control for emergency workers; provides technical guidance on monitoring and decontamination for personnel and equipment; establishes a radiological monitoring system for permanent and accident monitoring; provides a technical spokesperson for response to media questions during an emergency; establishes criteria for implementation of reentry and recovery operations; assists with the development of facility based public information programs; coordinates with GOHSEP on the development of offsite training, drill and exercise programs.

WATERFORD 3 SES EMERGENCY PLAN

5.3.2.1 (Cont'd)

Other Federal, State and local agencies provide assistance to LDEQ in evaluating radiological hazards and in implementing prescribed protective actions in accordance with the Louisiana Peacetime Radiological Response Plan - Attachment 1 which is site specific to Waterford 3.

As outlined in the State portion of the Plan, LDEQ will notify identified Federal agencies and organizations and request assistance as the situation requires. If additional resources are required, the Secretary of the Department of Environmental Quality will request assistance from the Department of Energy and the Southern States Energy Board as specified in the following:

- a. Federal Radiological Monitoring and Assessment Plan (FRMAP)
- b. Southern Mutual Radiological Assistance Plan (SMRAP)

LDEQ receives notification of an emergency directly from Waterford 3 via the operational hotline. During non-office hours, LDEQ maintains a duty officer system. The LDEQ duty officer is notified of an emergency through the Governor's Office of Homeland Security & Emergency Preparedness.

5.3.2.2 Governor's Office

- a. Governor's Office of Homeland Security & Emergency Preparedness (GOHSEP)

GOHSEP serves as the lead State agency for non-technical response to an accident at Waterford 3. In this role, GOHSEP establishes an Emergency Operations Center for State response agencies and coordinates the provision of State and Federal non-technical resources to support parish response to an accident. GOHSEP also establishes the State Communications Center in an emergency and assists with operational communications between State organizations and parishes. GOHSEP coordinates implementation of the Governor's Declaration of Disaster Emergency which assists parish government in its response. GOHSEP also activates the statewide Emergency Alert System for release of statewide emergency messages.

GOHSEP receives notification of an emergency directly from Waterford 3 via the operational hotline. The GOHSEP duty station is manned on a 24-hour per day, seven-day per week basis. During non-office hours, GOHSEP is responsible for notifying the LDEQ duty officer.

- b. Governor's Press Secretary

The Governor's Press Secretary serves as the official State Spokesperson for the release of state-wide information in an emergency.

WATERFORD 3 SES EMERGENCY PLAN

5.3.2.3 Department of Public Safety and Corrections

a. Office of State Police

The Louisiana State Police (LSP) provides assistance during an emergency to parish Sheriff's Offices in the areas of law enforcement, traffic control, access control and security. In addition, LSP may be called upon to provide communications, air and ground support to assist evacuation operations and State field monitoring teams.

b. Office of Correction Services

Provides assistance to parish governments in the transportation of and security arrangement for prisoners relocated during an emergency

5.3.2.4 Department of Agriculture and Forestry

The Louisiana Department of Agriculture and Forestry serves as liaison between the State and the U.S. Department of Agriculture (USDA) for the identification and control of agricultural products contaminated during an accident. The department coordinates emergency information to the agricultural community for the protection and/or disposition of livestock and crops during an accident; coordinates with LDEQ in the sampling of soil and crops; and assists with the identification of farms and food processing facilities within the ingestion exposure pathway EPZ.

5.3.2.5 Department of Culture, Recreation and Tourism, Office of State Parks

Assists with notification and protective actions for persons using state parks located within risk areas.

5.3.2.6 Department of Education

Serves as State liaison to school boards during an emergency. Assists with providing existing food stocks for mass feeding of evacuees at schools designated as shelters.

5.3.2.7 Department of Social Services

a. Office of Family Support

Responsible for registration, placement, feeding, clothing and general care of evacuees. Coordinates department resources to assist the elderly, handicapped and others with special needs during an evacuation. Assists with the identification of disabled persons prior to an emergency. Coordinates private agency support such as American Red Cross.

b. Office of Community Services

Provides for the assistance and special care for the elderly, handicapped and others with special needs during evacuations or at local shelter facilities in support areas.

WATERFORD 3 SES EMERGENCY PLAN

5.3.2.8 Department of Labor, Office of Employment Security

Analyzes impact of an accident on employment. Administers Disaster Unemployment Assistance Program.

5.3.2.9 Department of Health and Hospitals

a. Office of Public Health

In coordination with FDA, provides for the collection of water, milk, sewage and food samples from affected areas during an emergency. Along with USDA and LDEQ, provides for diversion and disposition of contaminated food, crops and milk.

Provides for the acquisition of radioprotective drugs used by emergency workers. Assists with notification of downstream water purification facilities. Provides for sanitary inspection of shelter facilities used to house evacuees.

b. Office of Hospitals, Bureau of Emergency Medical Services

Supports relocation of hospital patients in an emergency. Provides mass emergency medical transportation resources. Provides identification and coordination of medical resources.

5.3.2.10 Department of Transportation and Development

Coordinates the use of mass transportation resources to support an evacuation. Provides aerial surveillance and warning support as necessary in coordination with GOHSEP. Provides for road clearance and maintenance during an evacuation. Assists with traffic surveillance to determine traffic flow patterns during an evacuation. Provides barricades and road posting devices as needed. Activates fuel distribution stations as needed.

5.3.2.11 Department of Wildlife and Fisheries

Provides assistance in warning wilderness and wetland areas. Provides communications and transportation support as necessary during an accident. Assists LDEQ with sampling of terrestrial and aquatic environs.

5.3.2.12 Department of Natural Resources, Office of Conservation

Provides for motor fuel allocation within the risk area when Governor's State of Emergency Declaration is made.

5.3.2.13 Military Department

Provides manpower and vehicles to support transportation, traffic control, access control, security, transportation, highway clearance and maintenance and evacuation fuel distribution. Provides communications support for State and Parish field operations.

5.3.2.14 Department of Commerce, Office of Commerce and Industry

Serves as liaison to commercial and industrial establishments. Provides notification assistance to these establishments.

WATERFORD 3 SES EMERGENCY PLAN

5.3.3 Federal Agencies

Should an emergency situation or accident occur at the Waterford site, notifications and requests for assistance are made by Entergy Operations, Inc. to various Federal agencies and organizations. Details for notifying and making reports to these agencies, as well as requesting and obtaining assistance, are provided in the Emergency Plan Implementing Procedures. The following agencies may, as the situation warrants, require notification and act to provide assistance if requested:

5.3.3.1 Nuclear Regulatory Commission, Region IV. The anticipated arrival times for NRC Region IV personnel is approximately 3-4 hours and for the NRC mobile laboratory is 12-14 hours.

Air transportation of responding personnel and equipment can be conveniently accommodated at New Orleans Naval Air Station. Office space and communication facilities are provided for NRC representatives in the Technical Support Center and Emergency Operations Facility.

5.3.3.2 Department of Energy (DOE) - The DOE in Region 2 has agreed to provide radiological assistance on request. Appendix C details the provisions of this agreement. The anticipated arrival time for DOE personnel is approximately 6-8 hours and for the DOE mobile laboratory is 14-16 hours.

5.3.4 Local Agencies

During the operation of Waterford 3 it may become necessary to request and utilize assistance provided by local organizations and agencies. Since it is essential that support from these organizations and agencies be available, the following agreements and understandings have been made:

5.3.4.1 Support Hospital - Ochsner Clinic Foundation

Ochsner Clinic Foundation arrangements for managing medical emergencies involving radiation include configuration of an isolated radiation emergency area adjacent to the emergency department and utilization of a designated radiation management team for patient treatment/decontamination.

Details of Ochsner Clinic Foundation's capabilities are presented in Appendix I.

5.3.4.2 Support Hospital - West Jefferson Medical Center

West Jefferson Medical Center arrangements for managing medical emergencies involving radiation include configuration of an isolated radiation emergency area adjacent to the emergency department and utilization of a designated radiation management team for patient treatment/decontamination.

Details of West Jefferson Medical Center's capabilities are presented in Appendix I.

WATERFORD 3 SES EMERGENCY PLAN

5.3.4.3 Nearest Available Medical Facility - St. Charles Parish Hospital

As a parish general hospital, St. Charles Parish Hospital is capable of managing medical emergencies uncomplicated by radiation exposure or contamination.

Details of St. Charles Parish Hospital's capabilities are presented in Appendix I.

5.3.4.4 Ambulance Service

a. St. Charles Parish Hospital Emergency Medical Service

Details are presented in Appendix I.

b. Ochsner Flight Care helicopter ambulance service

Details are presented in Appendix I.

5.3.4.5 Hahnville Volunteer Fire Department - When requested by the Emergency Director/Emergency Plant Manager, the Hahnville Fire Department provides fire fighting assistance at Waterford 3.

5.3.4.6 St. Charles Parish Sheriff's Office - When requested, the St. Charles Parish Sheriff's Office provides:

- a. Control of traffic for the duration of the emergency on that portion of Louisiana Highway 18 that traverses the Waterford 3 exclusion area.**
- b. Assistance to Entergy Operations, Inc., in keeping members of the general public from entering the Waterford 3 exclusion area.**
- c. Assistance in security-related matters as detailed in the Waterford 3 Security Plan.**

5.3.4.7 United States Coast Guard - Upon notification by Waterford 3 of an emergency requiring vessel traffic exclusion, the Captain of the Port of New Orleans, Louisiana exercises its authority to control marine traffic through the establishment of a Safety Zone in the immediate area. The U.S. Coast Guard, at its discretion, dictates the type and degree of control consistent with the totality of circumstances which exist at the time of the request.

5.3.4.8 Union Pacific Railroad Company - When requested, the Union Pacific Railroad Company controls rail traffic through the exclusion area.

WATERFORD 3 SES EMERGENCY PLAN

5.4 Manpower and Timing Considerations

The manpower staffing and augmentation capabilities for the Waterford 3 Emergency Response Organization are illustrated in Table 5-1.

Shift personnel are considered to be immediately available to respond to the emergency situation and initiate emergency response actions from the Control Room and Technical Support Center. Other station personnel assigned to emergency response positions may be offsite at the time of initiating response actions. The staffing and augmentation capabilities are as follows. The expectation is that emergency response personnel will respond as quickly as possible but no later than the maximum times listed below.

The Technical Support Center (TSC) and Operational Support Center (OSC) are manned by designated station personnel and NRC inspectors. TSC and OSC may be activated at any time, and shall be activated at an Alert, Site Area Emergency or General Emergency declaration. Once activated, the TSC and OSC shall become operational as soon as possible after declaration of any of these emergency classifications. When facility minimum staffing can be accomplished with onsite personnel, it is the goal to become operational within 45 minutes. Otherwise offsite personnel required for minimum staffing shall provide shift augmentation in 75 minutes and be fully operational in 90 minutes.

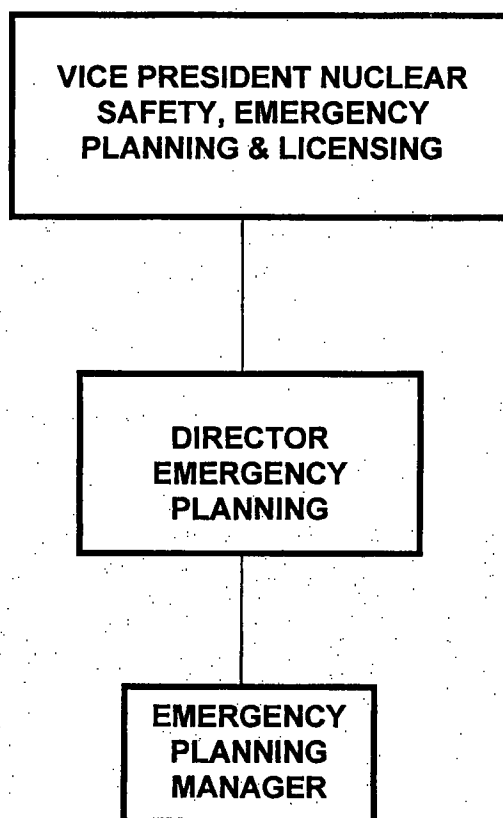
The Emergency Operations Facility (EOF) is manned by designated Waterford 3 personnel and State officials. The EOF may be activated at any time, and shall be activated at an Alert, Site Area Emergency or General Emergency declaration. Once activated, the EOF shall become operational as soon as possible after declaration of any of these emergency classifications. When facility minimum staffing can be accomplished with onsite personnel, it is the goal to become operational within 45 minutes. Otherwise offsite personnel required for minimum staffing shall provide shift augmentation in 75 minutes and be fully operational in 90 minutes.

The Joint Information Center (JIC) is staffed by designated Entergy Louisiana, LLC and Entergy Operations, Inc., personnel. The JIC is also available to Federal, State and local officials for the release of information pertinent to the emergency. JIC personnel report to their facility within two (2) hours depending on their location at the time of the notification.

W3 EMERGENCY PLAN

FIGURE 5-1A

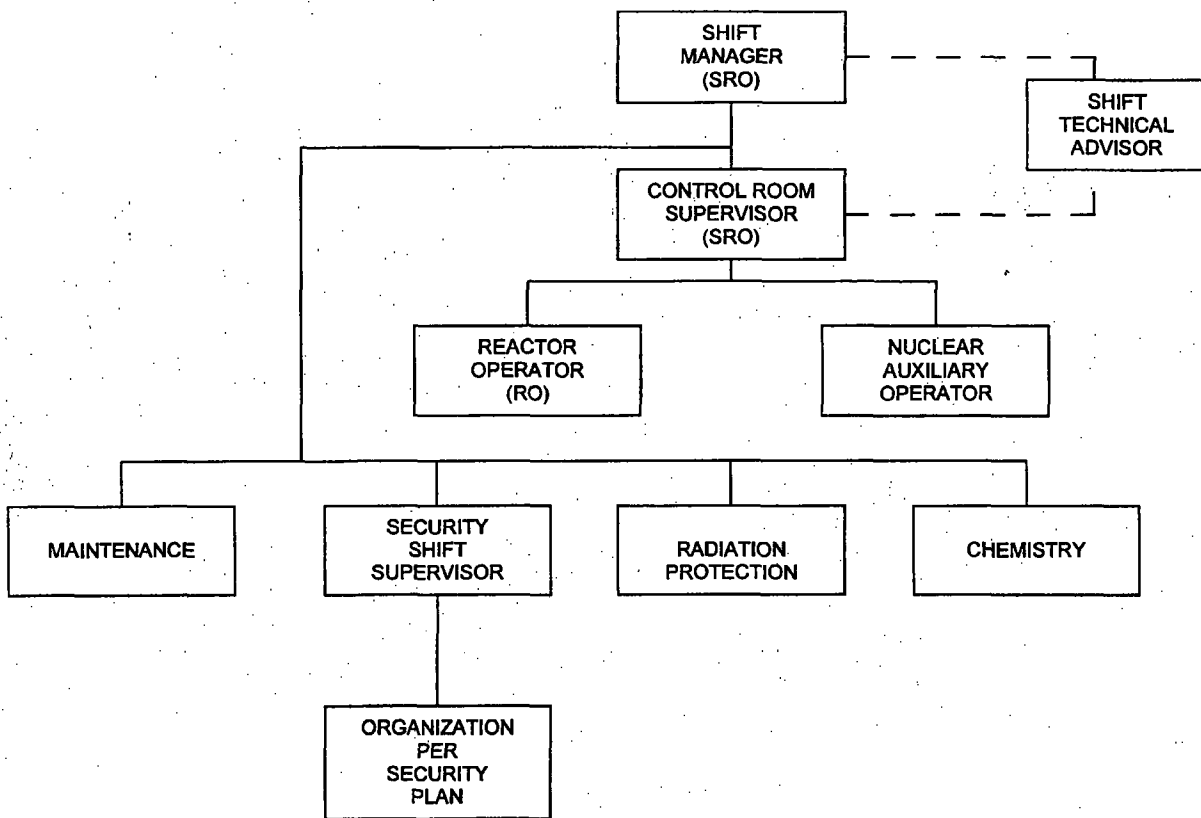
ENTERGY OPERATIONS, INC. WATERFORD 3 ORGANIZATION



W3 SES EMERGENCY PLAN

FIGURE 5-1B

NORMAL SHIFT ORGANIZATION



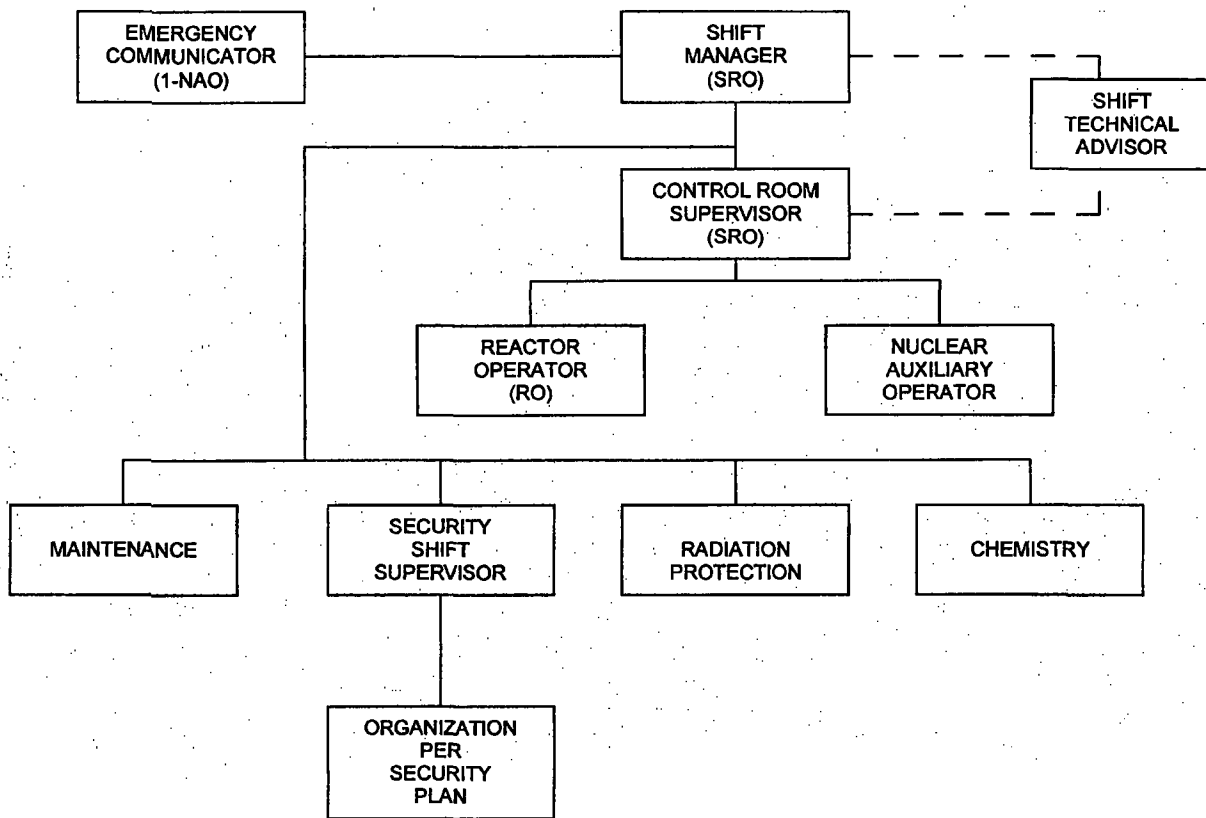
LEGEND

SRO	-SENIOR REACTOR OPERATOR
RO	-REACTOR OPERATOR
—	-COMMAND/REPORTING
- - -	-COMMUNICATIONS/ADVISORY

W3 SES EMERGENCY PLAN

FIGURE 5-1C

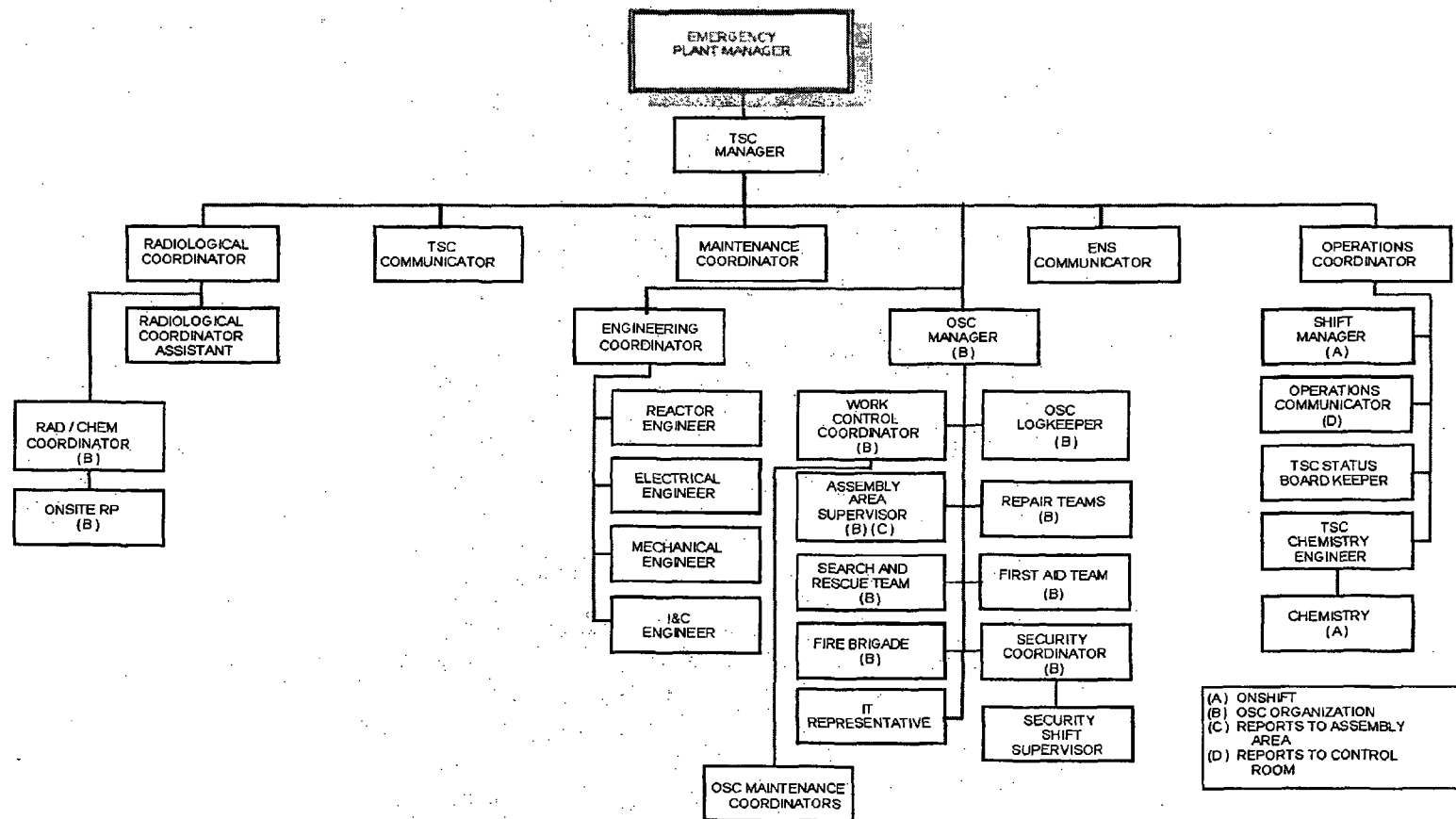
ONSHIFT EMERGENCY ORGANIZATION



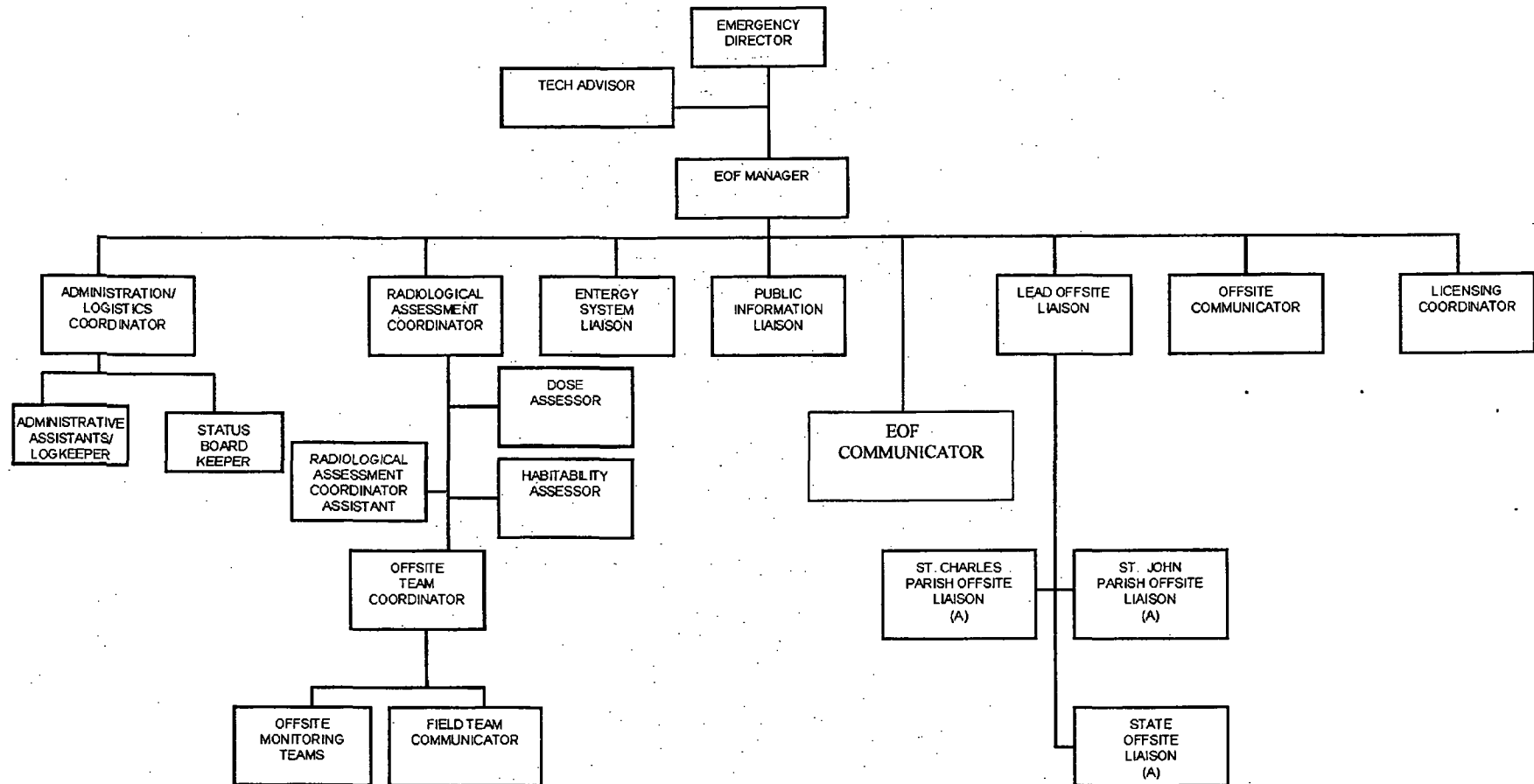
LEGEND

SRO	-SENIOR REACTOR OPERATOR
RO	-REACTOR OPERATOR
NAO	-NUCLEAR AUXILIARY OPERATOR
—	-COMMAND/REPORTING
- - -	-COMMUNICATIONS/ADVISORY

**W3 SES EMERGENCY PLAN
FIGURE 5-2
ONSITE EMERGENCY ORGANIZATION**

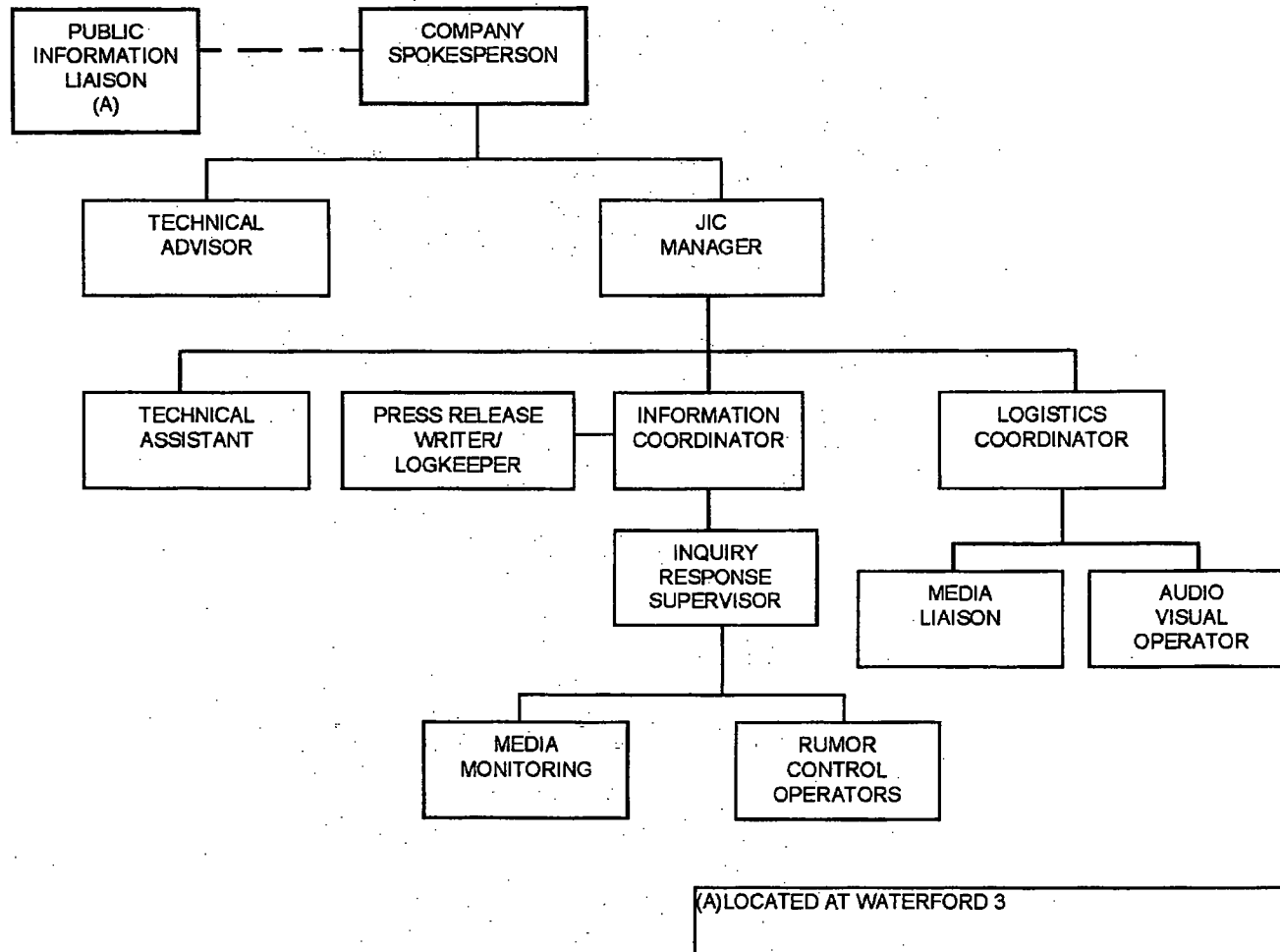


**W3 SES EMERGENCY PLAN
FIGURE 5-3
NEARSITE EMERGENCY ORGANIZATION**

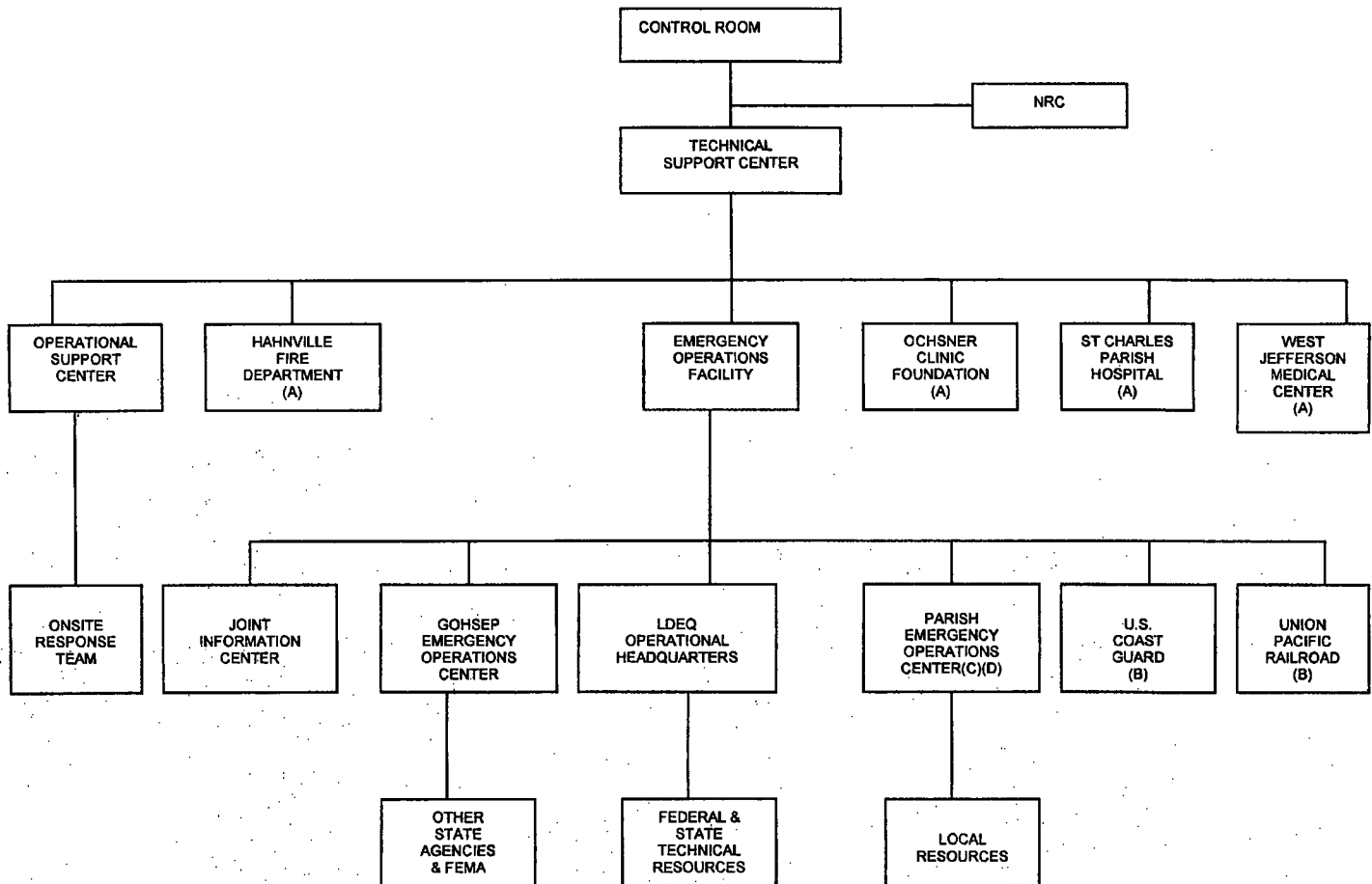


(A) LOCATED AT THE PARISH OR STATE EOC.

W3 SES EMERGENCY PLAN
FIGURE 5-4
JOINT INFORMATION CENTER ORGANIZATION



W3 SES EMERGENCY PLAN
FIGURE 5-5
EMERGENCY ORGANIZATION INTERFACES



- (A) ADDITIONAL OFFSITE ASSISTANCE
 (B) SECONDARY NOTIFICATION
 (C) ST JOHN THE BAPTIST PARISH CIVIL DEFENSE/SHERIFF
 (D) ST CHARLES PARISH EMERGENCY PREPAREDNESS/SHERIFF

FEDERAL & STATE TECHNICAL RESOURCES

- (1) DEPT. OF PUBLIC SAFETY & CORRECTIONS
 (2) DEPT OF WILDLIFE & FISHERIES
 (3) DEPT OF HEALTH & HOSPITALS
 (4) DEPT OF AGRICULTURE
 (5) NRC
 (6) DOE
 (7) EPA

LOCAL RESOURCES

- (1) FIRE DEPARTMENTS
 (2) AMBULANCE SERVICE
 (3) TRANSPORTATION SERVICES

W3 SES EMERGENCY PLAN

TABLE 5-1

MINIMUM STAFFING AND AUGMENTATION CAPABILITIES FOR EMERGENCIES

Major Functional Area	Emergency Tasks	Position Title Or Expertise	Location	On Shift	Capability for Additions
					75 Min
Plant Operations and Assessment of Operational Aspects	Emergency Direction and Control	Shift Manager (SRO)	CR	1	--
		TSC Duty Emergency Plant Manager	TSC	--	1(e)
		Control Room Supervisor (SRO)	CR	1	--
		Reactor Operator (RO)	CR	2	--
		Nuclear Auxiliary Operator	CR	5	--
		Remote Shutdown Operator	CR	2(b)*	--
	Firefighting, firefighting communications	Shift Personnel (Operations)	CR	5(a)	Provided by offsite fire department personnel
	Technical Support and Core/Thermal Hydraulics(d)	Shift Technical Advisor	CR	1(c)	--
Notification/Communication	Core/Thermal Hydraulics	TSC Reactor Engineer	TSC	--	1(e)
	Offsite Notifications (State, Local, Federal) and maintain communications, Notification of plant On-call emergency personnel	Emergency Communicator	CR	1	--
		EOF Offsite Communicator <u>OR</u> ENS Communicator	CR/EOF	--	3(e)
Radiological Accident Assessment and Support of Operational Accident Assessment	EOF Direction and Control	Emergency Director	EOF	--	1(e)
	Offsite Dose Assessment	Shift Personnel (Operations)	CR	1(a)	--
		Radiological Assessment Coordinator <u>OR</u> Dose Assessor <u>OR</u> Offsite Team Coordinator	EOF	--	1(e)
	Chemistry/Radio-Chemistry	Chemistry Technician	OSC	1	1 (e)
Plant System Engineering	Technical Support	Electrical Engineer	TSC	--	1 (e)
		Mechanical Engineer	TSC	--	1 (e)
Repair and Corrective Actions		Mechanical Maintenance	OSC	--	2 (e)
		Electrical Maintenance	OSC	1(f)	2 (e)
		I&C Maintenance	OSC	1(f)	2 (e)

THE CONTROL ROOM (SHIFT) RESPONSIBILITIES WERE REVISED TO SATISFY THE REQUIREMENTS OF THE ON-SHIFT ERO STAFFING ANALYSIS CONDUCTED IN ACCORDANCE WITH NEI 10-05 AND REQUIRED BY 10CFR50 APPENDIX E, SECTION IV.A AS DOCUMENTED IN THE WATERFORD 3 STATION ON-SHIFT STAFFING ANALYSIS FINAL REPORT REVISION 0 DECEMBER 2012.

*THE ADDITION OF THE REMOTE SHUTDOWN OPERATORS TO MINIMUM STAFFING IS EFFECTIVE ON JANUARY 18, 2013

W3 SES EMERGENCY PLAN

TABLE 5-1

MINIMUM STAFFING AND AUGMENTATION CAPABILITIES FOR EMERGENCIES

Major Functional Area	Emergency Tasks	Position Title or Expertise	Location	On Shift	Capability for Additions
					75 Min
Radiation Protection	-Access Control -HP coverage for repair, corrective actions, search and rescue/first-aid, and firefighting -Personnel monitoring -Dosimetry -Surveys (offsite, onsite, and in-plant surveys on as-needed basis only)	Health Physics Technician	OSC	1(g)	11(b) (e)
		Radiation Protection Department Personnel		1(b)	
Rescue / First aid		Emergency First Aid Team	OSC	2(a)	Provided by support hospitals
Security	Security, personnel accountability	Security Personnel			(See Security Plan)
			Totals:	17	27

Notes:

- (a) May be provided by Shift Personnel assigned other duties.
- (b) Must be trained for the Emergency Task being performed.
- (c) STA staffing in accordance with Waterford 3 Technical Specification.
- (d) Core/Thermal Hydraulics is part of normal STA duties as listed in the Updated Final Safety Analysis Report and Technical Specifications.
- (e) These personnel will report and augment shift personnel in 75 minutes (45 minutes if onsite).
- (f) Maintenance onshift staffing includes one technician from either Electrical Maintenance or I&C Maintenance.
- (g) The Health Physics Technician onshift is a qualified Senior Health Physics Technician.

THE CONTROL ROOM (SHIFT) RESPONSIBILITIES WERE REVISED TO SATISFY THE REQUIREMENTS OF THE ON-SHIFT ERO STAFFING ANALYSIS CONDUCTED IN ACCORDANCE WITH NEI 10-05 AND REQUIRED BY 10CFR50 APPENDIX E, SECTION IV.A AS DOCUMENTED IN THE WATERFORD 3 STATION ON-SHIFT STAFFING ANALYSIS FINAL REPORT REVISION 0 DECEMBER 2012.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-2

EMERGENCY FUNCTION AND RESPONSIBILITY CHART

(A) ENTERGY
 (B) ST. CHARLES PARISH
 (C) ST. JOHN PARISH
 (D) LDEQ
 (E) GOHSEP
 (F) STATE AGENCIES

(G) SUPPORT PARISHES
 (H) HAHNVILLE FIRE COMPANY
 (I) OCHSNER CLINIC FOUNDATION/WEST JEFF. MED. CENTER
 (J) ST. CHARLES PARISH AMBULANCE/HOSPITAL
 (K) OCHSNER FLIGHT CARE

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
PLANT CONTROL	P										
OFFSITE DIRECTION & CONTROL		P	P	S	S						
NOTIFICATION	P	S	S	S	S	S	S				
COMMUNICATIONS	P	P	P	S	P	S	S				
PUBLIC ALERT/NOTIFICATION		P	P		S	S					
PUBLIC INFORMATION	P	P	P	P	P						
ACCIDENT ASSESSMENT	P			S							
PUBLIC HEALTH		S	S			P					
SOCIAL SERVICES		S	S			P	S				
ONSITE FIRE & RESCUE	P	S						S			
TRAFFIC CONTROL		P	P			S	S				
ACCESS CONTROL		P	P			S	S				
EMERGENCY MEDICAL SERVICES		S	S			S			P	P	P
LAW ENFORCEMENT		P	P			S					
TRANSPORTATION		P	P				S				
PROTECTIVE RESPONSE	S	P	P	S	S						

P = PRIMARY

S = SECONDARY

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-2 (Continued)

EMERGENCY FUNCTION AND RESPONSIBILITY CHART

- | | |
|--|---|
| (A) ENTERGY
(B) ST. CHARLES PARISH
(C) ST. JOHN PARISH
(D) LDEQ
(E) GOHSEP
(F) STATE AGENCIES | (G) SUPPORT PARISHES
(H) HAHNVILLE FIRE COMPANY
(I) OCHSNER CLINIC FOUNDATION/WEST JEFF. MED.CENTER
(J) ST. CHARLES PARISH AMBULANCE/HOSPITAL
(K) OCHSNER FLIGHT CARE |
|--|---|

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
RADIOLOGICAL EXPOSURE CONTROL	P	S	S	P	S	S	S				
FOOD & WATER PURITY				P		S					
SHELTER & CARE						S	P				
FIELD SAMPLING	P			P		S					
HIGHWAY MAINTENANCE		P	P			S					
SECURITY	P	S	S			S					
FUEL DISTRIBUTION		S	S			P					
POWER RESTORATION	P	S	S			S					
OFFSITE RECOVERY		P	P	S	S	S	S	S	S	S	
EMERGENCY MEDICAL TRANSPORTATION									S	P	S
ACCIDENT CLASSIFICATION	P										
PLANT OPERATIONS	P										
POWER SUPPLY	P										
LIABILITY & CLAIMS	P				S						

P = PRIMARY

S = SECONDARY

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-3
FACILITY RESPONSIBILITIES

ACTIVITY	CONTROL ROOM	TSC	OSC	EOF	JOINT INFORMATION CENTER
Plant Control and Manipulations	P				
Management of Plant Operations	P(1)	P			
Overall Emergency Response Management	P(2)			P	
Management of Entergy Resources	P(2)			P	
In-Plant And Onsite Radiological Monitoring	P(1)	P	S		
Offsite Radiological Monitoring				P	
Dose Projections	P(2)			P	
Public Information					P
Approval of Technical Content of Information Releases				P	S
Approval of Non-Technical Content of Information Releases				P	S
Rumor Control					P
Technical Assessment		P		S	
Event Classification	P(2)			P	
Initial Offsite Notifications	P				
Follow-up Offsite Notifications/Communications	P(2)			P	
Logistics Support				P	
Site Security	P(1)	S	P	S	
Coordination of Security Matters with Offsite Law Enforcement Officials	P(1)	S	P	S	

- P - Primary Responsibility
 S - Support Responsibility
 (1) - Until relieved by the Onsite Organization
 (2) - Until relieved by the EOF

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-3 (Continued)
FACILITY RESPONSIBILITIES

ACTIVITY	CONTROL ROOM	TSC	OSC	EOF	JOINT INFORMATION CENTER
Coordination of Offsite Traffic Control with Offsite Law Enforcement Officials	P(1)		P(2)	P	
Protective Action Recommendations	P(2)			P	
Emergency Repair/Operations		S	P		
Coordination with Offsite Officials	P(2)			P	
Power Production and Distribution				P*	
Financial Support				P	
Coordination of Technical Information with Offsite EOCs				P	
Coordination of Non-Technical Information Offsite				S	P
Procurement and Contracting				P	
Handling Insurance Claims				P	
Transportation Coordination				P	
Governmental Liaison					P(3)
Direct Recovery Operation	P(1)			P	

- P - Primary Responsibility
- S - Support Responsibility
- (1) - Until relieved by the Onsite Organization
- (2) - Until relieved by the EOF
- (3) - Coordinated with Corporate Emergency Center
- * - The EOF has primary responsibility to coordinate these activities as they relate to the Waterford 3 site emergency. The primary responsibility for performing power production, power restoration and distribution activities lies with other Entergy Business Units coordinated through the EOF.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-4

CONTROL ROOM (SHIFT) RESPONSIBILITIES

- | | |
|--|-------------------------------------|
| (A) EMERGENCY DIRECTOR (SHIFT MANAGER) | (F) RADIATION PROTECTION TECHNICIAN |
| (B) CONTROL ROOM SUPERVISOR | (G) CHEMISTRY TECHNICIAN |
| (C) REACTOR OPERATORS | (H) MAINTENANCE TECHNICIAN(S) |
| (D) NUCLEAR AUXILIARY OPERATORS | (I) SECURITY |
| (E) SHIFT TECHNICAL ADVISOR | (J) REMOTE SHUTDOWN OPERATORS+ |

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
INITIAL ACCIDENT EVALUATION AND ASSESSMENT	P	S	S		S					
MANAGEMENT OF PLANT OPERATIONS	P	S								
OVERALL EMERGENCY RESPONSE MANAGEMENT	P	S								
EVENT RECOGNITION		S	P	S						
EVENT CLASSIFICATION	P	S			S					
EMERGENCY RESPONSE ORGANIZATION ACTIVATION OF ADDITIONAL RESOURCES	P	S		S						
CONTACT DUTY PLANT MANAGER	P	S								
OFFSITE PROTECTIVE ACTION RECOMMENDATIONS	P	S								
ONSITE PROTECTIVE ACTIONS	P	S								
PLANT CONTROL & OPERATIONS		P	S	S						P
DOSE PROJECTIONS	P	S	S	S	S	S				
ENGINEERING ANALYSIS & REACTOR SAFETY		P	S		A					
FIRE BRIGADE**				P***						

- P - PRIMARY
 S - SECONDARY
 A - TECHNICAL ADVISOR FOR REACTOR SAFETY CONSIDERATIONS
 * - AS DIRECTED

** - PRIORITY FOR ASSIGNMENTS WILL BE MADE BY THE EMERGENCY DIRECTOR WHEN CONFLICTS ARISE.

*** AS A MINIMUM THE FIRE BRIGADE LEADER WILL BE A FULLY QUALIFIED LEVEL A NUCLEAR AUXILIARY OPERATOR (NAO).

THE CONTROL ROOM (SHIFT) RESPONSIBILITIES WERE REVISED TO SATISFY THE REQUIREMENTS OF THE ON-SHIFT ERO STAFFING ANALYSIS CONDUCTED IN ACCORDANCE WITH NEI 10-05 AND REQUIRED BY 10CFR50 APPENDIX E, SECTION IV.A AS DOCUMENTED IN THE WATERFORD 3 STATION ON-SHIFT STAFFING ANALYSIS FINAL REPORT REVISION 0 DECEMBER 2012.

+THE ADDITION OF THE REMOTE SHUTDOWN OPERATORS TO MINIMUM STAFFING AND THE TRANSFER OF OFFSITE COMMUNICATIONS FROM THE SHIFT TECHNICAL ADVISORS TO THE REMOTE SHUTDOWN OPERATORS ARE EFFECTIVE ON JANUARY 18, 2013.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-4 (Continued)

CONTROL ROOM (SHIFT) RESPONSIBILITIES

- | | |
|--|-------------------------------------|
| (A) EMERGENCY DIRECTOR (SHIFT MANAGER) | (F) RADIATION PROTECTION TECHNICIAN |
| (B) CONTROL ROOM SUPERVISOR | (G) CHEMISTRY TECHNICIAN |
| (C) REACTOR OPERATORS | (H) MAINTENANCE TECHNICIAN(S) |
| (D) NUCLEAR AUXILIARY OPERATORS | (I) SECURITY |
| (E) SHIFT TECHNICAL ADVISOR | (J) REMOTE SHUTDOWN OPERATORS+ |
| (F) RADIATION PROTECTION TECHNICIAN | |

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
EMERGENCY COMMUNICATIONS				P	+					
INITIAL & FOLLOWUP OFFSITE NOTIFICATION/COMMUNICATIONS				P						
INPLANT AND ONSITE RADIOLOGICAL MONITORING/HEALTH PHYSICS						P				
CHEMISTRY							P			
FIRST AID TEAM**						S	P			
REPAIR OPERATIONS								P*		
SITE SECURITY/PERSONNEL ACCOUNTABILITY									P	
COORDINATION OF SECURITY MATTERS WITH OFFSITE LAW ENFORCEMENT OFFICIALS									P	
COORDINATION OF OFFSITE TRAFFIC CONTROL WITH OFFSITE LAW ENFORCEMENT OFFICIALS									P	

- P - PRIMARY
 S - SECONDARY
 A - TECHNICAL ADVISOR FOR REACTOR SAFETY CONSIDERATIONS
 * - AS DIRECTED

** - PRIORITY FOR ASSIGNMENTS WILL BE MADE BY THE EMERGENCY COORDINATOR WHEN CONFLICTS ARISE.

*** AS A MINIMUM THE FIRE BRIGADE LEADER WILL BE A FULLY QUALIFIED LEVEL A NUCLEAR AUXILIARY OPERATOR (NA0).

THE CONTROL ROOM (SHIFT) RESPONSIBILITIES WERE REVISED TO SATISFY THE REQUIREMENTS OF THE ON-SHIFT ERO STAFFING ANALYSIS CONDUCTED IN ACCORDANCE WITH NEI 10-05 AND REQUIRED BY 10CFR50 APPENDIX E, SECTION IV.A AS DOCUMENTED IN THE WATERFORD 3 STATION ON-SHIFT STAFFING ANALYSIS FINAL REPORT REVISION 0 DECEMBER 2012.

+THE ADDITION OF THE REMOTE SHUTDOWN OPERATORS TO MINIMUM STAFFING AND THE TRANSFER OF OFFSITE COMMUNICATIONS FROM THE SHIFT TECHNICAL ADVISORS TO THE REMOTE SHUTDOWN OPERATORS ARE EFFECTIVE ON JANUARY 18, 2013.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-5
TECHNICAL SUPPORT CENTER RESPONSIBILITIES

(A) EMERGENCY PLANT MANAGER
(B) TSC MANAGER
(C) TSC COMMUNICATOR
(D) RADIOLOGICAL COORDINATOR
(E) RADIOLOGICAL COORDINATOR ASSISTANT
(F) MAINTENANCE COORDINATOR
(G) ENGINEERING COORDINATOR

(H) TSC ENGINEERS
(I) OPERATIONS COORDINATOR
(J) OPERATIONS COMMUNICATOR
(K) TSC CHEMISTRY ENGINEER
(L) ENS COMMUNICATOR
(M) STATUS BOARD KEEPER

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
MANAGEMENT OF PLANT OPERATIONS	P	S											S
OVERALL EMERGENCY RESPONSE MANAGEMENT	P	S											
ACTIVATION/OPERATION/DEACTIVATION OF TSC/OSC	P	S											
ONSITE PROTECTIVE ACTIONS	P			S									
COORDINATION OF EMERGENCY TEAMS	P	S				S							
AUTHORIZE EXPOSURE IN EXCESS OF 10CFR20	P												
EMERGENCY REPAIR/OPERATIONS	P	S				S	S	S	S				
REQUEST OFFSITE ASSISTANCE	P	S											
DIRECT RECOVERY OPERATIONS	S	S											
RECORD OF EMERGENCY PLANT MANAGER ACTIONS (TSC LOG)/TSC ACTIVITIES	P		S										

P - PRIMARY RESPONSIBILITY
S - SUPPORT RESPONSIBILITY

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-5 (Continued)
TECHNICAL SUPPORT CENTER RESPONSIBILITIES

(A) EMERGENCY PLANT MANAGER
(B) TSC MANAGER
(C) TSC COMMUNICATOR
(D) RADIOLOGICAL COORDINATOR
(E) RADIOLOGICAL COORDINATOR ASSISTANT
(F) MAINTENANCE COORDINATOR
(G) ENGINEERING COORDINATOR

(H) TSC ENGINEERS
(I) OPERATIONS COORDINATOR
(J) OPERATIONS COMMUNICATOR
(K) TSC CHEMISTRY ENGINEER
(L) ENS COMMUNICATOR
(M) STATUS BOARD KEEPER

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
COORDINATE TSC STAFFING		P											
COORDINATION OF TSC ENGINEERING ACTIVITIES		P					S						
COORDINATION OF TSC AND OSC ACTIVITIES		P				S							
ENSURE PROPER MAINTENANCE OF ALL TSC LOGS	P	S	S										
OSC/TSC/EOF COMMUNICATIONS			P										
INPLANT & ONSITE RADIOLOGICAL MONITORING/HEALTH PHYSICS				P	S								
EOF RADIOLOGICAL ASSESSMENT COORDINATOR COMMUNICATIONS				P	S								
MANAGEMENT OF SITE RADIATION PROTECTION ACTIVITIES				P	S								

P - PRIMARY RESPONSIBILITY
S - SUPPORT RESPONSIBILITY

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-5 (Continued)
TECHNICAL SUPPORT CENTER RESPONSIBILITIES

(A) EMERGENCY PLANT MANAGER
(B) TSC MANAGER
(C) TSC COMMUNICATOR
(D) RADIOLOGICAL COORDINATOR
(E) RADIOLOGICAL COORDINATOR ASSISTANT
(F) MAINTENANCE COORDINATOR
(G) ENGINEERING COORDINATOR

(H) TSC ENGINEERS
(I) OPERATIONS COORDINATOR
(J) OPERATIONS COMMUNICATOR
(K) TSC CHEMISTRY ENGINEER
(L) ENS COMMUNICATOR
(M) STATUS BOARD KEEPER

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
TECHNICAL ASSESSMENT							S	S	P				
MAINTAIN RC LOG, STATUS BOARDS, COMMUNICATIONS					P								
MANAGEMENT LIAISON FOR PLANT OPERATIONS ACTIVITIES									P	S			
OPERATION OF SDS							P(1)	S	P(1)				
TSC PERSONNEL ACCOUNTABILITY		P	S										
COORDINATION OF EMERGENCY CHEMISTRY ACTIVITIES									P		S		
MAINTAIN CONTINUOUS CONTACT WITH THE NRC												P	

P - PRIMARY RESPONSIBILITY
S - SUPPORT RESPONSIBILITY

(1) - RESPONSIBILITIES ARE SHARED AMONG THE OPERATIONS COORDINATOR, ENGINEERING COORDINATOR AND TECHNICAL ASSESSMENT ENGINEERS BECAUSE THESE POSITIONS HAVE SDS CONTROL KEYBOARDS.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-6

OPERATIONAL SUPPORT CENTER RESPONSIBILITIES

(A) OSC MANAGER

(B) WORK CONTROL COORDINATOR

(C) OSC LOGKEEPER

(D) ASSEMBLY AREA SUPERVISOR

(E) RAD/CHEM COORDINATOR

(F) IN-PLANT RADIATION PROTECTION TECHNICIANS

(G) FIRE BRIGADE

(H) FIRST AID TEAM

(I) EMERGENCY REPAIR/OPERATIONS TEAM

(J) SEARCH AND RESCUE TEAM

(K) OSC MAINTENANCE COORDINATORS

(L) SECURITY COORDINATOR

(M) OSC IT REPRESENTATIVE

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
ACTIVATION/OPERATION OF OSC	P	S											
FORMATION, BRIEFING, DEBRIEFING OF EMERGENCY TEAMS	P				S	S					P	S	
COMMUNICATIONS	P		S										
OSC LOG			P										
COORDINATION OF OFFSITE ASSEMBLY AREA ACTIVITIES				P									
IN-PLANT AND ONSITE RADIOLOGICAL MONITORING					P	S							
COORDINATION OF IN-PLANT RADIOLOGICAL CONTROLS					P	S							
TSC RADIOLOGICAL COORDINATOR COMMUNICATIONS					P	S							
FORMATION, BRIEFING, DISPATCH OF RADIOLOGICAL MONITORING TEAMS	S	S			P								
EMERGENCY TEAM RADIATION PROTECTION SUPPORT					P	S							
PROVIDE RADIATION PROTECTION EQUIPMENT FOR ASSESSMENT ACTIVITIES					P	S							
FIRE BRIGADE							P						
FIRST AID TEAM								P					
EMERGENCY REPAIR/OPERATIONS									P				
SEARCH AND RESCUE OPERATIONS										P			
SITE SECURITY/PERSONNEL ACCOUNTABILITY												P	
COORDINATION WITH OFFSITE LAW ENFORCEMENT OFFICIALS												P	
COORDINATE COMMUNICATION SYSTEMS SUPPORT											S		P
COORDINATE COMPUTER APPLICATIONS SUPPORT											S		P

P - PRIMARY RESPONSIBILITY

S - SUPPORT RESPONSIBILITY

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-7

EMERGENCY OPERATIONS FACILITY RESPONSIBILITIES

(A) EMERGENCY DIRECTOR
(B) ADMINISTRATION/LOGISTICS COORDINATOR
(C) ADMINISTRATIVE ASSISTANT
(D) EOF COMMUNICATOR
(E) RADIOLOGICAL ASSESSMENT COORDINATOR*
(F) OFFSITE TEAM COORDINATOR

(G) OFFSITE TEAM COMMUNICATOR
(H) DOSE ASSESSOR
(I) EOF MANAGER
(J) EOF TECHNICAL ADVISOR
(K) LEAD OFFSITE LIAISON
(L) ENTERGY SYSTEM LIAISON

(M) PUBLIC INFORMATION LIAISON
(N) ST. JOHN PARISH LIAISON
(O) ST. CHARLES PARISH LIAISON
(P) STATE LIAISON
(Q) HABIABILITY ASSESSOR
(R) OFFSITE COMMUNICATOR

(S) LICENSING COORDINATOR

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
COORDINATION OF OVERALL EMERGENCY	P								S										
ACTIVATION AND OPERATION OF EOF	P	S	S						S										
PROTECTIVE ACTION RECOMMENDATIONS	P				S				S	S									
EVENT CLASSIFICATION	P				S				S	S									
OFFSITE RADIOLOGICAL ASSESSMENT					P	S		S											
FIELD MONITORING TEAM COORDINATION						P	S												
RADIATION PROTECTION/RADIOLOGICAL SUPPORT TO TSC					P	S													
COORDINATION OF RADIOLOGICAL ASSESSMENT WITH LDEQ					P	S													
FIELD TEAM COMMUNICATION						P	S	S											
DOSE PROJECTION CALCULATIONS						P		S											
COORDINATION OF ONSITE AND OFFSITE SUPPORT	P	S							S			S							
ENSURE THAT OFFSITE ORGANIZATIONS ARE KEPT INFORMED	P				S				S		S	S						S	S
OFFSITE COMMUNICATIONS COORDINATION									P									S	
EOF PERSONNEL SAFETY	P				S				S								S		
LIAISON AT EOF WITH NRC																			P
APPROVING THE TECHNICAL CONTENT OF EMERGENCY NEWS RELEASES	P									S			S						
COORDINATION OF TECHNICAL INFORMATION OFFSITE									S		P	S	S	S	S	S			
CR/OSC/TSC/EOF COMMUNICATIONS				P															

P - PRIMARY RESPONSIBILITY
S - SUPPORT RESPONSIBILITY

* - EOF TECHNICAL ADVISOR, RAC ASSISTANT AND STATUS BOARD KEEPER ASSIST THE EMERGENCY DIRECTOR AND RAC IN THE PERFORMANCE OF THEIR DUTIES.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-7 (Continued)

EMERGENCY OPERATIONS FACILITY RESPONSIBILITIES

(A) EMERGENCY DIRECTOR
(B) ADMINISTRATION/LOGISTICS COORDINATOR
(C) ADMINISTRATIVE ASSISTANT
(D) EOF COMMUNICATOR
(E) RADIOLOGICAL ASSESSMENT COORDINATOR*
(F) OFFSITE TEAM COORDINATOR

(G) OFFSITE TEAM COMMUNICATOR
(H) DOSE ASSESSOR
(I) EOF MANAGER
(J) EOF TECHNICAL ADVISOR
(K) LEAD OFFSITE LIAISON
(L) ENTERGY SYSTEM LIAISON

(M) PUBLIC INFORMATION LIAISON
(N) ST. JOHN PARISH LIAISON
(O) ST. CHARLES PARISH LIAISON
(P) STATE LIAISON
(Q) HABIABILITY ASSESSOR
(R) OFFSITE COMMUNICATOR

(S) LICENSING COORDINATOR

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
EOF TECHNICAL COORDINATION										P									
COORDINATING SERVICES OF OTHER TECHNICAL ORGANIZATIONS									S	S		S							
DEVELOPMENT OF EMERGENCY PROCEDURES										S									
OPERATION OF SPDS/SOUND POWERED PHONES IN EOF										S									
COORDINATING SERVICES OF OTHER ENTERGY SYSTEM BUSINESS UNITS		S							S			P							
EOF SECURITY COORDINATION		P							S			S							
PROCUREMENT OF MATERIALS, EQUIPMENT, SERVICES		P										S							
PROVIDE/DIRECT CLERICAL OR OTHER NON-TECHNICAL PERSONNEL		P																	
PROVIDE NECESSARY DRAWINGS, MANUALS, ETC.		P																	
ARRANGE FOR MEALS, LODGING, TRANSPORTATION		P										S							
MAINTAIN LOG OF EOF ACTIVITIES				P															
AUTHORIZE EXPOSURE IN EXCESS OF 10CFR20	P																		
PROTECTIVE ACTIONS FOR FOSSIL PLANT PERSONNEL												P							
ALLOCATION OF FUNDS		P										S							
COORDINATE SECURITY SUPPORT TO THE SITE		P										S							
COORDINATE INFORMATION RELEASES WITH PARISHES											P			S	S				
GOVERNMENTAL LIAISON												P							

P - PRIMARY RESPONSIBILITY
S - SUPPORT RESPONSIBILITY

* - EOF TECHNICAL ADVISOR, RAC ASSISTANT AND STATUS BOARD KEEPER ASSIST THE EMERGENCY DIRECTOR AND RAC IN THE PERFORMANCE OF THEIR DUTIES.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-8

JOINT INFORMATION CENTER (JIC) RESPONSIBILITIES

(A) COMPANY SPOKESPERSON
(B) RUMOR CONTROL OPERATORS
(C) INQUIRY RESPONSE COORDINATOR
(D) MEDIA MONITORING ASSISTANTS
(E) ENTERGY OPERATIONS, INC. HEADQUARTERS
(F) MEDIA LIAISON

(G) PARISH LIAISONS
(H) JIC MANAGER
(I) PRESS RELEASE WRITER/LOGISTICS ASSISTANTS
(J) LOGISTICS COORDINATOR
(K) AUDIO/VISUAL OPERATOR
(L) PUBLIC INFORMATION LIAISON

(M) TECHNICAL ADVISOR
(N) INFORMATION COORDINATOR
(O) TECHNICAL ASSISTANT

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)
OVERALL ACTIVATION AND OPERATION OF JIC	S							P		S					
TIMING AND CONTENT OF INFORMATION RELEASES	P							S				S	S	S	
MODERATE PRESS BRIEFINGS	P														
INFORM CORPORATE EMPLOYEES	S				P										
COORDINATE INFORMATION RELEASES WITH STATE, FEDERAL AGENCIES AND PARISHES	P						S	S						S	
RESPONSE TO MEDIA INQUIRIES	P		S	S		S		S					S	S	
RUMOR CONTROL		S	P					S							
DRAFT INFORMATION RELEASE									S			S	S	P	S
NEWS BRIEFING CENTER OPERATION						S				P	S				

P - PRIMARY RESPONSIBILITY
S - SUPPORT RESPONSIBILITY

WATERFORD 3 SES EMERGENCY PLAN

TABLE 5-8 (Continued)

JOINT INFORMATION CENTER (JIC) RESPONSIBILITIES

(A) COMPANY SPOKESPERSON
(B) RUMOR CONTROL OPERATORS
(C) INQUIRY RESPONSE COORDINATOR
(D) MEDIA MONITORING ASSISTANTS
(E) ENTERGY OPERATIONS, INC. HEADQUARTERS
(F) MEDIA LIAISON

(G) PARISH TECHNICAL REPRESENTATIVES
(H) JIC MANAGER
(I) PRESS RELEASE WRITER/LOGISTICS ASSISTANTS
(J) LOGISTICS COORDINATOR
(K) AUDIO/VISUAL OPERATOR
(L) PUBLIC INFORMATION LIAISON

(M) TECHNICAL ADVISOR
(N) INFORMATION COORDINATOR
(O) TECHNICAL ASSISTANT

ACTIVITY	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)
COORDINATE INFORMATION TO/FROM W3 SES SITE								S				P	S	S	S
ELECTRONIC EQUIPMENT OPERATION											P				
MONITOR INFORMATION BROADCASTS			P	S							S				
GENERAL JIC FACILITY SUPPORT								P	S	S					
COORDINATE NEWS BULLETINS WITH EMERGENCY DIRECTOR	P							S				S		S	
MEDIA BRIEFINGS	P									S			S		
APPROVAL OF INFORMATION RELEASES	S							S				S			
GOVERNMENTAL LIAISON	S				P										

P - PRIMARY RESPONSIBILITY
S - SUPPORT RESPONSIBILITY

WATERFORD 3 SES EMERGENCY PLAN

6.0 EMERGENCY RESPONSE MEASURES

This section identifies the specific measures that are taken for each class of emergency defined in section 4.0 of this Plan. The logic presented in this Section is used as the basis for detailed Emergency Plan Implementing Procedures that define the emergency actions to be taken for each emergency class. In all cases, emergency measures begin with (1) the recognition, assessment and declaration of the emergency and, (2) notification and activation of the appropriate agencies and portions of the emergency response organizations. Upon the emergency organization becoming operational, the following additional measures are taken: assessment actions, corrective actions, protective actions, aid to affected personnel, early warning and public information. These measures are described in the sections below.

6.1 Pre-Classification Assessment and Declaration of an Emergency

6.1.1 Recognition

Should an emergency situation (real or potential) arise, it is expected that the Reactor Operator(s) (RO) and/or the Control Room Supervisor (CRS) will be initially made aware by alarms, instrument readings, reports, the Industrial Hotline, etc. The RO(s) shall ensure that the CRS and/or Shift Manager (SM) are immediately informed. The CRS shall, if not already accomplished by the RO(s), inform the SM immediately.

6.1.2 Assessment

The SM, when informed of an emergency situation, is responsible for performing the assessment of the emergency (e.g., plant systems and reactor core status, radiological conditions, etc.). He will determine what immediate actions must be taken (e.g., use of Emergency Procedures) to ensure the safe and proper operation of the plant. The Shift Technical Advisor (STA) will advise and assist the SM on matters pertaining to the safe and proper operation of the plant with regards to nuclear safety.

6.1.3 Classification and Declaration

If the situation requires implementation of the Waterford 3 Emergency Plan, the SM acts to:

- a. Initially classify and declare the emergency as an Unusual Event, Alert, Site Area Emergency, or General Emergency as appropriate and implement the applicable Emergency Plan Implementing Instruction (Ref. Section 7.4.1, Control Room Instrumentation, and Section 4.1, Waterford 3 Classification System).
- b. Contact the TSC Duty Emergency Plant Manager and discuss the nature of the situation, the actions already underway and levels of additional anticipated support that may be required to mitigate the accident. The contact of the TSC Duty Emergency Plant Manager shall not be made if, in the opinion of the SM/ED, such a call is obviously going to hamper accomplishing the required notifications within the time limits as described in Section 6.2.1.

WATERFORD 3 SES EMERGENCY PLAN

6.1.3 (Cont'd)

- c. Ensure notification of agencies and personnel are completed as described in Section 6.2.1. The initial notification message contains information about the class of emergency, whether a release of radioactive material is taking place, potentially affected populations and areas, and protective action recommendations that may be warranted. (See Figure 6-2)

6.2 Activation of Emergency Organization

6.2.1 Notification

As stated in Section 6.1.3, upon declaration of an emergency by the SM at Waterford 3, the SM directs initial notifications to agencies and personnel be made in conjunction with notification of onshift personnel. The notification scheme is a two-phase process that entails notification of offsite agencies and activation of the Emergency Response Organization. Primary offsite agencies are required to be notified within 15 minutes of emergency declaration.

6.2.1.1 Activation of the Emergency Response Organization

Activation of the Emergency Response Organization depends largely on the nature of the incident and its classification. The Technical Support Center and Emergency Operations Facility are not activated for toxic chemical events. Offsite locations that are not affected by the toxic chemical cloud may be activated as necessary in accordance with Emergency Plan Implementing Procedures.

The level of activation of the Emergency Response Organization is determined by the SM/Emergency Director following the guidelines of Section 6.2.2.3.a. In all cases, regardless of emergency classification, the following emergency positions are notified of the emergency condition:

- a. TSC Duty Emergency Plant Manager
- b. Duty Emergency Director
- c. Duty Company Spokesperson

Activation of the Waterford 3 Emergency Response Organization is conducted in parallel with the primary notifications and is in accordance with the Emergency Plan Implementing Procedures (see Figure 6-1).

Upon declaration of an emergency, the SM directs the Emergency Communicator to activate the Emergency Response Organization to report to the plant to assist in handling the situation.

Key Entergy Operations, Inc., personnel have been designated to augment the Onshift Organization within 75 minutes of the declaration of an Alert, or higher, emergency classification. (See Table 5-1) This is an approved exception to NUREG-0654, Table B-1.

WATERFORD 3 SES EMERGENCY PLAN

6.2.1.1 (Cont'd.)

The Emergency Communicator, located in the Control Room Administrative Office, activates the Emergency Response Organization by the Emergency Paging System and an automated message system. When the Emergency Response personnel are alerted via the pager, they are trained to call in to the message system that will provide direction to them on their response.

6.2.1.2 Notification of Offsite Agencies

a. Initial Notification

Upon declaration of an emergency the SM approves a Notification Message Form similar to Figure 6-2 and directs the Emergency Communicator to initiate the offsite notifications. Initial and subsequent notifications will include appropriate protective action recommendations.

Primary offsite agencies must be notified within 15 minutes of emergency declaration, except the NRC, that must be notified immediately after the other primary agencies, not later than one hour. Secondary notifications must be made within a reasonable period of time.

If requested, continuous communications will be maintained with the NRC. Information will be provided to the NRC as requested without prior approval, except that the Emergency Director must approve the transmittal of information regarding future accident mitigation activities.

The following notifications to offsite agencies are primary notifications:

1. St. Charles Parish EOC/911 Center
2. St. John EOC/E-911 Center
3. Louisiana Department of Environmental Quality (LDEQ)
4. Governor's Office of Homeland Security & Emergency Preparedness (GOHSEP)
5. Waterford 1 and 2 SES
6. Nuclear Regulatory Commission, Bethesda, MD (NRC)

The following offsite notification is a secondary notification:

Institute of Nuclear Power Operations (INPO) at an Alert or higher classification. The Entergy Operations Headquarters is responsible for notifying INPO and ANI.

Additional secondary notifications to offsite agencies which may be affected (e.g. Union Pacific Railroad, U.S. Coast Guard) will be made as needed.

Figure 6-3 outlines primary and alternate positions for individuals designated to act in transmission and receipt of notification information.

WATERFORD 3 SES EMERGENCY PLAN

6.2.1.2a (Cont'd.)

In the event of an emergency requiring onsite response of offsite emergency agencies, contact with the St. Charles Parish Sheriff's Office, Hahnville Fire Department and St. Charles Parish Hospital will be made through the 911 Center using the PABX as the primary communications method. Contact with Ochsner Clinic Foundation and West Jefferson Medical Center will be made via the PABX.

In the event that the emergency is declared after normal working hours (0800-1700), it is the responsibility of GOHSEP to contact and notify LDEQ of the emergency; LDEQ shall then contact Waterford 3.

b. Subsequent Notification

Following initial notifications, after any change in plant status, or if new pertinent information becomes available, the SM approves the Notification Message Form, similar to Figure 6-2, and directs the Emergency Communicator to initiate notifications to the offsite agencies. In this manner, the offsite agencies are kept informed of the emergency situation as it progresses. The offsite agencies contacted are the same as for initial notification.

6.2.2 Mobilization of Emergency Organization

6.2.2.1 Control Room Supervisor/Reactor Operators

Upon declaration of an emergency by the SM, the ROs and CRS shall perform their normally assigned duties (i.e., plant operations).

6.2.2.2 Shift Manager

Once the SM has declared the emergency and has directed the appropriate notifications to be made, acting in the capacity of Emergency Director, he performs the following:

- a. Ensures that appropriate alarm (Fire or Station) is sounded. There are with limited approved exceptions during declared emergencies for severe weather when response personnel are sequestered onsite.
- b. Announces the location, type and classification of the emergency on the station public address system. There are limited exceptions during declared emergencies for severe weather when response personnel are sequestered onsite.
- c. Implements the applicable Emergency Plan Implementing Instruction and associated procedures.
- d. Activates the Onshift Emergency Organization.
- e. Recommends protective actions to appropriate offsite agencies for public protection as needed prior to arrival of the EOF Duty Emergency Director.

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6.2.2.3 TSC Duty Emergency Plant Manager

The TSC Duty Emergency Plant Manager, upon being informed that an emergency exists and has been declared by the SM, shall:

- a. Ensure that Waterford 3 emergency organizations have been activated to the extent necessary.
 1. Unusual Event - Key individuals in the onsite, nearsite and offsite emergency organizations shall be notified.
 2. Alert - The entire onsite and nearsite organization shall be activated. Key individuals in the offsite emergency organization shall be notified.
 3. Site Area Emergency - The entire onsite, nearsite and offsite emergency organizations shall be activated.
 4. General Emergency - The entire onsite, nearsite and offsite emergency organizations shall be activated.
- b. Report to the Technical Support Center and assume the position of Emergency Plant Manager in the Onsite Emergency Organization.

6.2.2.4 St. Charles Parish

- a. Waterford 3 provides initial notification to St. Charles Parish upon recognition that events have occurred which make notification appropriate.
 1. Notification will come directly to the St. Charles Parish EOC Dispatch Center. The St. Charles Parish 911 Center serves as a backup to the Dispatch Center.
 2. The EOC Dispatch Center is responsible for notifying the Emergency Preparedness Director.
- b. Upon receipt of the message on a communications circuit other than the Operational Hotline, St. Charles Parish verifies the message with Waterford 3, as deemed necessary.
- c. Following notification/verification, St. Charles Parish initiates activation of the emergency staff notification system by implementing the emergency call-out list.
- d. St. Charles Parish notifies potentially affected schools, hospitals, nursing homes, major industries, and appropriate local response organizations, as determined by the situation and emergency classification.
- e. St. Charles Parish is periodically updated as the situation warrants per the Emergency Plan Implementing Procedures.

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6.2.2.5 St. John the Baptist Parish

- a. Waterford 3 provides initial notification to St. John the Baptist Parish upon recognition that events have occurred which make notification appropriate.
 - 1. Notification will come to the St. John the Baptist Parish Emergency 911 Communications Center.
 - 2. The Emergency 911 Communications Center is responsible for notifying the Civil Defense Director. The Emergency 911 Communications Center remains active until relieved by the EOC Communications Point.
- b. Upon receipt of the message on a communications circuit other than the Operational Hotline, St. John the Baptist Parish verifies the message with Waterford 3, as deemed necessary.
- c. Following notification/verification, St. John the Baptist Parish initiates activation of the emergency staff notification system by implementation of the call-out list.
- d. St. John the Baptist Parish notifies potentially affected schools, hospitals, nursing homes, major industries, and appropriate local response organizations, as determined by the situation and the emergency classification.
- e. St. John the Baptist Parish is periodically updated as the situation warrants per Emergency Plan Implementing Procedures.

6.2.2.6 Louisiana Department of Environmental Quality (LDEQ)

- a. In the event of an accident at Waterford 3, initial notification is made by Waterford 3 to LDEQ. Upon notification, LDEQ is periodically updated as the situation warrants per the Emergency Plan Implementing Procedures.
- b. Upon notification of an accident, LDEQ activates its operational headquarters, as determined by the emergency classification.
- c. LDEQ notifies key technical support, State, and Federal agencies as determined by the emergency classification. These include:
 - 1. Louisiana Department of Agriculture and Forestry
 - 2. Louisiana Department of Health and Hospitals, Office of Public Health
 - 3. Louisiana Department of Wildlife and Fisheries
 - 4. U. S. Department of Energy (DOE)

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6.2.2.6 (Cont'd)

- d. LDEQ dispatches personnel to the Waterford 3 Emergency Operations Facility (EOF) as determined by the emergency classification and establishes direct communications with LDEQ headquarters.
- e. LDEQ establishes its personnel in the Waterford 3 EOF with the Field Monitoring Teams (FMT) conducting monitoring and sampling activities at predesignated sites in the plume exposure pathway EPZ. Field monitoring data is transmitted to the FMT Coordinator.
- f. LDEQ response personnel coordinate activities of the FMT, perform dose assessment activities, provide liaison with the EOF staff and provide coordination of field monitoring team activities and data with Entergy Operations, Inc.

6.2.2.7 Governor's Office of Homeland Security & Emergency Preparedness (GOHSEP)

- a. Upon notification of an emergency at Waterford 3, GOHSEP activates the State EOC as determined by the emergency classification.
- b. GOHSEP provides notification to support parishes as well as those parishes within the ingestion exposure pathway EPZ of Waterford 3.
- c. GOHSEP provides notification to State and Federal agencies designated to support protective response as determined by the emergency classification. These include:
 - 1. FEMA Region VI
 - 2. U. S. Coast Guard
 - 3. FAA
 - 4. Other designated state agencies
- d. GOHSEP maintains communications with affected risk and support parishes for coordination of requested assistance.
- e. GOHSEP is periodically updated as the situation warrants per the Emergency Plan Implementing Procedures.

6.3 Assessment Actions

Those actions taken during or after an accident to obtain and process information that is necessary to make decisions to implement specific emergency measures are considered assessment actions. Effective coordination and direction of all elements of the emergency organization requires continuing assessment throughout an emergency. The details of assessment functions are incorporated into the Implementing Instructions for each emergency classification describing both the methodologies and techniques to be used by Waterford 3. Although each emergency class invokes similar assessment methods, a different magnitude of assessment effort is required for each emergency class. An outline of assessment actions for each emergency class is given below.

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6.3.1 Assessment Actions for Unusual Events

The detection of an Unusual Event arises from either meeting or exceeding a specific initiating condition for this class or by an action statement in an Emergency Procedure. Detection of the event in either case comes as a result of alarms, instrument readings, recognition through experience or a combination thereof.

The continuing assessment actions to be performed for this class of emergency are in accordance with the Emergency Plan Implementing Instruction for an Unusual Event and consist of the normal monitoring of Control Room and other plant instrumentation and status indications until the situation is resolved. If a fire was the reason for the declaration of an Unusual Event, the Fire Brigade Leader, who will have reported to the fire location, makes continuing assessments based on his experience and reports to the Emergency Director on whether offsite fire fighting assistance is required.

6.3.2 Assessment Actions for Alerts

Once the Emergency Director has classified an accident as an Alert, assessment actions are performed in accordance with the Emergency Plan Implementing Instruction for an Alert. These actions include:

- 6.3.2.1 Increased surveillance of in-plant instrumentation.
- 6.3.2.2 If possible, the dispatching of an Emergency Repair Team to the identified problem area for confirmation.
- 6.3.2.3 If necessary, the dispatching of onsite radiological monitoring team(s) to monitor for possible releases and provide rapid confirmation of correct accident classification.
- 6.3.2.4 If a radiological accident is occurring, surveillance of the in-plant instrumentation necessary to obtain meteorological and radiological data required for calculating or estimating projected doses will commence. The dose assessment activity continues until termination of the emergency in order that updating of initial assessments may be provided to all concerned offsite agencies and to the Emergency Director. Emergency Plan Implementing Procedures are provided to allow rapid, consistent projection of doses.

6.3.3 Assessment Actions for Site Area Emergencies

The assessment actions for the Site Area Emergency class are similar to the actions for an Alert; however, due to the increased magnitude of the possible release of radioactive material, a significantly larger assessment activity occurs. The necessary personnel for this assessment effort are provided by activation of the onsite and nearsite emergency organizations, specifically:

- 6.3.3.1 An increased amount of plant instrumentation is monitored. In particular, indications of core status (e.g., in-core thermocouple readings) are monitored closely.
- 6.3.3.2 Monitoring efforts are greatly increased. Onsite and offsite monitoring teams are dispatched as necessary. In addition to beta and gamma field measurements, the changeout of Dosimeter(s) of Legal Record (DLRs) at frequent intervals is done, as necessary, air sampling and collection of other environmental media for assessment of material transport and deposition is performed as necessary.

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6.3.3.3 Dose assessment activities are conducted with an increased emphasis on dose projection for use as a factor in determining the necessity for protective actions. Radiological and meteorological instrumentation readings are used to project (1) dose rate at predetermined distances from the plant, and (2) an integrated dose. In reporting the dose projection to the Emergency Director or offsite agencies, the dose and the time used for the dose estimate are always provided. Any confirmation of doses by offsite teams is reflected in reporting or revising dose estimate information provided to applicable offsite agencies.

6.3.4 Assessment Actions for General Emergencies

Assessment actions for the General Emergency class are the same as for the Site Area Emergency class with a possible shift of emphasis to greater offsite monitoring efforts and dose projection efforts extending to distances farther from the plant. Additionally, since the projected doses are likely to be much closer to EPA PAGs, greater emphasis is placed on the assessment of release duration. Judgments and assumptions used for dose assessment are always reported.

6.4 Radiological Assessment and Monitoring

Accidents involving releases of radioactive materials to the environment require special methods of assessment to ensure responses are appropriate for the protection of the public as well as site personnel.

6.4.1 Field Monitoring

Prior to the activation of the entire Onsite Emergency Organization, the Emergency Director may dispatch an offsite radiological monitoring team. The plant has the capability to dispatch one radiological monitoring team and receive initial monitoring data within 90 minutes of the emergency declaration if necessary. This team will consist of two people, one of which is qualified in the use of the equipment contained in the field response emergency kits. When dispatched, the team will pick up field response emergency kits and be assigned designated vehicles. Teams will be equipped with radios. Portable radios are available at the Backup Operational Support Center for use in vehicles without radios or in the case of radio failure. Other means of back-up communications are available as described in the Implementing Document. After picking up an emergency vehicle and conducting an operational check of equipment, including a radio operations check, teams will proceed to their first assigned monitoring point. Field Teams will be controlled by the Offsite Team Coordinator (OTC) working from the EOF, and will report all readings to this individual through the Offsite Team Communicator. All readings will be reported through the Offsite Team Communicator.

Waterford 3 field teams have the ability to measure and detect 10^{-7} uCi/cc airborne radioiodine under field conditions in the presence of noble gases and background radiation.

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6.4.2 Radiological Assessment

Capability to make rapid assessments of the actual or potential magnitude and locations of any radiological hazards through gaseous release pathways is provided by computerized and manual dose assessment procedures included in the Implementing Document.

a. Radiological and Meteorological Data Sources

In evaluating the impacts of an accidental release of radioactive materials, the amount of activity released is the first item that must be determined. This information is available from the Radiation Monitoring System. Systems, and their release paths, which contain or may contain radioactive materials, are monitored by the installed Radiation Monitoring System. Radiation monitor readings and other information useful in performing offsite dose calculations can be found on SPDS mimic display "MARMOND 2, the Plant Monitoring Computer and the RM-11 Radiation Monitoring computer. In addition, these systems are routinely sampled and analyzed. Radiation surveys, contamination surveys, and air samples are performed as necessary to provide support data. If actual data is not immediately available, the magnitude and duration of the release may be estimated by station personnel from plant conditions or from knowledge of the type of incident that occurred, and use of survey instruments.

Meteorological data and summaries can be found on SPDS mimic display "MARMOND 1." Other sources of meteorological data are described in the Emergency Plan Implementing Procedures.

b. Other Computerized and Manual Calculations

For airborne releases, the first step in the assessment process is to estimate the noble gas and the iodine source release rates. To do this, the Radiation Monitoring System readings for the appropriate monitored gaseous effluent release path is converted to a noble gas and iodine release rate using source release fractions applicable to the type of accident, appropriate ventilation flow rates, instrumentation conversion factors, containment building design leak rate, and other parameters applicable to the release pathway. TEDE and CDE Thyroid dose rates are then projected by applying the appropriate meteorological dispersion factor (X/Q) for the location of interest. Dose rate calculations are normally performed with a computerized system described in the Emergency Plan Implementing Procedures. The calculations can also be done manually. Once the projections are made, the radiation monitoring teams can be directed to the location of interest to take readings and confirm the projection. Projected TEDE and CDE Thyroid dose rates are integrated over the anticipated duration of the accident to determine the TEDE and CDE Thyroid. A nominal time of two hours is assumed for the duration if the actual duration of the release cannot be estimated. These integrated doses will be compared to the protective action guides in order to recommend appropriate protective actions. The doses and recommendations will be communicated to the Louisiana Department of Environmental Quality and affected parishes.

If the instrumentation used for radiological assessment is off-scale or inoperative, contingency dose calculation methods are used. The contingency methods use conservative calculation processes using dose release factors that are based upon the expected plant source

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6.4.2b (Cont'd)

release terms for several accident classifications. First, the dose release factor for the accident class that most closely fits the current plant conditions is selected. Then, the X/Q for the location of interest is applied to the dose release factor to project the TEDE and CDE Thyroid. Concurrently, radiation monitoring teams are sent to those locations of interest to take actual field measurements in order to refine the projections and to correlate projected versus actual results. These detailed calculation techniques can be performed using the computerized system or manually and are included in an Emergency Plan Implementing Procedure.

c. Liquid Effluent Discharge

A projected dose from a liquid release, whether it is within normal limits or assumed to be an incident, can be determined through procedural methods. The concentrations of radioactivity being released can be determined from installed radiation monitors, samples, release records, or if necessary, estimated. The release rate and flow path can be determined as well. The appropriate dilution factors may be applied to the concentration in the effluent at the point of measurement to allow for the additional dilution by circulating water. Offsite consequences of liquid effluent releases can be determined through the use of plant operating procedures.

6.4.3 Transfer of Radiological Assessment Responsibility

Once the nearsite emergency organization is activated, and the Emergency Director declares it operational, the responsibility for offsite radiological assessment will be transferred to the EOF. The decision of when to transfer responsibility for offsite radiological monitoring will be made by the Emergency Director. A formal radio announcement at the time of this transfer will be made to all offsite monitoring teams. Upon assuming offsite radiological dose assessment, the Radiological Assessment Coordinator/Offsite Team Controller shall direct teams and perform offsite dose calculations and verifications as well as inform the Emergency Director of the results. Waterford 3 will continue to update dose projections and plant conditions, and coordinate dose assessment activities and exchange data with LDEQ personnel at the EOF.

6.5 Corrective Actions

Detailed operating procedures are available to the operators for use during emergencies as well as during normal operations. Specific Emergency Procedures are provided to assist the operators in placing the plant in a safe condition and taking the necessary supplemental corrective actions. In addition, Operations personnel are trained in the operation of plant systems and their associated procedures, and are, therefore, capable of taking appropriate corrective actions based on their training, knowledge and experience.

Selected Waterford 3 Steam Electric Station Personnel are trained for and assigned to emergency teams. (Reference Section 5.0, Organizational Control of Emergencies). These teams are capable of responding to situations as set forth in the Emergency Plan Implementing Instructions and Procedures in order to assess conditions and take any applicable corrective actions. Maintenance personnel provide the necessary crafts expertise to effect repair and damage control functions.

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6.5 (Cont'd)

Corrective actions shall normally be planned events that are taken to control or terminate the emergency situation. Planned radioactive releases or corrective actions that may result in a radioactive release are reported to the appropriate offsite emergency response organization and/or agencies. Entergy Operations, Inc. recommendations to authorities responsible for offsite emergency measures are made by the Emergency Director working from the EOF or if such recommendations are necessary prior to the EOF becoming fully operational, by the Shift Manager serving as the Emergency Director.

6.6 Protective Actions

Emergency measures taken during or after an emergency situation that are intended to minimize or eliminate the hazard to the health and safety of the general public and/or site personnel are considered protective actions. Such actions taken onsite are the responsibility of Entergy Operations, Inc. while those taken offsite fall under the jurisdiction of the State of Louisiana and affected parishes.

A range of protective actions to protect onsite personnel during hostile action is provided to ensure the continued ability to safely shut down the reactor and perform the functions of the Emergency Plan.

Each Implementing Instruction used in classifying emergencies has predetermined Initiating Conditions (ICs). These ICs when met or exceeded, require that protective actions are initiated to ensure that both onsite and offsite personnel are notified and protected.

6.6.1 Evacuation, Personnel Accountability

During an emergency, the relocation of persons may be required in order to prevent or minimize exposure to radiation, radioactive materials or other substances such as toxic chemicals. The following subsections discuss the policies applying to such situations.

6.6.1.1 Site Protective Measures

Site protective measures are initiated upon the declaration of a Site Area Emergency, General Emergency, or at the discretion of the Emergency Plant Manager. This action is based upon the results of assessments of existing and potential environmental conditions and consists of site evacuation. Accountability is considered a site protective measure.

a. Site Evacuation

This evacuation occurs by private vehicle via Highway 18 to St. John the Baptist Catholic Church in Edgard, La. or to Monsanto Park in Luling, La. An announcement will be made by the Shift Manager, Emergency Plant Manager or Emergency Director specifying which assembly area will be used. The assembly area to be used is determined by the emergency organization prior to the evacuation announcement. Once at the offsite assembly area, all personnel are assembled, with trained individuals performing monitoring of personnel and vehicles for radioactive contamination. Individuals found to be contaminated are decontaminated in accordance with applicable Radiation Protection procedures. Vehicles found to be contaminated are impounded at the assembly area to await decontamination and final disposition.

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6.6.1.1 (Cont'd)

b. Accountability

Accountability of personnel within the protected area is performed by the Security Department in accordance with Security and Emergency Plan Implementing Procedures. Utilizing the capabilities of the security computer system, accountability can be performed within 30 minutes of implementation. Should the security computer or the accountability keycard readers be inoperative, alternative methods of accountability as specified in the Emergency Plan Implementing Procedures will be utilized.

Upon activation of each of the emergency response facilities, continuous accountability is performed by procedure for each facility's personnel.

Personnel and the general public in the Exclusion Area outside the Protected Area and selected areas where members of the public may be expected to congregate in the Owner Controlled Area are evacuated, or if required to be in the area, are accounted for. Roving Security personnel make evacuation announcements in these areas. St. Charles Parish addresses actions in areas of the Owner Controlled Area where members of the public are generally not expected to be present.

The Union Pacific Railroad will be contacted to request suspension of rail traffic through the Exclusion Area. The Coast Guard will be contacted to request suspension of river traffic within the Exclusion Area.

Re-entry control will be maintained within the Exclusion Area following the evacuation.

6.6.1.2 Offsite Protective Action Recommendations

During emergency situations, the responsibility for providing protective action recommendations for the general public lies with Entergy Operations, Inc. Within the Entergy Operations, Inc. emergency response organization, there is at all times one individual responsible for those recommendations to State and parish agencies. Section 5.1.2.1.a of this plan defines the individual responsible to be the Shift Manager (SM) until the arrival of the Duty EOF Emergency Director who will officially relieve the SM as the Emergency Director.

When the Emergency Operations Facility (EOF) is operational, the Shift Manager acting as the Emergency Director shall transfer the responsibilities for Protective Action Recommendations to offsite agencies to the EOF Emergency Director.

Recommendations for offsite Protective Actions will be made directly to those State and Parish organizations linked to the Operational Hot Line: LDEQ, GOHSEP, St. Charles Parish, and St. John the Baptist Parish. When possible, these recommendations will be coordinated with LDEQ in the EOF. LDEQ's actions will be in accordance with the State plan.

There are two general sets of Waterford 3 Protective Action Guidelines. One set is based on dose projections, and the other is based on in-plant conditions.

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6.6.1.2 (Cont'd)

- (1) The first set of guidelines, based on dose projections, is consistent with both the USEPA PAGs and with the PAGs of the State of Louisiana Peacetime Radiological Response Plan. The PAGs are nuclear criteria based on dose projections from which pre-determined actions may be taken. These criteria are not inflexible limits nor are they "safe" levels below which no protective action is indicated. Rather, they will be used to minimize risks for an accident that is occurring or has occurred.

The following guidelines will be utilized:

- a. TEDE projected dose less than 1 rem or CDE Thyroid projected dose less than 5 rem:

No immediate action necessary.

- b. TEDE projected dose greater than or equal to 1 rem or CDE Thyroid projected dose greater than or equal to 5 rem:

Evacuation or sheltering will be recommended in affected areas.

Recommendations for offsite protective actions will be made by Entergy Operations, Inc., based on projected doses. The determination of the projected dose will be based on radiological, meteorological and operational information including:

1. Radiation monitoring system data.
2. Meteorological instrumentation data.
3. Field monitoring team data.
4. FSAR design basis accident assumptions.
5. Reactor core temperatures.
6. Fission product barrier integrity.
7. Projected duration of release based on reactor plant status.

It should be understood that not all of the above information is needed to project doses. The immediately available information will be used to meet the 15-minute requirements mentioned in 6.2.1, and subsequent information will be used to modify or refine the early dose projections and corollary protective action recommendations.

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6.6.1.2 (Cont'd)

- (2) The other basis for Waterford 3 PAGs is preemptive in nature and is not based on the release of radioactive materials, but rather on various instrument readings and plant status that indicate problems are developing which could lead to such a release.

As described in Chapter 4.0 of this Plan, four emergency classes have been established for Waterford 3, along with their attendant Initiating Conditions (ICs). The ICs, where appropriate, have been flagged to instruct the responsible persons that protective action recommendations are required.

Protective actions will be implemented within predesignated areas by LDEQ and the local parishes. Recommended protective actions taken may include:

1. Evacuation or sheltering for affected population.
2. Evacuation or sheltering of population within a specified predetermined section of Waterford 3.
3. Shelter-in-place of the population in unaffected areas in the plume EPZ.

Following initial protective actions, subsequent dose projections and monitoring results will be used to determine the need for extending the initial response area or increasing the scope of the initial protective actions.

Sheltering in place is defined as remaining within protective structures in order to minimize exposure to the gaseous plume and direct exposure to deposited radionuclides. The effectiveness of a structure in reducing direct external radiation exposure depends primarily on the thickness and composition of the building materials. Figure 6-4 lists representative cloud gamma attenuation factors for various types of shelters including residential and industrial buildings. The effectiveness of shelters in reducing inhalation exposure depends on the overall building integrity, ventilation rate and filtering characteristics, including trapping and deposition in small cracks or openings. Figure 6-4 also lists the ventilation characteristics of representative residences.

In evacuation, the general public is moved out of the path of the gaseous radioactive plume. It is expected that, should evacuation be required, it will be implemented well before a radionuclide release has begun.

Evacuation of members of the general public is the responsibility of the local parishes, working in conjunction with LDEQ, and will be carried out in accordance with their prearranged plans. The general steps to be followed are as follows:

1. Collaborative response actions will be maintained between the LDEQ Liaison Team Director located in the EOF and the parish Emergency Preparedness/Civil Defense Directors at their respective local EOC;

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6.6.1.2(2) (Cont'd.)

2. The area to be evacuated, the evacuation routes and reception center arrangements will be agreed upon by the State and local agencies;
3. The parish Sheriff's and Emergency Preparedness/Civil Defense Departments will carry out the evacuation in accordance with established procedures and isolate the evacuated area;
4. Reentry into the evacuated areas will be prevented until it is confirmed that radiological conditions permit unrestricted access.

6.6.1.3 Offsite

Protective measures for the general public are the responsibility of the risk parishes in conjunction with LDEQ and GOHSEP. Provisions for protection of the public are outlined in the Louisiana Peacetime Radiological Response Plan and Attachment 1 to that plan which is site-specific to Waterford 3. Responsibilities of key agencies and individuals are covered below:

a. State

1. Governor of Louisiana

The governor of Louisiana can order protective measures for the public if a state of disaster emergency is declared.

2. Secretary of the Department of Environmental Quality

The Secretary of the Department of Environmental Quality is responsible for finalizing a protective response recommendation as received from LDEQ.

3. LDEQ

The LDEQ develops protective response recommendations based on facility information and data gathered by LDEQ field monitoring teams.

4. GOHSEP

The GOHSEP coordinates state resource support for risk parishes if protective actions are required.

b. Risk Parishes

1. Parish President

The Parish President has the overall responsibility for the protection of the health, safety and welfare of persons living and working in the parish. He (she) is the individual responsible for making protective response recommendations to the public in the risk area.

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6.6.1.3b (Cont'd)

2. Parish Emergency Preparedness/Civil Defense Directors

Director serves as chief-of-staff for the Parish President. Directs implementation of offsite protective response decisions.

c. Protective Response

In the event of an accident at W3SES, the decision to protect the general public, institutionalized persons and transients will be based on the U. S. Environmental Protection Agency Manual of Protective Action Guides and Protective Actions. The protective actions that may be considered include evacuation, breathing protection and sheltering in place. These actions can be taken for all predesignated parts of the plume exposure pathway EPZ. The alert/notification of the public will be accomplished in accordance with Section 6.8.1. If protective actions are called for, provisions have been made to provide appropriate controls within the affected area. Arrangements for the reception and care of evacuees have been established in support parish plans.

6.6.2 Use of Onsite Radiological Protective Equipment and Supplies

6.6.2.1 W3SES maintains an inventory of protective clothing, respiratory equipment, survey instruments, radioprotective drugs, and other protective equipment and supplies to provide adequate contamination control for all personnel expected to be onsite who might be affected in the event of an emergency. A brief description of the types of equipment that might be found in emergency equipment lockers is provided in Section 7.4.8. The actual inventory and location of their storage is listed in the Implementing Documents.

6.6.2.2 Procedures for the distribution and use of radioprotective drugs for emergency workers are incorporated into the Emergency Plan Implementing Procedures.

6.6.3 Radiological Contamination Control Measures

This section describes provisions for preventing or minimizing direct or subsequent ingestion exposure to radioactive materials deposited on the ground or other surfaces.

6.6.3.1 Onsite and Exclusion Area

Waterford 3 SES has onsite contamination control procedures that provide for monitoring, access control, decontamination and using techniques for minimizing the spread of contamination. Any individual found to have contamination levels in excess of 100-cpm/probe area above background, as measured by a pancake-type GM Tube, is considered to be contaminated. Onsite measures are taken to prevent or minimize the ingestion of radioactive materials deposited on the ground or other surfaces. As necessary, food supplies grown within the exclusion area are isolated. Drinking water is normally supplied by the St. Charles Parish Waterworks. As the situation warrants, bottled drinking water is brought onto the site. Additionally, there are procedures to monitor for contamination during emergency and recovery phases in areas designated for eating and drinking. Eating and drinking are prohibited in all other areas during the incident.

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6.6.3.1 (Cont'd)

The Emergency Plant Manager may request assistance from such organizations as the St. Charles Parish Sheriff's Office, the Louisiana State Police, LDEQ, the Union Pacific Railroad Company, the United States Coast Guard and others as necessary to move personnel and to isolate and control access to affected areas within the Exclusion Area boundary. The movement of onsite personnel to unaffected areas is initiated for their protection should radiation or airborne activity levels in their immediate environment warrant such actions.

Specific criteria for permitting return of areas to normal use are included in the Emergency Plan Implementing Procedures. Reentry into affected areas is a controlled process performed under the procedures described in the Emergency Plan Implementing Procedures. Surveys are performed in areas posted and/or decontaminated. Environmental samples are obtained and analyzed. Entergy Operations, Inc. maintains control over the Exclusion Area as required, and restores affected onsite areas to acceptable conditions for access where possible.

Waste generated as a result of decontamination activities during and after an accident is handled in the same manner as during normal operation, in accordance with Radiation Protection Procedures.

Entergy Operations, Inc. requests assistance from and uses guidance provided by LDEQ in handling food crops and water supplies within the area.

6.6.3.2 Offsite

Actions taken offsite for the control of contamination are the responsibility of LDEQ. Any response to such incidents by LDEQ is in accordance with the Louisiana Peacetime Radiological Response Plan and its Waterford 3 SES Attachment. Entergy Operations, Inc. provides information and data pertinent to such incidents, makes recommendations for offsite actions as appropriate, and, when possible, provides assistance.

6.7 Aid to Affected Personnel

This section of the plan describes the measures that are used by Waterford 3 to provide necessary assistance to persons injured or exposed to radiation and radioactive material.

6.7.1 Emergency Personnel Exposure

Emergency personnel, including those involved in removal of injured persons, undertaking corrective actions, performing assessment actions, providing first aid, performing personnel decontamination, and providing ambulance services, will have their exposure kept as low as reasonably achievable. This is accomplished through normal radiological control practices onsite. When personnel are called in from offsite, qualified Radiation Protection technicians are provided as necessary to support the offsite teams. For example, a Radiation Protection technician may be assigned to the offsite fire teams to monitor and control radiation exposures and evaluate radiological hazards. Emergency measures may warrant the acceptance of above normal radiation exposures (doses).

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6.7.1 (Cont'd)

Saving of life, measures to circumvent substantial exposures to population groups or other accident-mitigating activities may all be sufficient cause for above normal exposures. The following are the exposure guidelines for these emergency activities:

1. Life-saving action - 25 rem TEDE, 250 rem Extremities, 250 rem Thyroid, 75 rem Lens of Eye
2. Corrective action - 10 rem TEDE, 100 rem Extremities, 100 rem Thyroid, 30 rem Lens of Eye

The Emergency Director (or Emergency Plant Manager for in-plant conditions) is the designated individual who can authorize emergency workers to receive doses as defined above in excess of 10CFR20 limits. These workers must be volunteers, and as such, sign a letter of understanding, and are required to closely adhere to the controls specified in applicable procedures. Declared pregnant females shall be excluded from activities involving emergency exposure. The Emergency Director or EPM, to the extent practicable, coordinates with the NRC prior to authorizing exposures in excess of 10CFR20 limits. In authorizing onsite volunteers to receive radiation exposure in the course of carrying out lifesaving activities, the Emergency Director balances the risks from such exposures against the benefits to be received from the lifesaving activities. Risks are determined and decisions are made to expedite lifesaving activities based upon advance radiation surveys done at the affected areas to determine stay times, shielding requirements, or the possibility of dispatching a "scouting" team to assess actual conditions. Personnel are briefed on stay times, use of protective equipment, potential hazards and communication requirements. Measures are utilized to aid in exposure reduction and the Emergency Plant Manager, in consideration of advice from the Radiological Coordinator, shall assure that all possible measures are taken to minimize other exposures (such as internal exposures) during the activities. Exposure records are maintained for all station personnel, and such information is used in determining emergency team assignments. It is not possible to predict the time and place an accident will occur; however, personnel in areas where there is the possibility of exposure to radioactive material are required to wear personnel monitoring devices in accordance with 10CFR20. If an accident occurs, assistance may be required from personnel available at the scene or from emergency teams. Responding emergency teams obtain personnel monitoring devices that are required for the area or for the situation. Extremity monitoring devices are located at the Reactor Auxiliary Building - Controlled Access Area Access Control Point. Whole body monitoring devices are available at the Security Primary Access Point. Personnel monitoring is performed in accordance with the Emergency Plan Implementing Procedures. Capability to determine the doses received by emergency personnel and volunteers on a 24-hour/day basis is provided. Additionally, dosimetry is read at appropriate intervals for maintaining dose records for emergency workers.

WATERFORD 3 SES EMERGENCY PLAN

6.7.2 Thyroid Blocking

A ready supply of suitable thyroid blocking agent is maintained and available for use by emergency workers. Guidance for administration of the blocking agent is specified in applicable Emergency Plan Implementing Procedures.

6.7.3 First Aid and Decontamination

Emergency medical care to injured/ill personnel is initiated regardless as to whether the injury/illness is radiation or non-radiation associated. First aid/emergency medical care, conforming to procedures specified in applicable Emergency Plan Implementing Procedures and Appendix I, Emergency Medical Assistance Plan (EMAP), is provided at the accident scene. In the event of a serious injury, the medical treatment takes precedence over decontamination. Provisions for any required personnel decontamination are provided in the Radiation Protection area which contains showers, sinks, eyewash supplies, cleaning agents and materials, contamination monitoring equipment, and materials to control the spread of contamination, along with the necessary first aid/emergency care supplies specified in the Implementing Document. Ideally, injured/ill or contaminated personnel exiting the controlled access area are monitored and decontaminated prior to being transported to support medical facilities. However, in cases of life threatening trauma/illness or persistent contamination, where patients must be transported to support medical facilities prior to complete decontamination, measures are taken to minimize the spread of contamination in accordance with Radiation Protection Procedures. A Radiation Protection technician will accompany contaminated patient(s) to the supporting hospital to supervise control of contamination and serve in an advisory capacity.

Personnel leaving the controlled access area are monitored by appropriate portal monitors, counters or friskers. During emergencies, personnel onsite will, as necessary, be checked for contamination based on specific criteria found in the Implementing Document.

Personnel found to be contaminated are decontaminated under the direction of Radiation Protection personnel. Measures taken to prevent the spread of contamination include isolating affected areas, placing contaminated personnel in "clean" protective clothing prior to moving, and decontaminating affected personnel, their clothing, and equipment before release. Details for personnel decontamination are included in Radiation Protection Procedures.

For managing first aid and emergency medical care for life-threatening medical emergencies, wound decontamination, treatment requiring administration of radioprotective drugs, overexposure or persistent contamination, medical consultation and/or onsite physician assistance is available through qualified medical personnel at Ochsner Clinic Foundation, West Jefferson Medical Center or the Radiation Emergency Assistance Center/Training Site (REAC/TS).

Non-life-threatening, minor injuries/illnesses are managed consistent with the training of the first aid team personnel and based on specific guidelines provided in the Implementing Document.

Waste generated during decontamination activities following an accident is handled the same as during normal operation. In accordance with Radiation Protection Procedures, the waste is packaged in accordance with NRC and DOT regulations. Waste containers will be stored onsite, in a secure area having adequate shielding, awaiting shipment to a commercial low-level waste disposal facility.

WATERFORD 3 SES EMERGENCY PLAN

6.7.4 Medical Transportation

Entergy Operations, Inc. maintains agreement with the St. Charles Parish Hospital Ambulance Service, an advanced life support staffed/equipped service, for emergency medical care and transportation of injured personnel to offsite support medical treatment facilities. The vehicle(s) have radio communications capability to the St. Charles Parish 911 Center for dispatch and coordination and to the necessary support hospitals (Ochsner Clinic Foundation, West Jefferson Medical Center and St. Charles Parish Hospital), for appropriate medical consultation/notification, as outlined in Emergency Plan Implementing Procedures and Appendix I, Emergency Medical Assistance Plan. An agreement is in effect with Ochsner Flight Care Helicopter Ambulance to transport Waterford 3 personnel to support medical facilities, should air helicopter transport be determined advisable for medically unstable patients or if ground transportation is impractical.

The Waterford 3 Shift Manager/Emergency Director in consultation with members of the First Aid Team will determine the priorities for the mode of emergency medical transportation based on the need for immediate medical intervention, the comfort of the patient, and the vehicles available.

Support hospitals receive prior notification of patients with radiological complications being transported to their emergency departments for emergency medical care. Procedures for notification and content are specified in Emergency Plan Implementing Procedures and Appendix I, Emergency Medical Assistance Plan. Following the transportation to and admission of a contaminated patient(s) to the support hospital Radiation Emergency Area, the ambulance vehicle, associated equipment and emergency medical personnel are surveyed by the Waterford 3 Radiation Protection personnel assisting the hospital Radiation Management Team. If contamination is detected, the ambulance is returned to Waterford 3 for decontamination, as necessary.

6.7.5 Medical Treatment

Arrangements for medical treatment of personnel from Waterford 3 are predetermined through written agreements with offsite medical facilities.

Ochsner Clinic Foundation, New Orleans, Louisiana, a 532-bed acute-care medical facility, designated as the regional medical resource hospital and regional trauma center agrees to accept and provide treatment to Waterford 3 personnel experiencing injury/illness, provide long-term treatment or evaluation of radiation-associated injuries or overexposure, and provide medical consultation or onsite physician assistance to the Emergency Plant Manager/First Aid Team.

West Jefferson Medical Center, Marrero, Louisiana, a 462-bed acute-care medical facility, designated as an area-wide trauma center, agrees to accept and provide treatment to Waterford 3 personnel experiencing injury/illness and to provide long-term treatment or evaluation of radiation associated injuries or overexposure, and provide medical consultation or onsite assistance to the Emergency Plant Manager/First Aid Team.

WATERFORD 3 SES EMERGENCY PLAN

6.7.5 (Cont'd)

St. Charles Parish Hospital, Luling, Louisiana, a 50-bed acute-care general hospital, agrees to accept and treat personnel from Waterford 3 having experienced injuries or illness uncomplicated by radiation contamination or overexposure.

All three support hospital facilities further agree to participate to the fullest extent possible in training programs and emergency medical drills intended to maintain emergency preparedness.

The admission of injured/ill patients to the supporting hospital will be governed by standard admissions procedures. However, in the event that the injured/ill patient is radioactively contaminated, normal admissions procedures will be superseded by the appropriate procedures for medical emergencies involving radiation contained within the supporting hospital's Emergency Management Plan.

For extreme radiation accident cases, the Department of Energy provides patient referral facilities to Ochsner Clinic Foundation and West Jefferson Medical Center through the Radiation Emergency Assistance Center/Training Site.

6.8 Public Alert/Notification and Public Information

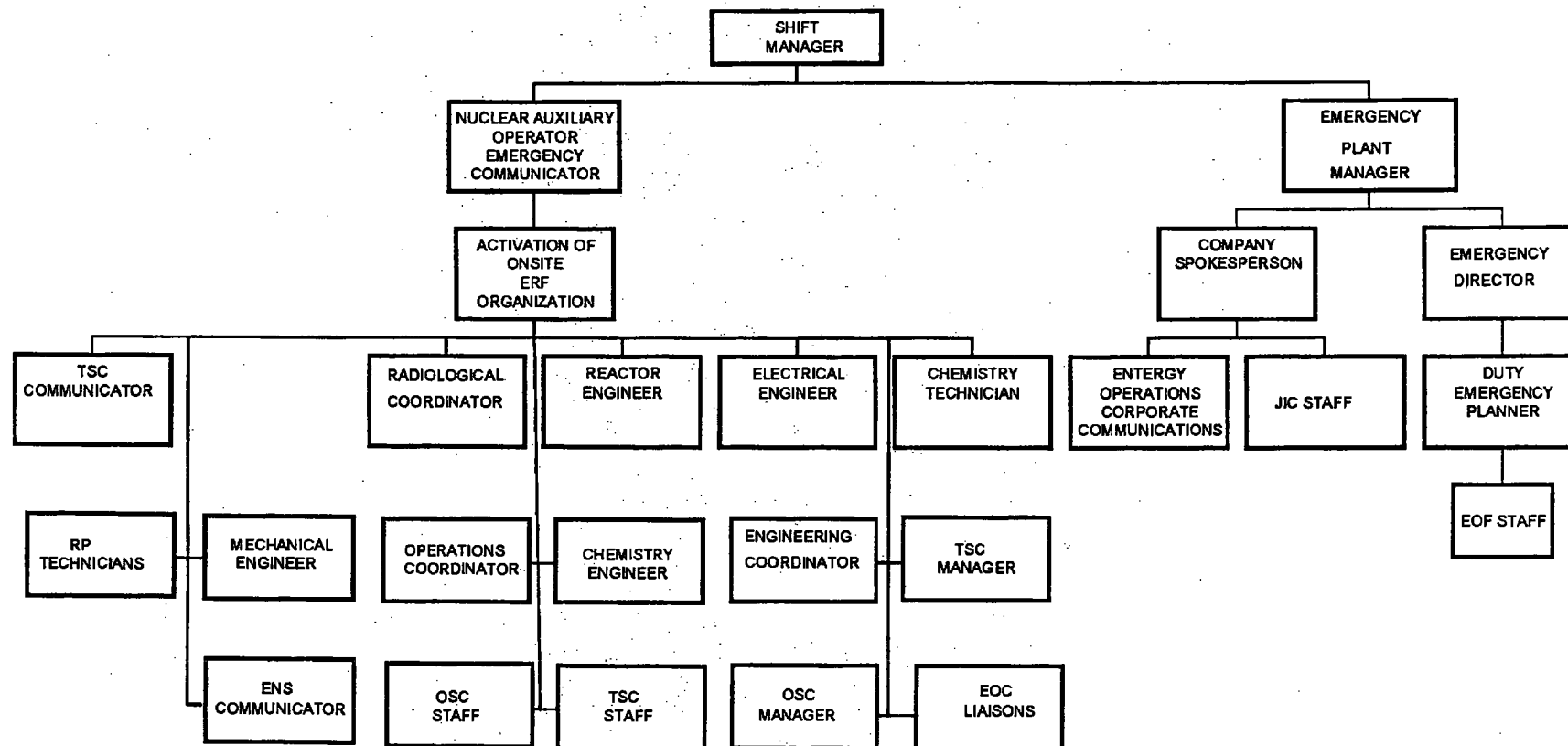
6.8.1 Public Alert/Notification

The means for the alert/notification of the public in the event of an accident at W3SES have been established upon the direction of the emergency preparedness/civil defense department of the risk parishes. Once local and State authorities have been notified of the accident and the decision to take protective actions has been made, the alert/notification of the public will be accomplished.

6.8.2 Public Information

St. Charles Parish, St. John the Baptist Parish, LDEQ, GOHSEP and Entergy Operations, Inc., coordinate the dissemination of printed material to the public within the 10-mile EPZ. This printed material informs the public as to how they will be notified and what their actions should be in an emergency. This printed material contains information on radiation, protective measures, special needs of the handicapped, and points of contact for obtaining further information.

W3 SES EMERGENCY PLAN
 FIGURE 6-1
 WATERFORD 3 EMERGENCY ORGANIZATION ACTIVATION SCHEME



* ACTIVATED WITH ONSITE EMERGENCY ORGANIZATION. PART OF EOF STAFF

WATERFORD 3 SES EMERGENCY PLAN
FIGURE 6-2
NOTIFICATION MESSAGE FORM (Typical)

1. THIS IS ☐ GRAND GULF ☐ WATERFORD 3 ☐ RIVER BEND WITH MESSAGE NUMBER F-_____
(OHL CODE NO.) _____

2. A. _____ / _____ B. COMM: _____ C. TEL NO. _____
(TIME/DATE) (NAME)

3. **EMERGENCY CLASSIFICATION:**
A. ☐ NOTIFICATION OF UNUSUAL EVENT C. ☐ SITE AREA EMERGENCY E. ☐ TERMINATED
B. ☐ ALERT D. ☐ GENERAL EMERGENCY

4. **CURRENT EMERGENCY CLASSIFICATION DECLARATION/TERMINATION** Time/Date: _____ / _____

5. **RECOMMENDED PROTECTIVE ACTIONS:**
A. ☐ No Protective Actions Recommended At This Time (Go to Item 6).
B. ☐ EVACUATE _____
☐ SHELTER _____

6. **INCIDENT DESCRIPTION/UPDATE/COMMENTS:** _____

7. **REACTOR SHUT DOWN?** ☐ NO ☐ YES Time/Date: _____ / _____

8. **METEOROLOGICAL DATA:**
A. Wind Direction FROM _____ Degrees at _____ MPH
B. Sectors Affected (A-R): _____
C. Stability Class (A-G): _____
D. Precipitation: ☐ None ☐ Rain ☐ Sleet ☐ Snow ☐ Hail ☐ Other _____

9. **RELEASE INFORMATION:**
A. ☐ No RELEASE (Go to Item 13)
B. ☐ A RELEASE is occurring BELOW federally approved operating limits
C. ☐ A RELEASE is occurring ABOVE federally approved operating limits
D. ☐ A RELEASE OCCURRED BUT STOPPED

E. Release started at _____ (time) Release stopped at _____ (time)
Release duration _____ hrs. (actual or expected)

10. **TYPE OF RELEASE:**
A. ☐ Radioactive Gases B. ☐ Radioactive Airborne Particulates C. ☐ Radioactive Liquids

11. **RELEASE RATE:**
A. NOBLE GASES _____ Ci/s B. IODINES _____ Ci/s

12. **ESTIMATE OF PROJECTED OFFSITE DOSE:**
A. Projections for _____ hours based on: ☐ Field Data ☐ Plant Data ☐ Default Data
B. (TEDE) WB DOSE COMMITMENT (mRem) C. (CDE) THYROID DOSE COMMITMENT (mRem)
Site Boundary _____ 5 miles _____ Site Boundary _____ 5 miles _____
2 miles _____ 10 miles _____ 2 miles _____ 10 miles _____

13. **MESSAGE APPROVED BY:** _____ **TITLE:** _____

W3 SES EMERGENCY PLAN

FIGURE 6-3

INITIAL NOTIFICATION PERSONNEL SCHEME

Organization	Primary	Alternate
Waterford 3	Emergency Communicator	Emergency Director
Louisiana Department of Environmental Quality	Administrator	LDEQ Duty Officer
St. Charles Parish	Emergency Preparedness Director	Emergency Coordinator
St. John the Baptist Parish	Civil Defense Director	Public Safety Dispatcher
Governor's Office of Homeland Security & Emergency Preparedness	Assistant Deputy Director Emergency Management	GOHSEP Duty Officer

W3 SES EMERGENCY PLAN

FIGURE 6-4

EFFECTIVENESS OF SHELTERS

REPRESENTATIVE CLOUD-GAMMA ATTENUATION FACTORS

Structure	Attenuation Factor
Wood frame house, no basement	0.9
Masonry house, no basement	0.6
Basement of wood house	0.6
Basement of masonry house	0.4
Large office or industrial building	0.2 or less

AIR CHANGES TAKING PLACE UNDER AVERAGE CONDITIONS IN RESIDENCES, EXCLUSIVE OF AIR PROVIDED FOR VENTILATION

Kind of Room of Building	Number of Air Changes Taking Place per Hour*
Rooms with no windows or exterior doors	1/2
Rooms with windows or exterior doors on one side	1
Rooms with windows or exterior doors on two sides	1-1/2
Rooms with windows or exterior doors on three sides	2
Entrance halls	2

* For rooms with weather-stripped windows or with storm sash, use two-thirds of these values.

WATERFORD 3 SES EMERGENCY PLAN

7.0 EMERGENCY RESPONSE FACILITIES AND EQUIPMENT

The emergency equipment and facilities described in this section operate as an integrated system to support the Control Room in the mitigation of the consequences of an accident and act to enhance Entergy Operations, Inc.'s capability to respond to abnormal plant conditions. The equipment and facilities function during an emergency to provide the following services:

- a. Aid reactor operators in the determination of plant safety status.
- b. Relieve the Control Room of those duties and responsibilities not directly related to reactor systems manipulation.
- c. Eliminate unnecessary Control Room traffic.
- d. Provide technical assistance to Control Room personnel through the use of technical personnel and comprehensive plant data.
- e. Provide a coordinated response by both technical and management personnel.
- f. Provide reliable communications between onsite and nearsite emergency response personnel.
- g. Provide a focal point for the development of recommendations for offsite actions.
- h. Provide to the NRC, for its analysis, relevant plant data.
- i. Support accident mitigation operations.
- j. Activate the resources required to mitigate the consequences of an accident.
- k. Provide protection to station personnel.
- l. Provide immediate care for injured personnel.
- m. Effect damage control measures.

A diagram identifying the emergency facilities and their general location relative to each other is attached as Figure 7-1, 7-2 and 7-3. Many of the Waterford 3 facilities and much of the equipment is employed in the daily operation of the station. Other facilities and equipment are reserved for use only on an emergency "as needed" basis.

7.1 Waterford 3 Onsite Emergency Facilities

7.1.1 Control Room

The Control Room is located on the 46.0 ft. MSL elevation of the Reactor Auxiliary Building and is designed to be habitable under accident conditions.

The ventilation system has redundant fans and chillers and is provided with radiation, chemical and smoke detectors with appropriate alarms and interlocks. The emergency lighting, power air-filtration-ventilation system, cascade air system and shield walls enable operators and other emergency support personnel to remain in these areas with adequate protection. The physical arrangement of the Control Room is shown in Figure 7-5.

Permanent radiation monitoring is installed in the Control Room. These systems continuously monitor radiation dose rates and airborne radioactivity concentrations. These monitoring systems include local alarms set to provide early warning to personnel of adverse conditions that could affect habitability.

WATERFORD 3 SES EMERGENCY PLAN

7.1.1 (Cont'd.)

The Operations Group supplies continuous shift coverage and staffs the main Control Room at all times. The operator(s) keep the Shift Manager informed of abnormal and accident situations or conditions. The communications, procedures, controls and instrumentation required for safe plant operation and for accident assessment are located in this area. Emergency equipment and supplies needed to support Emergency Actions by shift personnel are also located in close proximity to the Control Room.

7.1.2 Technical Support Center

The Technical Support Center (TSC) is located on the 46.0 ft. MSL elevation in the Reactor Auxiliary Building. It is contained entirely within the Control Room emergency ventilation system envelope but separate from the Control Room. Fixture installations within the various areas of the TSC prevent the TSC from being seismic Category I qualified. The physical arrangement of the TSC is shown in Figure 7-6. In the event that access to the Control Room envelope is limited and response procedures require TSC activation, a Backup TSC will be established in the EOF. The primary function of the TSC will be performed in cohabitation with EOF personnel.

In its location, the TSC is in the closest possible proximity to the Control Room and readily allows face-to-face interaction between TSC and Control Room personnel. The size of the TSC provides sufficient storage space and access to data displays, plant records and historical data.

Located in the Control Room envelope, the TSC has the same heating, ventilation, air conditioning and radiological habitability as the Control Room for postulated accident conditions. Personnel are protected from radiological hazards, including direct radiation and airborne contaminants, under accident conditions, within the guideline criteria of General Design Criterion 19 and Standard Review Plan Section 6.4.

Particulate (HEPA) and charcoal filters are an integral part of the ventilation system. The ventilation system is designed to seismic Category I design criteria and is automatically activated as a part of the Control Room ventilation systems. Personnel in the center will not receive doses in excess of 5 rem to the whole body or 30 rem to the thyroid for the duration of the accident.

The TSC has facilities to support the plant management and technical personnel who are assigned there during an emergency and is the primary onsite communications center for the plant during the emergency. TSC personnel use the TSC data system (see Section 7.4.11) to analyze the plant steady state and dynamic behavior prior to and throughout the course of an accident. This information is transmitted to the TSC via the plant computer to four Satellite Display System (SDS) units. Emergency power supply to the plant computer is provided from the computer SUPS and emergency diesel generators. The results of this analysis are used to provide guidance to the Control Room operating personnel in the management of abnormal conditions and in accident mitigation.

TSC personnel use the environmental and radiological information available from the TSC data system to perform the necessary functions. The TSC also is used to provide technical support during the recovery operations following an emergency.

WATERFORD 3 SES EMERGENCY PLAN

7.1.2 (Cont'd)

The TSC acts as a complete and up-to-date repository of plant records and procedures and is at the disposal of TSC personnel to aid in their technical analysis and evaluation of emergency conditions. In particular, up-to-date as-built drawings of the plant systems are available to diagnose sensor data, evaluate data inconsistencies, and identify and counteract faulty plant system elements.

To ensure that TSC personnel can remain self-sufficient, emergency equipment and supplies are stored in the Technical Support Center (see Section 7.4.8).

7.1.3 Operational Support Center

The primary location for the Operational Support Center (OSC) is in the Maintenance Support Building (MSB). An area of the first floor (+18.5 MSL) is designated as the OSC Command Room (Figure 7-7). The OSC is an assembly area where the operations support personnel and members of the emergency teams report in an emergency situation. The OSC can accommodate at least 100 people. Communications is provided with the Control Room, the Technical Support Center and the Emergency Operations Facility.

An inventory of emergency supplies including respiratory protection, protective clothing, portable lighting and communications equipment is stored in the OSC for use by emergency response personnel assigned to the facility. Although it is physically separate from the MSB, an instrumentation laboratory can be used for radiation protection purposes. The laboratory is located in the -4 RAB and is considered part of the OSC.

Access control to the Radiologically Controlled Area (RCA) may be through the Westside Facility or the -4 elevation of the Reactor Auxiliary Building. Other control points are established as necessary. Associated with the -4 access control point are lockers, toilets, showers and change room facilities. Separate facilities are provided for men and women.

Space is provided in the Westside Access for Radiation Protection personnel. Associated with the Westside Access is space for Whole Body Counting, access and exit control terminals, personnel and tool contamination monitors.

Space is reserved for personnel at the -4 elevation control point for Radiation Protection/Chemistry personnel. It is provided for equipment, records and supply storage. Space for instrumentation issue and storage may be provided near the Westside Access or the -4 Control Point.

The counting room located in the -4 elevation RAB control point area provides facilities for analysis of samples. Portable sample counting instrumentation will be utilized at other control points as necessary.

Limited personnel decontaminations may be performed in the Westside Access. The -4 control point decon facility will be used on a case by case basis, for example in the event personnel showering is needed. Contaminated equipment will normally be decontaminated in the decontamination facility located on the +21.00 ft. west wing area. Other equipment decon locations may be approved by Radiation Protection.

Personnel contamination monitors, tool and personnel contamination friskers are located at the -4 and Westside Access control points. All personnel exiting the Radiologically Controlled Area will be monitored. Respiratory protection equipment is issued and stored near the access control points. Portal monitors are also located at the Primary Access Point in the administration building.

WATERFORD 3 SES EMERGENCY PLAN

7.1.3 (Cont'd.)

Other in-plant control points may be established as applicable to ensure positive radiation control and provide protective equipment and supplies.

The Maintenance Support Building does not provide habitability comparable to the Control Room and TSC, thus a backup location is provided. The backup OSC is located in the Generation Support Building Executive Conference Room and is capable of functioning in the same manner as the primary OSC.

7.2 Waterford 3 Nearsite and Offsite Emergency Facilities

7.2.1 Emergency Operations Facility

The Emergency Operations Facility (EOF) is located within the James M. Cain Energy Education Center (see figure 7-4). The James M. Cain Energy Education Center is located approximately one mile southwest of the Waterford 3 plant site and is accessed from Louisiana State Road 3127. (See Figure 7-3)

An alternative facility, with communication capabilities for contacting the Control Room and plant security, is available to serve as a staging area for augmented emergency response staff if the site is not accessible.

The Emergency Operations Facility has been designed for a protection factor of 5 as provided for by NUREG-0696, Section 4.2 and Supplement 1 to NUREG-0737. The Emergency Operations Facility ventilation system's air intake and return air is continuously monitored for radiation. The ventilation system is equipped with zero leakage dampers and is provided with a recirculation fan with both High Efficiency Particulate (HEPA) and charcoal filter systems. The facility is provided with an emergency diesel generator backup power system.

The EOF provides facilities for:

- a. Management of overall licensee emergency response.
- b. Coordination of radiological and environmental assessment.
- c. Determination of recommended public protective actions.
- d. Coordination of emergency response activities with Federal, State and local agencies.
- e. Communication between the EOF and the TSC, Control Room, NRC and State/local agencies.

Facilities are provided in the EOF for the acquisition, display and evaluation of all radiological, meteorological, and plant system data pertinent to determine offsite protective measures (see Subsection 7.4.11). These facilities are used to evaluate the magnitude and effects of actual or potential radioactive releases from the plant and to determine offsite dose projections as well as offsite protective measures. The EOF is not only used for coordination of offsite radiological monitoring during an emergency, but also is used to coordinate emergency response activities with those of Federal, State and local organizations. Personnel in the EOF use the evaluations of offsite effects to make protective action recommendations for the public to State and local emergency response agencies. There are no provisions for accommodating news media personnel in the EOF.

The State Liaison Team will locate in the EOF to facilitate coordination of activities between State representatives and EOF personnel.

WATERFORD 3 SES EMERGENCY PLAN

7.2.1 (Cont'd.)

The EOF is used for coordination of the receipt and analysis of sample media from State and utility monitoring teams. After initial analysis in the field, samples are returned for further analysis onsite, at the Baton Rouge LDEQ facilities, or at backup analysis facilities identified in the Implementing Procedures.

To ensure adequate radiological protection of EOF personnel, dedicated portable monitoring equipment is provided. This equipment is used to monitor radiological conditions inside the EOF. The dedicated portable equipment is used when the permanently installed monitoring system gives an indication of increasing airborne or direct radiation activity.

The EOF technical data system acts to receive, store, process, and display information sufficient to perform assessments of the actual and potential onsite and offsite environmental consequences of an emergency condition. Data providing information on the general condition of the plant also is available for display in the EOF.

The EOF data set includes radiological, meteorological and other environmental data as needed to:

- a. Assess environmental conditions,
- b. Coordinate radiological monitoring activities, and
- c. Recommend implementation of offsite emergency plans.

Up-to-date plant records, procedures and emergency plans needed to exercise overall management of licensee emergency response resources are available on line via the Entergy intranet. There are hard copies of select emergency plan implementing documents in the EOF to support EOF functions in the event this system is not available.

In the event that the EOF should be uninhabitable, an alternate EOF Facility is located at 142 Delaronde Street, New Orleans, Louisiana. This facility is equipped to provide the same operational capabilities as outlined for the nearsite EOF.

7.2.2 Joint Information Center

The Joint Information Center is located in the Metro Customer Service Building at 142 Delaronde Street, New Orleans, Louisiana. The Joint Information Center acts as the control location for information dissemination to the public via the news media. News conferences and press briefings will be conducted at this location.

WATERFORD 3 SES EMERGENCY PLAN

7.3 State, Parish and Other Emergency Facilities

7.3.1 Parish Emergency Operations Center

The St. Charles Parish direction and control of emergency operations during an accident associated with Waterford 3 is maintained from the St. Charles Parish Emergency Operations Center (EOC) located in the basement of the St. Charles Courthouse, Hahnville, Louisiana. This facility is capable of operating on a 24-hour-per-day basis for an extended period of time. Figure 7-1 shows the relative location of the Parish EOC.

The St. John the Baptist Parish direction and control of emergency operations during an accident associated with Waterford 3 is maintained from the St. John the Baptist Parish Emergency Operations Center (EOC) located in the Percy Hebert Office Building, Airline Highway, LaPlace, Louisiana. This facility is capable of operating on a 24-hour-per-day basis for an extended period of time. Figure 7-1 shows the relative location of the Parish EOC.

7.3.2 State Emergency Operations Center

Actions taken by the State during an emergency are coordinated by the State Emergency Operations Center (EOC), which is located at 7667 Independence Boulevard, Baton Rouge, Louisiana. This EOC is staffed by response agencies as indicated in the State of Louisiana Peacetime Radiological Response Plan. Figure 7-1 shows the relative location of the State EOC.

7.3.3 Louisiana Department of Environmental Quality

The Louisiana Department of Environmental Quality (LDEQ) maintains an Operational Headquarters located at 602 North 5th Street, Baton Rouge, Louisiana. This facility is staffed during an emergency to aid the State and parish EOC's in conducting emergency operations. Figure 7-1 shows the relative location of the LDEQ Operational Headquarters.

LDEQ establishes liaison at the EOF during an emergency for coordination of activities with EOF personnel and for direction of LDEQ Field Monitoring Team (FMT) activities.

The FMT conducts monitoring and sampling activities at predesignated sites in the plume exposure pathway EPZ at the time of the accident. Location of the Field Response Team is established at the time of the accident to facilitate the coordination of monitoring and sample collection activities. After initial field analysis, further analyses will be performed at the LDEQ Laboratory in Baton Rouge. In the event that the number of samples is too large to allow processing in an expedient manner, provisions have been made for assistance from the Southern Mutual Radiological Assistance Plan and the U.S. Department of Energy.

WATERFORD 3 SES EMERGENCY PLAN

7.3.4 Other Response Facilities

In conjunction with the emergency facilities previously discussed, there are several organizations that are capable of providing support to Entergy Operations, Inc. in an emergency.

Westinghouse Electric Company LLC and the Institute of Nuclear Power Operations provide facilities at their business locations that are staffed upon notification and serve to provide assistance as discussed in Section 5.2. The NRC maintains Incident Response Centers and Regional Office facilities, as does the Department of Energy, which is capable of supporting Entergy Operations, Inc. in an emergency. Locations for these supporting facilities are shown in Figure 7-8.

7.4 Assessment Facilities and Equipment

7.4.1 Control Room Instrumentation

Control Room instrumentation provides for the measurement of appropriate plant parameters that are indicative of the status of various plant systems and the reactor itself. Tables 7.5-1 and 7.5-3 of the Waterford 3 FSAR describe the plant systems instrumentation that is used to initiate emergency conditions and assess plant status. These systems, including their installed monitoring instrumentation, are designed to be operational under post-accident conditions. In addition, the operability of these systems in post-accident conditions allows the operators to assess the magnitude and potential consequences of the accident.

Various protective and engineered safety features (ESF) instrumentation systems provide continuous monitoring of the reactor and ensure that the associated ESF action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof exceeds specified setpoints.

7.4.2 Fixed and Portable Radiation Monitoring Systems

The Waterford 3 plant has an installed radiation monitoring system. The purpose of the system is to ensure that radiation levels throughout the plant and in process systems are continuously monitored. In addition, the system provides alarms and interlocks. The system consists of area monitors located throughout the plant and process monitors located in systems where the potential for accidental or excessive release of radioactive material to the environment exists. The operation of selected monitors in this system is described in the FSAR. Data obtained from selected monitors are used in estimating potential doses to the public as a result of routine or accidental releases of radioactive materials to the environment.

7.4.2.1 Process and Effluent Radiological Monitoring Systems monitor and furnish information to operators concerning activity levels in selected plant process systems and plant effluents. These systems consist of permanently installed continuous type monitoring devices together with provisions for specific routine sample collections and laboratory analyses. The overall systems are designed to assist the operator in providing information for evaluating and controlling the radiological consequences of normal plant operation, anticipated operational occurrences, and postulated accidents such that resultant radiation exposures and releases of radioactive materials in effluents to unrestricted areas are maintained as low as reasonably achievable.

WATERFORD 3 SES EMERGENCY PLAN

7.4.2.1 (Cont'd)

Table 7-2 is a tabulation of basic information describing each of the continuous process and effluent radiological monitors and samplers, including type of monitor and measurement made, sampler and/or detector type, range of activity concentrations to be monitored, provision for power supplies, and automatic actions initiated.

Table 4-4, provided in Section 4 of this plan, references the applicable radiological process, effluent and accident monitors to accidents analyzed in the FSAR. This table may be referred to for further information.

7.4.2.2 The Area Radiation Monitoring channels are located at selected places inside the plant to provide information on the radiation levels and annunciate any abnormal radiation conditions. Table 12.3-2 of the Waterford 3 FSAR indicates locations and range for these alarms.

7.4.2.3 The Airborne Radiation Monitoring System consists of monitors for the containment, the main Control Room, as well as certain areas in the Reactor Auxiliary Building. Table 12.3-3 of the Waterford 3 FSAR lists the Airborne Radiation Monitoring System monitors including the locations, number of channels and ranges.

7.4.2.4 The High Range Effluent Monitors/Containment High Range Monitors provide instrumentation that enables plant operators to better follow the course of a major accident and thereby assist them in making decisions with reference to mitigating the effects of a major accident. The instrumentation consists of the following monitors (For additional information see Table 1.9-4 of the FSAR).

1. One Plant Vent Stack Monitor
2. One Condenser Vacuum Pump Effluent Monitor
3. One Fuel Handling Building Emergency Exhaust Effluent Monitor
4. Two Main Steam Line Monitors
5. Two High Range Containment Monitors

Readout of all monitored items for all of the accident radiation monitors are available from the Radiation Monitoring System Computer Remote Console CRT (CP-6) and from separate readouts found in the Control Room (CP-52) and the Radiochemistry Count Room (CP-51B). Additionally, the two High Range Containment Monitors have separate readouts via safety-related remote display/control devices. These remote display/control devices are mounted on the existing safety-related radiation monitoring cabinet (CP-14) located in the Control Room.

A functional description of the High Range Effluent Monitors is provided in Subsection 7.4.11.

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7.4.2.4 (Cont'd)

The High-Range Containment Radiation Monitor consists of a gamma detector and cable for use in a containment environment, and support electronics that includes a readout located in the Control Room and Radiochemistry Count Room. The detector is encased in stainless steel to protect it from containment sprays and high temperatures. The monitor is a safety monitor (Class 1E) and is qualified under LOCA conditions to IEEE 323-1974. Radiation levels of up to 10^7 R/hr are displayed in the Control Room on a front panel meter. Two level trips are provided for alert and high radiation levels and are independently adjustable over the full range.

A failure trip is provided to actuate upon loss of power, high voltage, or signal from the detector. Automatic self-testing is provided to continuously verify detector operation. Outputs are provided for recorders, remote alarm relays and meters. A separate local display of radiation levels and alarm conditions exists. Energy response is uniform (± 20 percent) for photons in the range of 80 Kev to 3 Mev.

- 7.4.2.5 Monitoring of overall Reactor Auxiliary Building radioactive particulate, iodine and gas concentrations is provided for via the In-Plant Airborne Radiation Monitoring System (IPARMS). Using these monitors, the presence of potentially unacceptable high airborne activity levels can be detected in the RAB.

If the existence of a potential problem area is shown by the IPARMS, portable high volume samplers are used by Radiation Protection personnel to establish initial occupancy constraints for personnel who shall be working in a given area. Analysis of the samples taken via the portable high volume samplers is performed by the existing gamma spectroscopy system located in the counting room.

Finally, if plant personnel need to work in an area that was previously cleared by Radiation Protection personnel for occupancy for any length of time, Portable Continuous Air Monitors (PCAM) may be placed in the area to continuously monitor airborne activity levels, if conditions warrant. If unusually high activity levels were to be detected, the personnel occupying the area would be warned by the PCAM alarms.

- 7.4.2.6 Portable radiation detection equipment consists of low and high range instruments to measure gamma radiation levels from a fraction of an mR/hr to 10,000 R/hr. Instruments for alpha, beta, and neutron radiation measurements are available. Sampling equipment is also available to collect samples for analysis of particulate and radioiodine concentrations.

Emergency radioiodine sampling is done with silver zeolite cartridges that have extremely low retention efficiency for noble gas. With minimal interference from noble gases, radioiodine concentrations as low as 1×10^{-7} uCi/cc can be measured. Portable radiation survey instruments are listed in Table 12.5-2 of the Waterford 3 FSAR.

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7.4.2.7 Personnel monitoring is provided by use of Dosimeter of Legal Record (DLRs), direct reading pocket dosimeters, direct reading electronic dosimeters and survey instrumentation. The dose measuring devices used consist of devices that can be quickly and accurately evaluated by EOI Dosimetry Process Facility personnel (DLRs) and devices that can be easily read by the individual (direct reading dosimeters). During an emergency/accident condition, all personnel entering the Controlled Access Area will be issued DLR badges which will be used to measure exposure to beta-gamma and neutron radiation, and to provide the official personnel exposure records.

7.4.2.8 Personnel survey instrumentation consists of G-M countrate meters (contamination friskers), PCMs, portal monitors, and whole body counting capability. The criteria for selection of external contamination measuring equipment were to have devices available at checkpoints and other areas that could be used to determine the location of contamination (friskers and tool monitor), and to have devices at all normal exits from the controlled area that do not require any action by personnel being checked (portal monitors and PCMs). These instruments are calibrated in accordance with Radiation Protection procedures. The criteria for selection of the whole body counting system were to have a system readily available to quickly supply information concerning internal contamination levels. The whole body counting system calibration and source checks are performed in accordance with Radiation Protection procedures. Personnel monitoring instrumentation is listed in Table 12.5-3 of the Waterford 3 FSAR.

7.4.3 Laboratory Facilities

The Radiochemistry counting rooms are near the -4 elevation access control point. The counting rooms provide the necessary laboratory instruments for personnel to process radioactive material survey samples, post-accident chemistry samples, or samples collected by radiological field monitoring teams. Portable sample counting instrumentation is utilized at other control points as necessary. Analysis of Radiation Protection and field samples will normally be performed in the Radiochemistry counting rooms or using the Onsite Monitoring Kit equipment in the OSC.

The counting rooms are equipped with High Purity Germanium (HPGE) detectors for gamma spectral analysis in addition to gas flow proportional and liquid scintillation counters. These detectors are shielded to reduce background radiation to an acceptable level. In an emergency, this equipment is available for use in the analysis of samples. A list of equipment maintained in the counting rooms is included in Table 12.5-1 of the Waterford 3 FSAR.

Instrumentation located in the counting rooms allows plant personnel to ascertain the radioactive material present in survey samples. Typical samples would be contamination survey smears, airborne survey filters, and charcoal or silver zeolite cartridges; tritium and other samples may be processed also.

The criteria for selection of these various counters were to obtain instrumentation that could reliably and quickly count samples; provide necessary low backgrounds and sensitivities; and to some extent, analyze counting data to provide information in a form more easily used in radiological assessment.

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7.4.3 (Cont'd.)

Each laboratory counting system is checked and calibrated at regular intervals with standard radioactive sources traceable to a National Institute of Standards and Technology (NIST) source. Counting efficiency, background count rates, and high voltage settings are checked by plant personnel in accordance with plant procedures.

Additional laboratory facilities may be utilized at Louisiana Department of Environmental Quality (LDEQ), Riverbend, Arkansas Nuclear One, and Grand Gulf Nuclear Stations. Laboratory facilities for the analysis of State field team samples are provided at the Baton Rouge LDEQ headquarters. Shipment of samples to these facilities is handled in accordance with emergency implementing procedures, chemistry procedures, Radiation Protection procedures and agreements regarding offsite laboratory facilities in Appendix C. Samples may also be analyzed using the Onsite Monitoring Kit equipment in the OSC.

7.4.4 Environmental and Offsite Monitoring Equipment and Facilities

The Waterford 3 plant has a Radiological Environmental Monitoring Program (REMP) which provides environmental data for the Waterford 3 site and the surrounding area.

Detailed information concerning this program can be found in the Waterford 3 Environmental Report Technical Requirements Manual (TRM) and in the Offsite Dose Calculation Manual (ODCM).

There are presently 31 external radiation monitoring locations in the REMP. However, the number of monitoring locations may vary from year to year in accordance with Plant Procedures. Each external radiation monitoring device consists of two Panasonic UD814 TLDs. Each unit contains one lithium borate element and three calcium sulfate elements. There are additional sample locations for milk, water, river sediment, fish, broad leafy vegetation, and airborne (iodine and particulate) samples. Many of these sample locations correspond to external radiation points. More than one sample type may be collected at specific sample locations. The sample station identification numbers for all external radiation and environmental sampling locations are designated with respect to the 16 directional sections demonstrated in the ODCM/TRM and the distance from the plant. The REMP monitoring sample locations are shown in the ODCM.

All REMP stations serve the dual function of environmental fixed monitoring sample locations and emergency fixed monitoring/sample locations. In addition, predetermined points for monitoring and environmental sampling in an emergency have been identified and are shown in Figure 7-9d.

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7.4.4.1 The objectives of the (REMP) are:

- a. To determine any statistically significant increase in the concentration of radionuclides in critical pathways.
- b. To detect any build-up of long-lived radionuclides in the environment.
- c. To detect any change in ambient gamma radiation levels.
- d. To verify that radioactive releases are within allowable limits and that plant operations have no detrimental effects on the health and safety of the public or on the environment.

The Waterford 3 REMP satisfies the NRC Radiological Assessment Branch technical position.

Additionally, in response to an offsite release, the Louisiana Department of Environmental Quality will request State agencies to assist with environmental sampling as follows:

- a. Department of Wildlife and Fisheries
 - (1) Fish sampling
 - (2) Wildlife sampling
- b. Department of Health and Hospitals
 - (1) Drinking water sampling
 - (2) Processed (consumer ready) milk, fruit, vegetables, poultry and egg sampling
- c. Department of Agriculture and Forestry
 - (1) Animal food sampling
 - (2) Raw milk sampling
 - (3) Unprocessed fruit, vegetables, poultry and egg sampling

The type of emergency sampling employed is indicated in Table 7-8.

7.4.5 Meteorological Detection

The Waterford 3 plant has an onsite meteorological monitoring system. The purpose of this system is to ensure that sufficient meteorological data are available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. The operational meteorological monitoring program is designed to comply with the requirements of USNRC Regulatory Guide 1.23 and Appendix 2 NUREG-0654.

The location of the two independent meteorological towers (primary and back-up) are such that the data from the towers are representative of the Waterford 3 site.

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7.4.5 (Cont'd.)

Both monitoring locations were selected to minimize the effects of wake interference from surrounding obstacles and to decrease the probability that a natural event, such as a lightning strike, will disable both systems. Each location is fenced and contains an equipment shelter, a meteorological tower, a complete lightning protection system (i.e., lightning dissipation array system, lightning rods, surge arrestors, buried grid, etc.), and adequate night illumination.

Signals from both the primary and back-up stations are transmitted to the plant via communication cables to the plant monitoring computer for processing (quality assurance check). These weather-resistant cables are placed in trenches approximately six feet deep that are covered with concrete slabs and adequately protected against transient electrical fields from lightning strikes. Signals from the back-up station are sent through a different multiplexer site than those from the primary station and each multiplexer passes the signal on to the online plant monitoring computer. All signals may be switched to the redundant computer system if required. Meteorological information coming into the computer is available for use by the MARMOND display described in Section 7.4.11 for prediction of effluent transport and diffusion. It is also available for display on several remote terminals connected to the plant monitoring computers. Additionally, local displays and data loggers operate at each tower location for the purpose of continually monitoring and recording meteorological data necessary to perform diffusion calculations. The operation of this system is specified in the technical requirements manual.

The 60-meter (199 ft) primary tower monitors the following meteorological parameters at the specified levels:

<u>Parameters</u>	<u>Level (m)</u>
Wind Speed	10
Wind Speed	60
Wind Direction	10
Wind Direction	60
Sigma Theta	10
Sigma Theta	60
Temperature Difference "A"	10-60
Temperature Difference "B"	10-60
Ambient Temperature "A"	10
Ambient Temperature "B"	10
Ambient Temperature "A"	60
Ambient Temperature "B"	60
Precipitation	Ground

The 60-m (199 ft) back-up tower monitors the following meteorological parameters at the specified levels:

<u>Parameters</u>	<u>Level (m)</u>
Wind Speed	10
Wind Direction	10
Sigma Theta	10
Ambient Temperature	10
Ambient Temperature	60
Temperature Difference	10-60

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7.4.5 (Cont'd.)

Since the two meteorological monitoring systems have totally independent power supply, cables, back-up line power, signal transmission cables, and signal handling for the plant monitoring computer input, it is highly unlikely that meteorological data will be unavailable from either the primary or back-up stations at any time. Rigorous quality assurance procedures and semi-annual calibration of the equipment ensure the reliability and proper operation of both stations.

The National Weather Service (NWS) provides additional minimal back-up meteorological information (i.e., wind speed, direction and probability of upper air inversion) in the vicinity of the Waterford 3 plant from the NWS Office at Slidell.

7.4.6 Fire Protection and Detection

A comprehensive Fire Protection Program is provided at Waterford Steam Electric Station Unit 3 (W3) to maintain the ability to perform the safe reactor shutdown function, maintain the reactor in a safe shutdown condition, and to minimize radioactive releases to the environment in the event of a fire, as well as to prevent/minimize economic loss due to property damage and operating interruption. The overall objective of the Fire Protection Program is to minimize both the probability and consequence of postulated fires.

The design bases of these goals are directed toward:

- a. Prevention of fires through the control and separation of ignition sources.
- b. Prompt detection and suppression of fires in areas containing safety-related equipment or high combustible loadings;
- c. Confinement of fires to their areas of initiation by provision of fire barriers, spatial separation, administrative procedures, and segregation of combustibles; and
- d. Protection of redundant safe shutdown equipment and associated cabling to ensure post-fire shutdown capability.

At Waterford 3, structures, systems and components important to safety are designed and located to minimize, consistent with other safety requirements, the probability and effect of fires and explosions. Noncombustible and heat-resistant materials are used wherever practical throughout the unit, particularly in locations such as Containment and the Control Room. Fire detection and suppression systems of appropriate capacity and capability are provided and designed to minimize the adverse effects of fires on structures, systems and components important to safety. Fire suppression systems have been bounded by general plant flooding analyses to provide assurance that their rupture or inadvertent operation does not significantly impair the safety capability of these structures, systems and components.

Equipment and facilities for fire protection, including detection, alarm and extinguishment, are provided to protect both plant and personnel from fire or explosion. Both wet and preaction type fire suppression equipment are provided.

Normal fire protection is provided by sprinkler systems, hose lines and portable extinguishers.

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7.4.6 (Cont'd.)

The Fire Protection System is designed to protect systems/components such that a failure of any component of the system will not impair the ability of redundant equipment to achieve and maintain safe shutdown or limit the release of radioactivity to the environment in the event of a postulated accident.

Total reliance is not placed on any single fire suppression system, automatic or manual. A full complement of appropriate portable fire extinguishers are installed throughout the plant to provide either initial fire fighting capacity or back-up to automatic or manual suppression system. As a back-up to portable fire extinguishers and/or automatic suppression systems, a system of 1-1/2 inch hose stations is installed, throughout the plant, so that all areas within each building can be reached with an effective hose stream. As a final back-up to all of the protection outlined above, outside yard hydrants and hose houses are also provided.

A single failure in the water-supplied fire suppression system will not impair both the primary and back-up fire suppression capability.

Three fire pumps, one electric motor and two diesel engine driven, provided with independent suction and discharge lines, supply water to the underground yard loop.

The Fire Protection System at Waterford 3 is designed and installed using guidance provided by the National Fire Protection Association (NFPA) and applicable regulatory guides.

7.4.7 Seismographic and Hydrologic Equipment

The Waterford 3 Station employs an active seismic monitoring system which serves to alert station personnel that a seismic event has occurred and records/displays the seismic data to allow evaluation upon which response actions will be initiated.

The system consists of triaxial time history accelerographs, located at various locations within the plant, which detect vibratory ground motion and input data to a recording unit.

In addition to the seismic instrumentation onsite, the following stations maintain seismographs in the vicinity of the site. Recorded seismic data from these stations is available to corroborate onsite data or as a back-up source of information in the unlikely event that onsite instrumentation does not function properly.

- University of St. Louis, Department of Earth & Atmospheric Sciences, St. Louis, Missouri
- Center for Earthquake Research and Information, Memphis, Tennessee
- National Earthquake Information Center, Denver, Colorado
- California State Institute of Technology, Pasadena, California
- U.S. Geological/Albuquerque Seismological Lab, Albuquerque, New Mexico
- Alabama Geological Survey/Georgia Institute of Technology

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7.4.7 (Cont'd)

Hydrological equipment used in monitoring the Mississippi River level consists of a gage station installed adjacent to the intake structures.

The U.S. Army Corps of Engineers maintains a system of river gage stations upstream and downstream of the plant. The river level is monitored and, under conditions conducive to higher than normal levels, the Corps of Engineers will provide estimates of the crest level and time. The hydrology of the Mississippi Valley is such that ample warning, on the order of days, will be available prior to reaching the flood stage.

7.4.8 Protective Facilities and Equipment

Offsite evacuation assembly points provide a predesignated location where evacuating personnel can assemble during an emergency. These areas provide locations to allow the flexibility to select an area upwind from any release or potential release. Figure 7-9 shows the location of these areas. Communications between the assembly points and the Operational Support Center are provided by radio.

Facilities for decontaminating personnel are available at Waterford 3 in the -4.0 ft. Control Point Access Area. Decontamination showers, sinks and specialized equipment are located in this area, as is the normal inventory of Radiation Protection equipment. This area also acts as a storage area for emergency equipment and supplies. Should this area become uninhabitable, facilities are available on the +7 ft. MSL to carry out decontamination activities. Limited personnel decontamination may be performed in the Westside Access.

The Waterford 3 Station maintains an extensive complement of protective equipment to provide emergency response personnel with adequate protection to carry out their roles in an emergency. This equipment is located in the following facilities:

- a. Control Room/Technical Support Center
- b. Operational Support Center
- c. Control Point Area (-4 RAB and Westside Access point)
- d. Emergency Operations Facility
- e. Main Security Office

An adequate inventory of protective clothing is maintained on hand at the access control point or other control points as necessary to support emergency operations and maintenance activities. This clothing includes lab coats, overalls, hoods, caps, plastic oversuits, gloves (plastic, rubber, cloth), shoe covers, boots and rubbers. Tape is provided for sealing. A listing of Radiation Protection equipment is shown in Table 12.5-4 of the Waterford 3 FSAR.

Additional contamination control supplies are available. These include vacuum cleaners, mops, absorbent paper, plastic sheets and bags, barricade ropes, signs and labels.

To minimize exposure to non-emergency personnel, protective actions will be implemented.

Typical equipment listings for each facility are contained in Appendix G. Instructions for their dissemination and use are provided for in the Implementing Procedures.

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7.4.9 Damage Control Equipment

The Waterford 3 Station is extensively equipped to conduct preventive maintenance and repairs on mechanical, structural, electrical, and instrumentation and control equipment found in the station.

Maintenance personnel are trained to perform the tasks associated with their craft in the working environment of a nuclear plant.

In addition to the equipment and materials required for normal maintenance, other items are available to handle extraordinary maintenance jobs that might arise in damage control.

7.4.10 First Aid and Medical Facilities

Facilities for first aid/emergency medical care and related decontamination of injured/ill personnel are available in the Radiation Protection Area on the -4.0 ft. MSL elevation of the Reactor Auxiliary Building. Basic emergency medical equipment and supplies are contained within this area.

In addition, first aid lockers are provided in strategic locations onsite, as described in station procedures.

The first aid and emergency care supplies available at all locations are designated appropriate to the training level of the First Aid Team.

Decontamination equipment/supplies, to support a first aid effort, are located in the Radiological Controlled Area and include showers, sinks, eyewash supplies, cleaning agents and materials, contamination monitoring equipment, and materials to control the spread of contamination. Specific decontamination procedures/supplies are detailed in the Emergency Plan Implementing Procedures.

7.4.11 Assessment Capabilities

- a. The capability to make rapid assessment of the actual or potential magnitude and location of any radiological hazards through gaseous release pathways is provided by computerized and manual dose assessment procedures described in the Emergency Plan Implementing Procedures.

The first item which must be determined in evaluating an accidental release of radioactive materials is the amount of activity released. This information is available since those systems, which contain or may contain radioactive materials, and their potential release paths, are monitored by the installed Radiation Monitoring System described in Subsection 7.4.2. In addition, these systems are routinely sampled and analyzed. Radiation surveys, contamination surveys and air samples are performed as necessary to provide supporting information.

If actual data is not immediately available, the magnitude and duration of the release may be estimated by station personnel from plant conditions or from knowledge of the type of incident that occurred.

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7.4.11a (Cont'd.)

All radiation monitors at the Waterford 3 plant, including process, effluent, area and airborne monitors, include local microprocessors with inputs to the Radiation Monitoring Computer. Data coming into the Radiation Monitoring Computer is available for interrogation by plant personnel. The plant stack is the common release point for normal exhaust from the Reactor Auxiliary Building as well as emergency exhaust from the Shield Building Ventilation System and the Controlled Ventilation Area System. These release points are provided with radiation monitors which function to confirm that releases of radioactivity do not exceed the limits of 10CFR20. Additional high-range monitors are provided for accident situations in which the range sensitivity of the normal monitors may be exceeded. The normal stack and FHB monitors are listed in Table 7-2.

The normal plant stack radiation monitor is a three-stage isokinetic monitor that monitors the plant stack for particulates, iodine and noble gases.

During an accident the concentration of radioactive effluents monitored by each channel is input into the plant monitoring computer. The release rate is determined by multiplying the concentration by the stack flow rate, which is also measured by the monitor and polled by the plant computer.

The release rate from the normal Fuel Handling Building Exhaust is determined in the same manner as for stack releases. Concentration of particulates, iodines and noble gases, and exhaust flow rates in Exhausts A and B are obtained from two three-stage isokinetic monitors whose design and operation is the same as the plant stack monitor. The concentration in each channel is multiplied by the volumetric flow rate to obtain the release rate.

The source term from the Condenser Vacuum Pumps exhaust is determined in a similar manner to the above source terms. The exhaust is monitored by a three-stage isokinetic monitor whose design and operation is the same as the plant stack monitor.

Following an accidental release of radioactivity, dose assessment personnel can perform dose projections based on the best release and atmospheric dispersion data available. The primary sources of the data are the effluent monitors and the primary and backup meteorological towers. If release data from effluent monitors is unavailable, or if the releases bypass the monitor, the operator is able to explicitly specify the source term based on an assessment of inventory available for release. If the type and magnitude of the source term cannot be estimated, dose assessment personnel can classify the accident according to one of the accident types in Chapter 15 of the FSAR. Similarly, if data from the meteorological monitors (i.e., wind speed and direction and atmospheric stability category) is unavailable or suspect, dose assessment personnel can explicitly specify the necessary meteorological parameters from offsite sources.

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7.4.11a (Cont'd.)

In addition to normal effluent monitors, high range monitors are provided on the plant stack, exhaust from the Fuel Handling Building, and the Condenser Vacuum Pump and main steam lines. These monitors are used to measure effluent concentration at levels above the normal monitor alarm levels. The monitors are discussed in Subsection 7.4.2 and described in detail in FSAR Subsection 1.9.29.

Radiation monitor readings and other information useful in performing offsite dose calculations can be found on PMC mimic display "MARMOND 2."

Meteorological data and summaries can be found on PMC mimic display "MARMOND 1." The MARMOND program acquires meteorological parameters from the meteorological monitors described in Subsection 7.4.5 and provides information that allows for the calculation of atmospheric dispersion estimates at various locations. Other sources of meteorological data are described in the Emergency Plan Implementing Procedures.

Data acquired from MARMOND displays is used as input to the Dose Assessment computer or as input to one of the manual methods of Dose Assessment. The calculation procedures that are employed to predict the transport and diffusion of airborne effluents are derived from regulatory guidance and other industry reference documents, and documented in accordance with accepted Entergy Operations, Inc. practices. The exact procedures and formulations are described in the Emergency Plan Implementing Procedures.

If the situation warrants, additional information on meteorology, radiation levels and the environment is gathered and evaluated to determine exposure rates as well as confirming and/or updating previous assessments.

Air samples and dose rate readings are taken, as appropriate, at offsite locations based on present meteorological data. The projected dose is confirmed by analyzing air samples or by comparing dose rate readings to doses projected by Dose Assessment or a combination of both.

As indicated in Subsection 7.4.2, main steam line monitors are installed in order to estimate releases that may occur from secondary relief valves and atmospheric steam dump valves. One collimated GM tube is installed to view the activity and is recorded by the microprocessor at 10-minute, 24-hour and 28-day averages. Two conversion factors have been developed for the main steam line monitors in terms of mR/hr per uCi/cc of pressurized steam.

These factors are based on isotopic functions arising from gross fuel failure and 1.0% cladding failure, respectively. The conversion factors take into account the thickness of the main steam line. Plant personnel can calculate the flow in cubic feet per minute of steam through secondary relief valves or atmospheric dump valves. Using the above information they are able to estimate the activity release rate at any time during the accident or, after the valves have closed, estimate the integrated releases which had occurred during the accident.

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7.4.11a (Cont'd.)

An indication of the source term of radioactive material within, and potentially available for release from, the containment is provided by the two high range containment monitors described in Subsection 7.4.2. To facilitate assessment of accident severity and the potential for radioactivity release, plots have been prepared showing the containment radiation monitor readings vs. time following an accident for incidents involving 100 percent release of coolant activity, 100 percent release of gap activity, one percent release of fuel inventory, and 10 percent release of fuel inventory. These plots are shown in Figure 7-10.

A projected dose from a liquid release, whether it is within normal limits or assumed to be an incident, is determined through normal procedural methods. The concentrations of radioactivity being released are determined from installed radiation monitors, samples, release records or estimated if necessary. The release rate and flow path are determined as well. The appropriate dilution factors are applied to the concentration in the effluent at the point of measurement to allow for the additional dilution by circulating water.

- b. In the event an accident results in a release of radioactive materials to the environment, an emergency radiological survey team is assembled. This team is composed of sufficient Radiation Protection and other trained personnel to provide for offsite emergency monitoring within the 10-mile EPZ.

The offsite monitoring teams assemble at predetermined locations and are given instructions as defined in the Emergency Plan Implementing Procedures as to location and types of samples that are required within the plume exposure pathway.

These teams have the capability of communicating with the Emergency Operations Facility when that location becomes operational. The EOF will then be the central point for coordinating the receipt and analysis of field monitoring data.

Transportation for offsite monitoring is provided by company vehicles assigned to the station. The teams maintain contact with the EOF when in the field.

Portable radiation detection equipment consists of instruments to measure gamma and beta radiation levels. Sampling equipment is also available for the collection of air samples. Battery-operated air samplers are used to collect low volume air samples for analysis of radioiodine concentrations. These air samples are initially analyzed in the field using a GM Survey Meter with pancake probe.

Emergency radioiodine sampling is done with silver zeolite cartridges that have extremely low retention efficiency for noble gases.

Radioiodine concentrations as low as 1×10^{-7} uCi/cc can be measured. The exact types and quantity of equipment for emergency radiological monitoring is specified in the Emergency Plan Implementing Procedures.

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7.4.11 (Cont'd.)

- c. The Waterford 3 Safety Parameter Display System (SPDS) consists of a plant computer-driven SDS display in the Control Room on the Plant Operator's desk providing the operators with a continuous indication of a set of parameters defining the safety status of the plant. While the main purpose of the SPDS is to aid the operator in the detection of abnormal operating conditions, duplication of the SPDS displays in the Technical Support Center (TSC) and the Emergency Operations Facility (EOF) enhances the exchange of information between these facilities and the Control Room; it also assists management in the decision-making process.

The data base of the plant monitoring computer includes many of the variables required to provide significant information to the operator on the status of important plant functions, such as:

- Reactivity Control
- Reactor Core Cooling and Reactor Coolant System Heat Removal
- Reactor Coolant System Integrity
- Radioactivity inside the Containment
- Radiation monitor readings
- Meteorological data and summaries
- Other equipment and plant functions important to plant safety

The use of the plant computer as a data acquisition system for the SPDS offers the following advantages:

- (1) Most, if not all, of the specified parameters required for the SPDS are already available in the extensive plant computer database, as required by other monitoring activities or specific application programs.
- (2) Additional inputs from plant instrumentation or from other monitoring systems (e.g., radiation monitoring system) are provided.
- (3) Derived variables required for the display are obtained through software information processing.
- (4) The display formats are designed according to human factor principles. A routinely displayed, readily interpretable presentation of the safety status for all modes of operation is always available to the operator. This is obtained by grouping a limited number of parameters, derived variables, and their trends in dedicated primary display formats.

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7.4.11c (Cont'd.)

- (5) The CRTs used for the safety parameter displays in the Control Room, as well as their corresponding keyboards, were physically and functionally integrated in the Control Room. Availability of similar displays in the Technical Support Center (TSC) and the Emergency Operations Facility (EOF) is obtained through additional CRT's and keyboard consoles linked to the plant computer.

The advantages listed above are complemented by the optimum flexibility allowed by a computer-driven CRT display system. This flexibility is available at different levels:

- (a) Flexibility in changing the display formats.
- (b) Flexibility allowing for interaction by the operator in the choice and grouping of displays.
- (c) Flexibility for future incorporation of advanced diagnostic concepts and evaluation techniques.

7.4.12 Post Accident Liquid Effluent Sampling

Various sampling sinks are located on the -35 elevation RAB near the tank rooms. These sinks are used for both normal and post accident sampling.

7.4.13 Post Accident Stack Gas Sampling

A post accident stack effluent sample can be obtained off the wide range gas monitor located on the +46 elevation near the plant stack.

7.5 Communications Systems

A comprehensive communications system is provided to assure reliable intra-plant communication, offsite commercial telephone service and offsite emergency communication capabilities.

The communications system is designed to ensure a reliable, timely flow of information and action directives between personnel and agencies having response or supporting roles in the mitigation of emergencies at Waterford 3.

7.5.1 Normal Communications Systems at Waterford 3

The communication facilities at Waterford 3 are as follows:

- a) Intraplant voice communication is provided by a Private Automatic Branch Exchange (PABX) telephone system which will also interconnect with the central office of the AT&T Telephone System.
- b) Intraplant voice paging is provided by a system of high-level audio amplifiers and speakers.
- c) A sound-powered headset intercom system provides communication for maintenance and operational purposes. The refueling operation intercom is a dedicated circuit in this system. It provides communication between the Fuel Handling Building operating levels and the main Control Room.

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7.5.1 (Cont'd.)

- d) Five radio communication systems are provided, two for intraplant operation and maintenance (O&M), a third system for intraplant security, a fourth system for offsite communications (Civil Defense) and a fifth system for communications with field monitoring teams during emergencies.
- e) The main Control Room is provided with a PABX dial telephone, PA paging, radio and sound-powered headset communication facilities.
- f) Plant working stations located throughout the plant site are provided with communication facilities so that personnel can communicate with other working stations, and/or the main Control Room, and/or the remote shutdown room.
- g) Telecommunications support is provided to the plant security system by the telephone and paging systems.
- h) The Emergency Operations Facility, in the James M. Cain Energy Education Center, is serviced by the James M. Cain Energy Education Center telephone system. This telephone system is separate from the plant system, which services the nuclear island and other station facilities. To ensure reliable telephone communications, the Control Room, OSC and TSC are provided with a limited number of extensions on the James M. Cain Energy Education Center telephone system. The EOF is provided with a limited number of extensions on the plant telephone system. In addition, the EOF has a building page system separate from the Plant Page system. This building page system is accessed through the EOF phone system.

7.5.1.1 The Private Automatic Branch Exchange (PABX) telephone system supports at least 30 simultaneous conversations on a dial-up basis between extension stations located strategically throughout the plant areas. The telephone switching equipment is a modern electronic-type with built-in safeguards and annunciation signals. Its design is modular and utilizes plug-in-type components. The telephone operator or technician can check the status of the system through the consoles. Any malfunction can be easily detected and usually corrected by replacing the affected module. If a line is severed or shorted, it will be automatically isolated by the switch until it is repaired and the rest of the system will continue to function normally. In case of power failure, the telephone switch sends an annunciation alarm signal to the Control Room. Desk, wall and weatherproof-type telephone instruments are installed as required and connected to the main switching unit with shielded cable. Telephone instruments are the pushbutton type. A PABX extension station has access to all telephones in the plant. Designated PABX extension stations have access to the loudspeaker-paging network. Telephone calls from the plant into the AT&T System can be made from designated unrestricted service phones. The central switching unit is located in a limited access, air conditioned communications equipment room in the Reactor Auxiliary Building (elevation +7 ft. MSL).

The PABX is supplied 120 Vac power from independent circuits of the plant static uninterruptible power system (SUPS).

WATERFORD 3 SES EMERGENCY PLAN

- 7.5.1.2 The Public Address (PA) System allows intraplant paging. It is used to supply general information and emergency information to station personnel. It can be accessed by using the PABX telephone and dialing a four-digit access code.

The paging system consists of two precompressor amplifiers and five power amplifiers (one is a spare) feeding four 70-volt independent audio and signal transmission lines. The preamps and power amplifiers are monitored by a supervisory signal. The active tone generator is also supervised. Failure of any of these components is detected and annunciated in the main Control Room.

The output of the power amplifiers is distributed to the loudspeakers via four independent transmission lines (channels). To improve system reliability, the speaker load is divided into nine zones. Each zone is covered by two channels. These two channels are connected to different precompressor amplifiers and are run in the same conduit system; diversification is carried further by connecting speakers on alternate channels. Failure of the precompressor amplifier will mute half of the speaker system; malfunction of a power amplifier will only affect 25% of the speakers, but in no case will an area or building lose total coverage. However the standby unit can be switched on immediately to restore the system to 100% capability. The paging system is provided with a spare power amplifier that is manually switched into operation should an active amplifier fail. The paging system is powered from a 120 Vac source from the plant static uninterruptible power system (SUPS). Flashing lights are provided in high noise areas to alert personnel of a plant alarm. Personnel are trained to proceed to an area in which they can hear the announcement when the light begins to flash.

- 7.5.1.3 The Sound-Powered System is a communications network between the Control Room and various in-plant locations. The Sound-Powered System is located in the Waterford 3 SES emergency facilities.

During normal operations, the Sound-Powered System is used to coordinate various tests and maintenance tasks. During emergencies, it is used as a backup communications method to pass plant status and operational information.

There are 11 dedicated sound-powered headset intercom circuits installed. By segmenting this system, it is possible to have several teams working simultaneously. These 11 circuits are terminated in the patchboard terminal panels, which are located in the main Control Room. Plug-in patches allow temporary circuit interconnections at these panels whenever there is a need for it. Each circuit consists of a two-conductor shielded line interconnecting two or more remote stations. A jack is provided at each remote station into which the portable headset equipment can be plugged. This arrangement allows for handsfree operation and requires no amplifiers or power source.

The Sound-Powered System is a simple system, it does not require a power supply and component failure is minimal. A damaged headset is easily replaced and there is very little to go wrong with the jack stations and the patchboard terminal panels.

WATERFORD 3 SES EMERGENCY PLAN

7.5.1.3 (Cont'd)

A separate independent sound powered phone system is provided between the Control Room, TSC, OSC, EOF and Backup OSC. This sound powered phone circuit exists primarily to provide plant status and operational information between emergency facilities.

These systems also serve as back-up to the normal communications system (PABX).

7.5.1.4 Station Radio System

- a. The Operation and Maintenance Radio System (O&M) is the primary radio communications network for normal onsite communication for Operations and Maintenance personnel. When an emergency is declared (Unusual Event, Alert, Site Area Emergency or General Emergency), the maintenance radio frequency is dedicated to emergency communications. The O&M Radio System includes the following features: One-way (paging) and two-way operation. A base station is used as a repeater for portable-to-portable and portable-to-base station communications. The O&M Radio System operates in the FM band. The O&M Radio system is powered from a 120 Vac source from the static uninterruptible power system.
- b. The Security Radio System is the primary radio communications network for security personnel during normal and emergency conditions. Further details of the Security Radio System are contained in the Waterford 3 SES Security Plan.
- c. The State Civil Defense Radio Network is a communications network primarily used by offsite agencies during any type of emergency. It can provide communications links with the local parishes and State agencies. The State Civil Defense Radio Network operates on the 700 MHz band. The State Civil Defense Radio Network is powered from a 120 Vac source from the static uninterruptible power system.
- d. During emergencies, the Radiological Field Monitoring Radio Network is utilized by Waterford 3 SES personnel to transmit offsite radiological data. The Radiological Field Monitoring Radio Network operates in the FM band. The Radiological Field Monitoring Radio Network is powered from a 120 Vac source from the uninterruptible power system.

WATERFORD 3 SES EMERGENCY PLAN

7.5.1.4d (Cont'd)

The radio remote stations are provided in locations inside and outside the protected area. The transmitter and antenna are located in the Information Technology Building. Component failure probability is quite small and the system requires minimum wiring. Should the control or transmission lines be faulted, depending on the fault's location, a portion of the subsystem will be operable. A repeater system is provided throughout the Metro New Orleans area and a talk-around feature is available with a coverage of 2 miles if a repeater failure occurs.

A summary of onsite communications system capabilities versus work station noise considerations during transients and/or accidents is shown in Table 9.5-6 of the Waterford 3 FSAR.

Besides the reliability provided with each subsystem, the strength of the onsite communications system lies in the overlapping coverage given by the subsystems, where the likelihood of simultaneous failure is minimal.

During normal operations, offsite telephone service is provided to the plant by the AT&T central office. In the event that commercial telephone service is lost, an emergency communications link will be set up from the main Control Room, the central alarm station, and/or the secondary alarm station via the two-way radio system and/or Entergy Louisiana's fiber optic system, which are both available to the plant.

Communications system protective measures are in some cases built into the equipment, in other instances they are provided in the design of the subsystems. Each of the subsystems is provided with a dedicated conduit system. The wiring is sectionalized by areas, floors, and/or building to facilitate troubleshooting. Further, the basic systems (PABX and loudspeaker paging) are monitored by Control Room annunciators.

7.5.2 Emergency Communications Systems

In the event of an emergency, the communications system discussed in Section 7.5.1 is employed by emergency response personnel to initiate corrective and protective actions.

The reliability of emergency communications is ensured through: (1) extensive redundancy, (2) alternate communication methods and (3) routine testing of the communications system.

Timeliness of the flow of information is achieved through: (1) prompt notification, (2) predetermined lines of communication, (3) predetermined emergency action levels, and (4) predetermined levels of authority and responsibility as discussed in other sections of this plan.

In addition to the communications systems discussed in Section 7.5.1, the following systems are provided for emergency use:

WATERFORD 3 SES EMERGENCY PLAN

- 7.5.2.1 Operational Hotline - The Operational Hotline is a communications network between Waterford 3 SES and the following agencies: GOHSEP, LDEQ, St. Charles Parish, St. John the Baptist Parish and Waterford 1&2.

In the event of an emergency, the Operational Hotline in conjunction with fax machines serve as the primary method of notification. It is used to transmit plant status, classification of emergency, radiological considerations, and protective action recommendations.

The Operational Hotline System includes the following features: 24-hour monitoring by St. Charles Parish, St. John the Baptist Parish and GOHSEP (GOHSEP notifies LDEQ of emergencies after normal working hours), dedicated cable and switching facilities.

The PABX and the Civil Defense Radio network are Backups to the Operational Hotline. The Industrial Hotline may also be used as a backup means of notification of St. Charles Parish. The Entergy Telecommunications Network is a backup for Waterford 1&2.

- 7.5.2.2 Industrial Hotline - The Industrial Hotline is a communications network between the St. Charles Parish EOC and industries in St. Charles Parish. Waterford 3 SES is a member of this network.

In the event of an emergency, the affected industry member notifies the St. Charles EOC via the Industrial Hotline. The class of emergency, type of incident and recommended actions are reported. The St. Charles EOC then notifies the affected neighboring industry members.

The Industrial Hotline System includes the following features: Voluntary participation by member industries, 24-hour monitoring by St. Charles Parish EOC, dedicated cable and switching facilities, and automatic ring. The Industrial Hotline is normally used only for communication between a member industry and St. Charles Parish. If needed, the St. Charles Parish EOC can patch individual members together.

- 7.5.2.3 NRC Emergency Notification System (ENS) and Emergency Response Data System (ERDS) - The ENS is a dedicated communications system between the NRC Operations Center in Bethesda, Maryland and Waterford 3 SES. Additionally, the NRC Operations Center has the ability to patch in the NRC regional office.

In the event of an emergency, the ENS is the primary method of notification to the NRC. It is used to transmit plant status, classification of emergency, radiological considerations, and other operational information, as requested.

The backup to the ENS is commercial telephone lines. The ERDS supplements the existing voice transmission over the ENS by providing the NRC Operations Center with timely and accurate updates of a limited set of parameters from Waterford 3's installed onsite computer system in the event of an emergency.

- 7.5.2.4 Health Physics Network (HPN) - The HPN is a telephone line supplied by the NRC. It is routed to the Emergency Facilities separate from the normal plant PABX lines and, therefore, would not be affected by a malfunction of the plant telephone system. The HPN telephones are appropriately labeled and are designed for communications with the NRC Operations Center, Bethesda, Maryland and the Regional NRC Offices.

WATERFORD 3 SES EMERGENCY PLAN

7.5.2.4 (Cont'd)

In the event of an emergency, the HPN is primarily used to supply Radiation Protection support to the affected site.

- 7.5.2.5 Control Room Intercom - The Control Room Intercom is the primary method of communicating plant status and operational information between the Control Room, TSC, OSC and EOF. The backup to the Control Room Intercom is the Sound Powered System.
- 7.5.2.6 Hotline Circuits - The Hotline Circuits provide direct communications between positions in the EOF, TSC, OSC, and Joint Information Center (JIC) and the State and Parish Agency Technical Representatives. Hotlines are used to enhance the senior management decision-making process. A hotline is used by the Emergency Director in the EOF and Emergency Plant Manager. Additionally hotlines are used to transmit plant status and information to various members of the emergency organization. Backup communications are provided by PABX.
- 7.5.2.7 Health Physics (HP) Intercom is used to enhance the onsite Radiation Protection decision-making process. It is used by the Radiological Coordinator and Rad Chem Coordinator. Additionally, it can be used to transmit Radiation Protection and radiological information to various members of the emergency organization. The backup to the HP Intercom is the PABX.
- 7.5.2.8 Facsimile transmission capabilities are available to provide rapid transmission of printed material between Waterford 3 emergency facilities and offsite agencies.
- 7.5.2.9 Entergy's Telecommunications Network - The Entergy Telecommunications Network interconnects Waterford 3 SES to Entergy Business Units and Entergy Power Plants throughout Arkansas, Louisiana, Mississippi and Texas. The system uses a combination of fiber optics and microwave for transmission, therefore totally bypassing all public telephone systems. It is used to transmit emergency information to the Entergy Louisiana, LLC. organization.
- 7.5.2.10 Pine Bluff Network - The Pine Bluff Network is the primary communications network between Transmission System Security Complex and Waterford 3 SES. Pine Bluff is the central dispatch of electrical power for Entergy Corporation. The system uses a combination of fiber optics and microwaves for transmission.
- 7.5.2.11 Southern Control Network - The Southern Control Network is the primary communications network between the Gretna Transmission Operations Center and Waterford 3 SES.

Gretna Transmission Operations Center is the central dispatch for Entergy Louisiana's Transmission and Distribution System. The system uses a combination of fiber optics and microwave for transmission.

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- 7.5.2.12 Mitsubishi Satellite Terminal** - The Mitsubishi Satellite Terminal is a lightweight portable Inmarsat-M terminal, which provides access to the international dial-up telephone, facsimile and data network. Inmarsat-M is a satellite communications system that provides telephone, data and facsimile communication to and from mobile subscribers anywhere within its worldwide coverage area. Additional satellite phone systems are available for use. There are at minimum 4 other satellite phones using multiple services available on the Waterford-3 site.

Table 7-10 outlines the communication systems provided in each of the emergency response facilities.

7.5.3 Onsite Emergency Notification System

To ensure notification to all site personnel that an emergency condition exists, Waterford 3 provides the following systems:

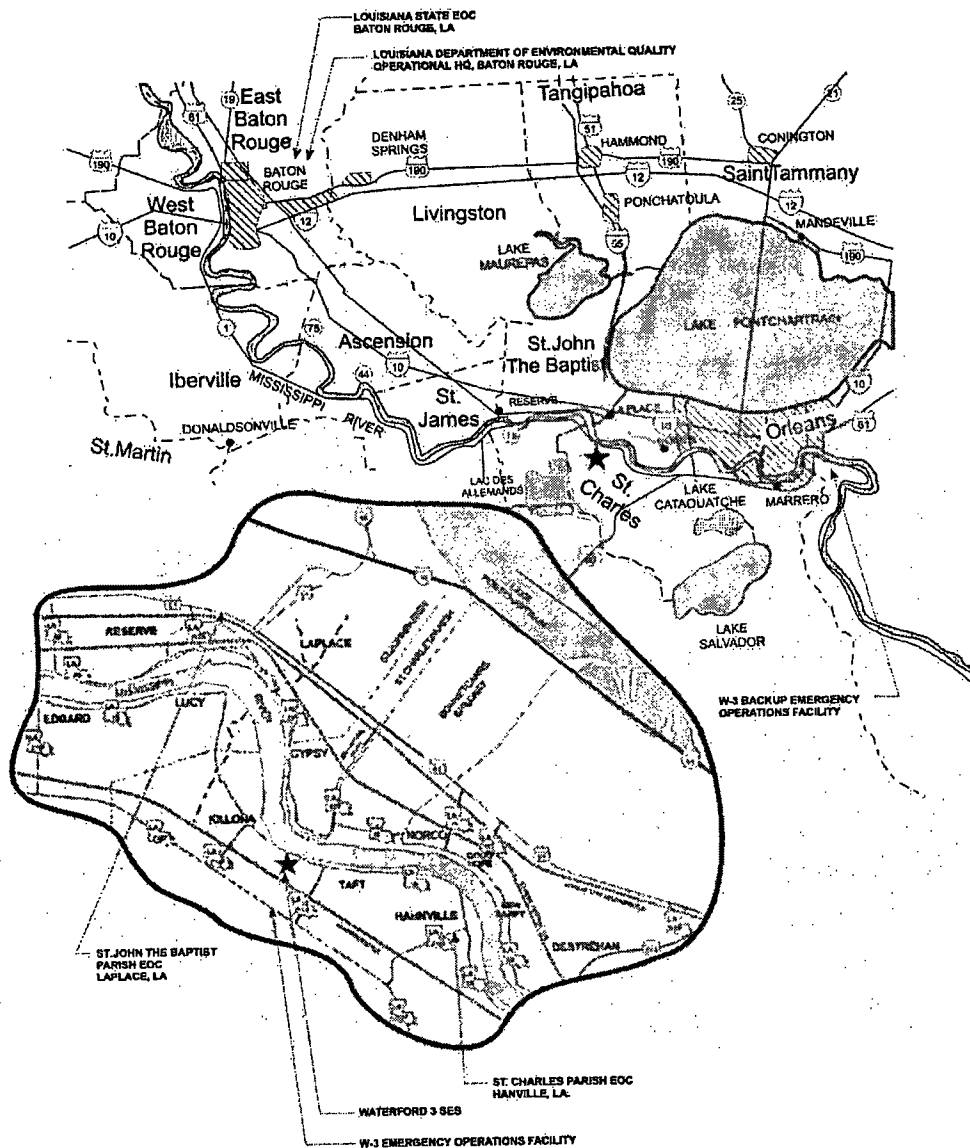
- 7.5.3.1 Waterford 3** has two alarms with distinctive sounds that all plant personnel and contractors are trained to recognize, namely, the Fire Alarm and the Station Alarm. There are also radiation alarms at the local radiation monitors and in the Control Room. The paging system is used in conjunction with the Fire Alarm and the Station Alarm. The Fire Alarm and Station Alarm can be manually activated from the Control Room, remote shutdown room, or the TSC. In addition, the paging system has a spare alarm tone capability built in.

The alarm signals are generated by one of two tone generators. The tone generators are arranged such that one generator is active and the other is standby. If the active generator fails, the standby generator will be automatically connected and an annunciation signal will be sent to the Control Room. The tone generator signals are fed to the paging amplifiers and broadcast through the loudspeaker system covering the entire site.

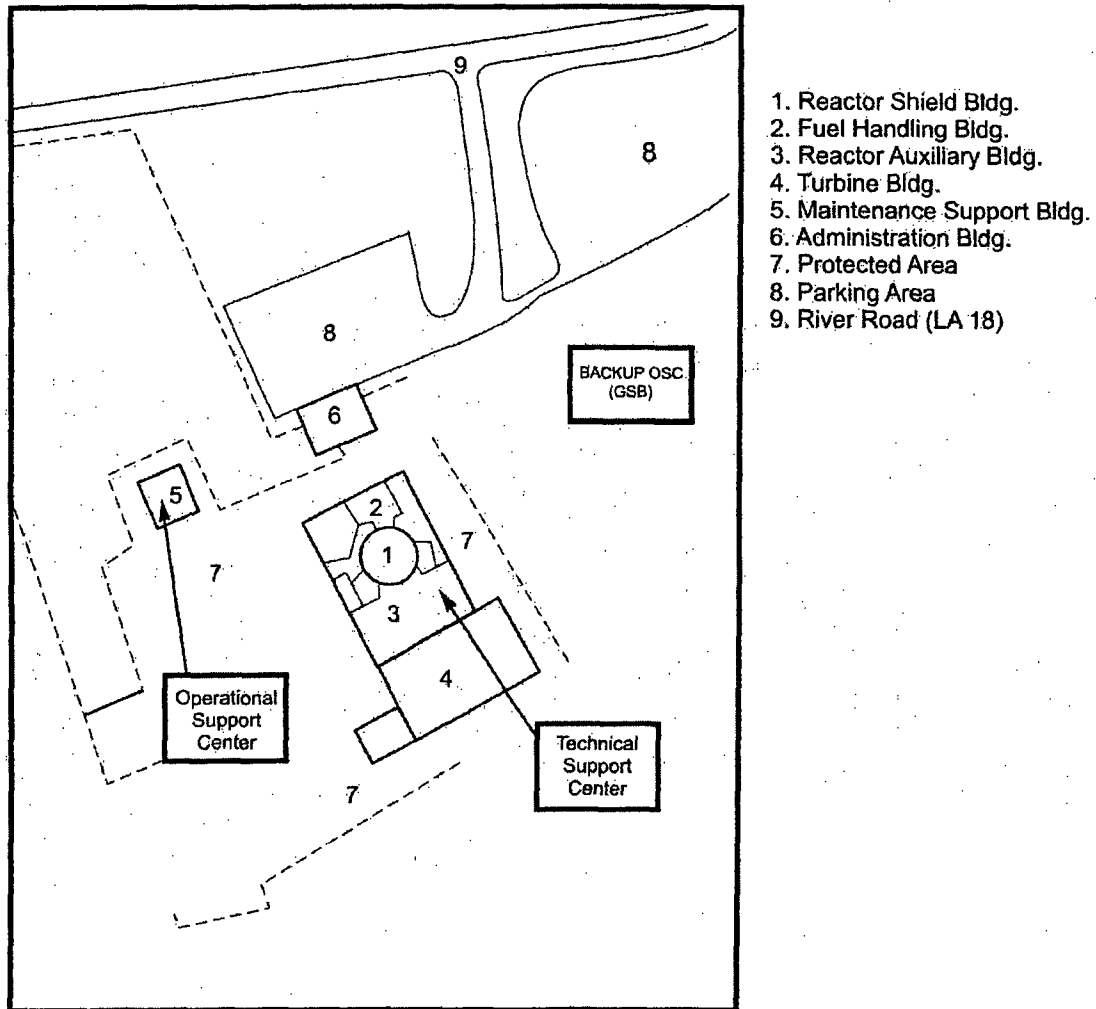
7.5.4 Offsite Emergency Notification System

A summary of the Offsite Emergency Notification System is contained in Appendix K. Details of the System are provided as a separate document.

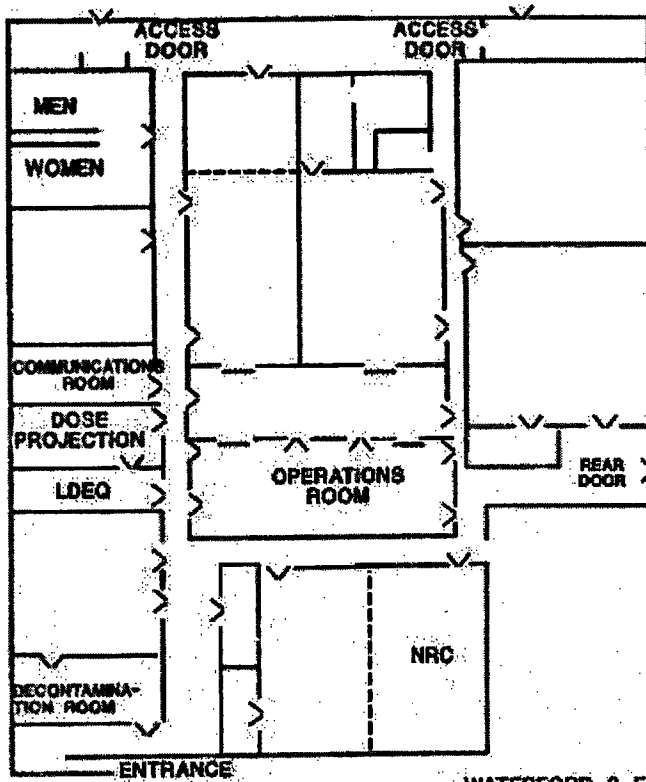
**W3 SES EMERGENCY PLAN
FIGURE 7-1
EMERGENCY RESPONSE FACILITIES LOCATIONS**



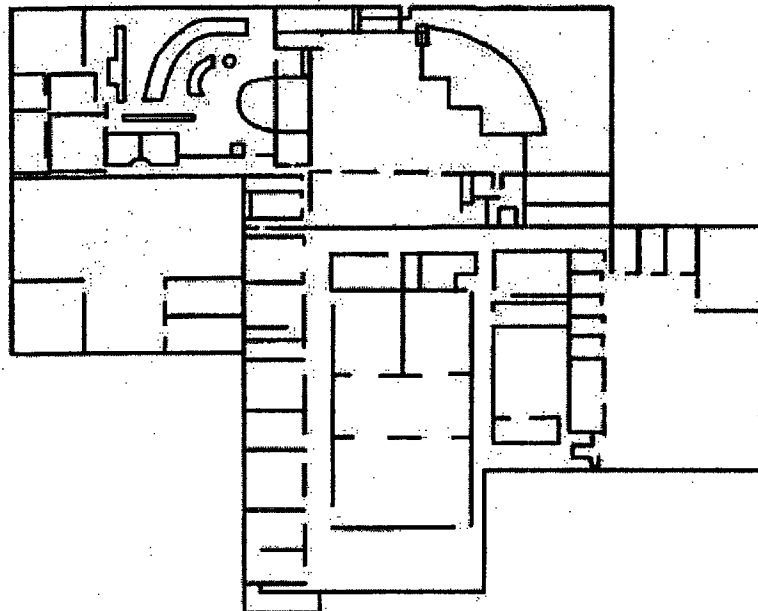
W3 SES EMERGENCY PLAN
FIGURE 7-2
ONSITE EMERGENCY FACILITIES LOCATIONS



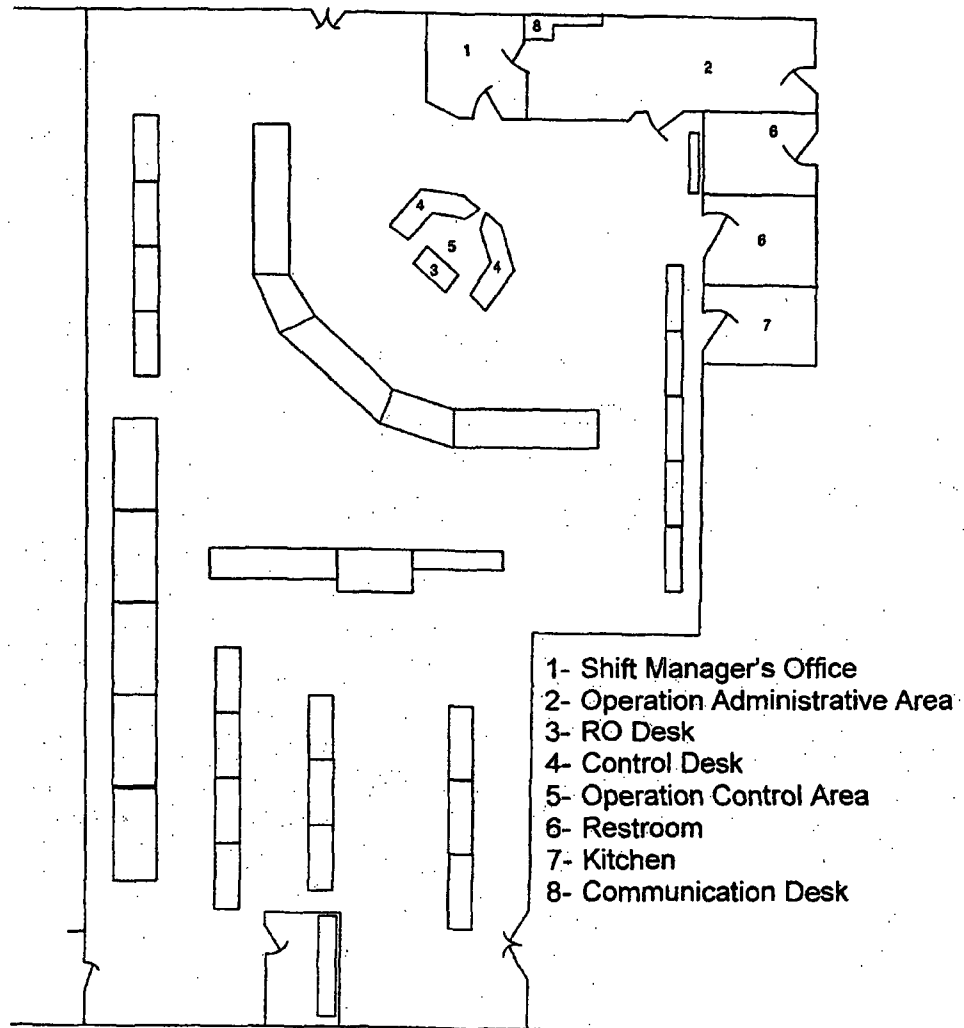
W3 SES EMERGENCY PLAN
 FIGURE 7-4
 EMERGENCY OPERATIONS FACILITY (EOF)



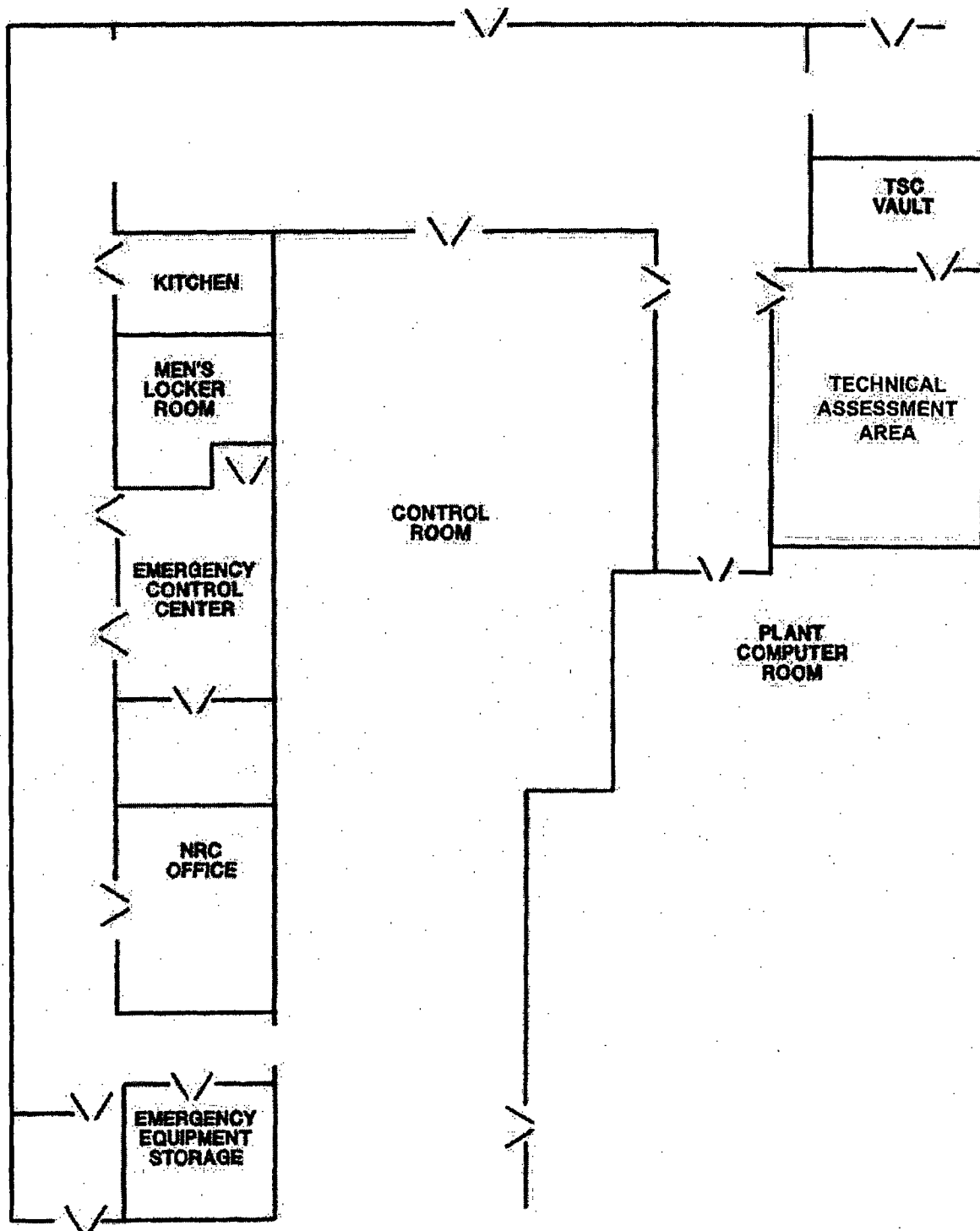
WATERFORD 3 ENERGY EDUCATION CENTER



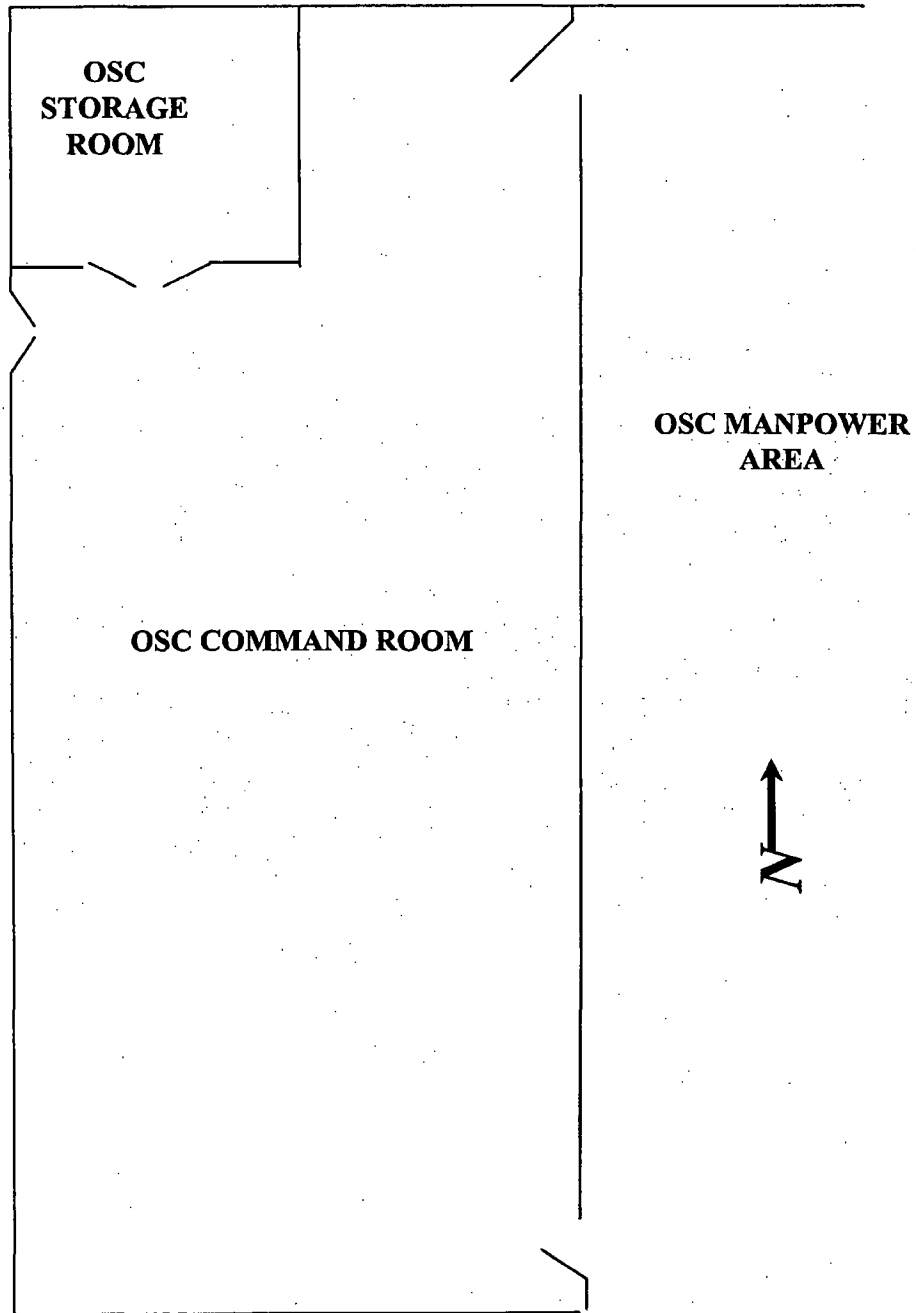
W3 SES EMERGENCY PLAN
FIGURE 7-5
CONTROL ROOM LAYOUT



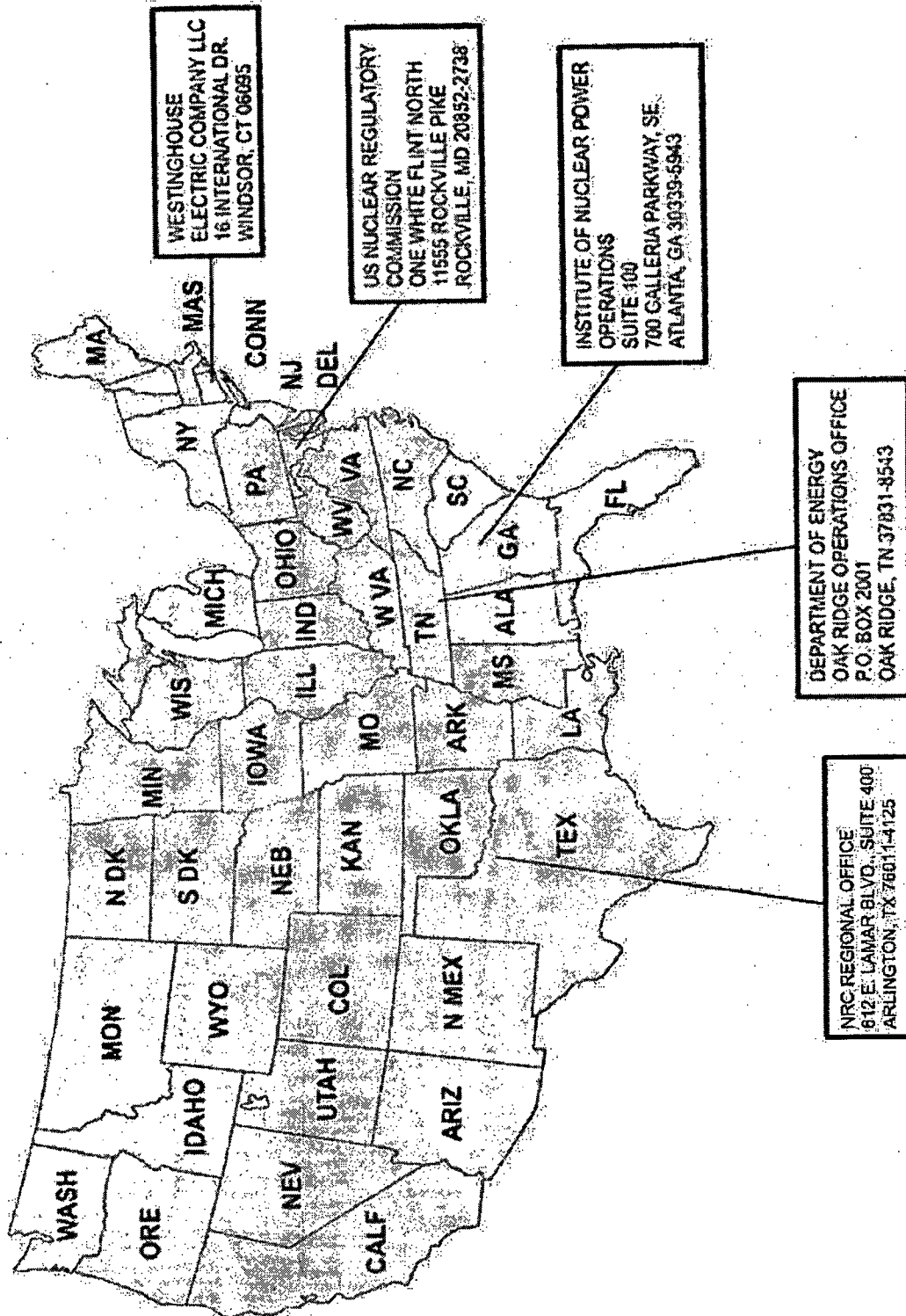
W3 SES EMERGENCY PLAN
FIGURE 7-6
TECHNICAL SUPPORT CENTER LAYOUT



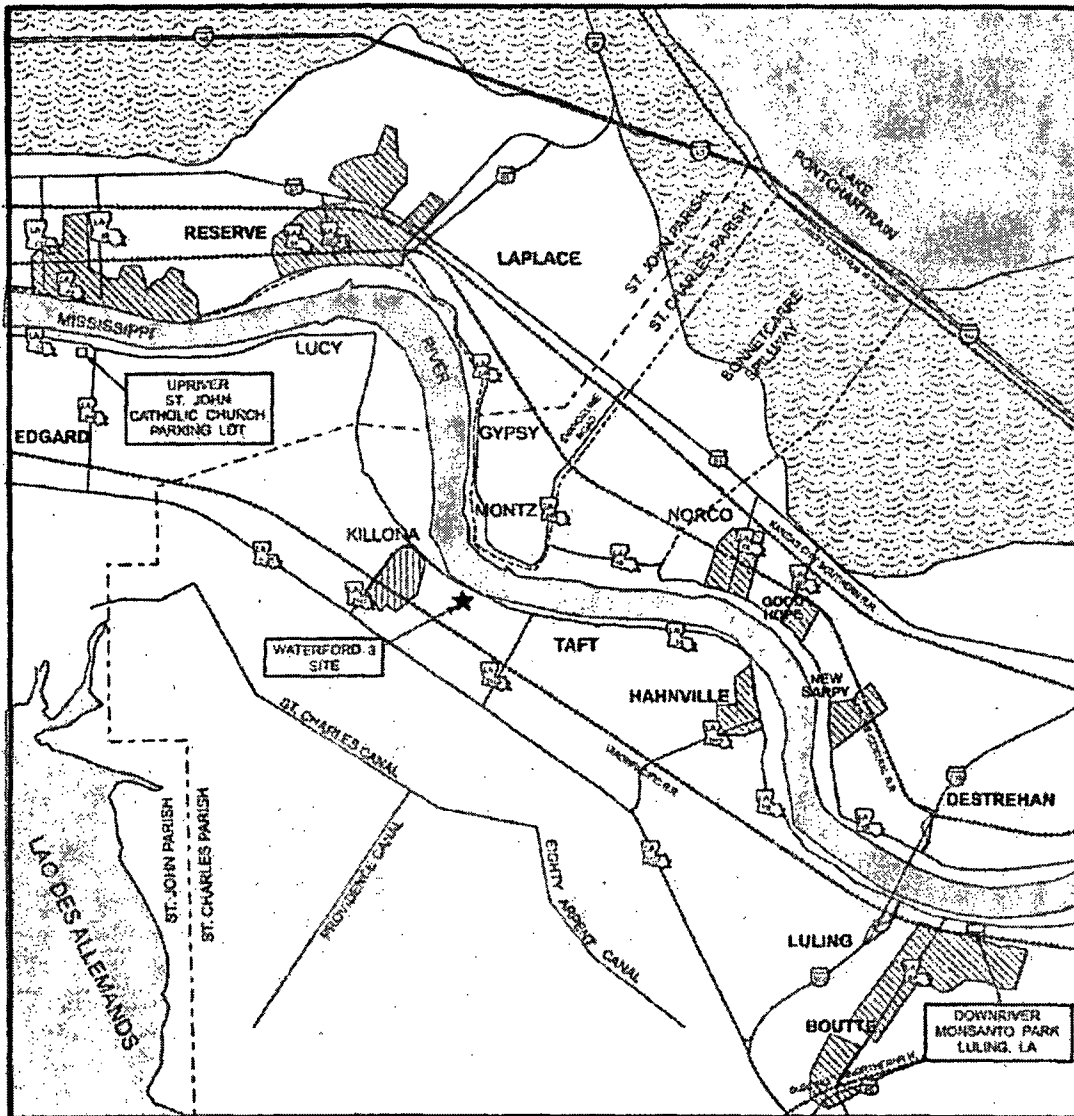
W3 SES EMERGENCY PLAN
FIGURE 7-7
OSC FLOOR PLAN
MAINTENANCE SUPPORT BUILDING FIRST FLOOR



**W3 SES EMERGENCY PLAN
FIGURE 7-8
SUPPORT FACILITIES LOCATIONS**



**W3 SES EMERGENCY PLAN
FIGURE 7-9
OFFSITE EVACUATION ASSEMBLY AREAS**



**W3 SES EMERGENCY PLAN
FIGURE 7-9A
REMP SAMPLE LOCATIONS WITHIN 2 MILES OF WATERFORD 3**

The map showing REMP sample locations within 2 miles of Waterford 3 which under earlier revisions resided in this figure, has been deleted. This information is provided in the Waterford 3 Offsite Dose Calculation Manual (ODCM).

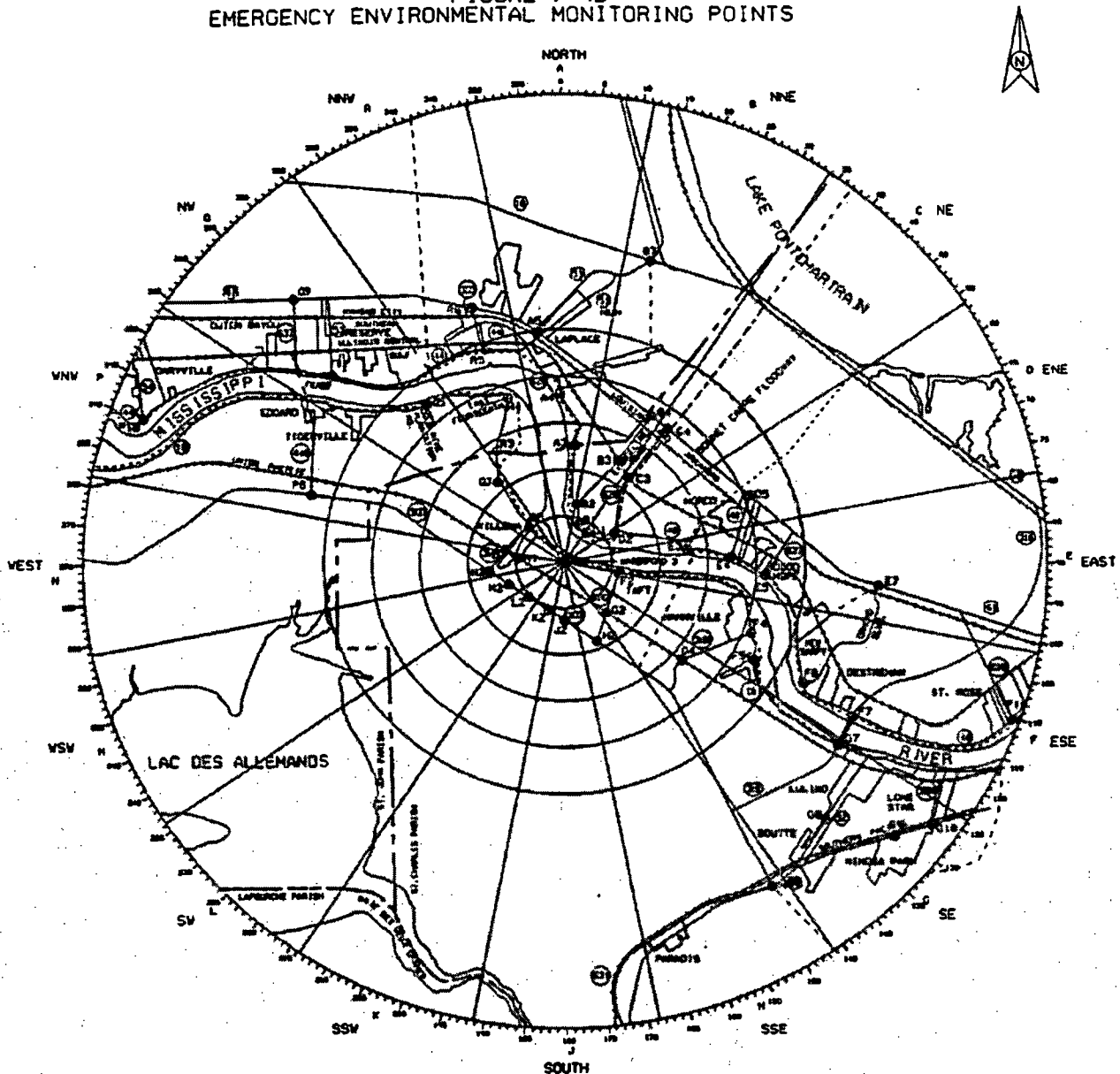
**W3 SES EMERGENCY PLAN
FIGURE 7-9B
REMP SAMPLE LOCATIONS WITHIN 10 MILES OF WATERFORD 3**

The map showing REMP sample locations within 10 miles of Waterford 3 which under earlier revisions resided in this figure, has been deleted. This information is provided in the Waterford 3 Offsite Dose Calculation Manual (ODCM).

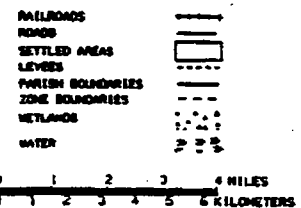
**W3 SES EMERGENCY PLAN
FIGURE 7-9C
REMP SAMPLE LOCATIONS WITHIN 50 MILES OF WATERFORD 3**

The map showing REMP sample locations within 50 miles of Waterford 3 which under earlier revisions resided in this figure, has been deleted. This information is provided in the Waterford 3 Offsite Dose Calculation Manual (ODCM).

W3 SES EMERGENCY PLAN
 FIGURE 7-9D
 EMERGENCY ENVIRONMENTAL MONITORING POINTS



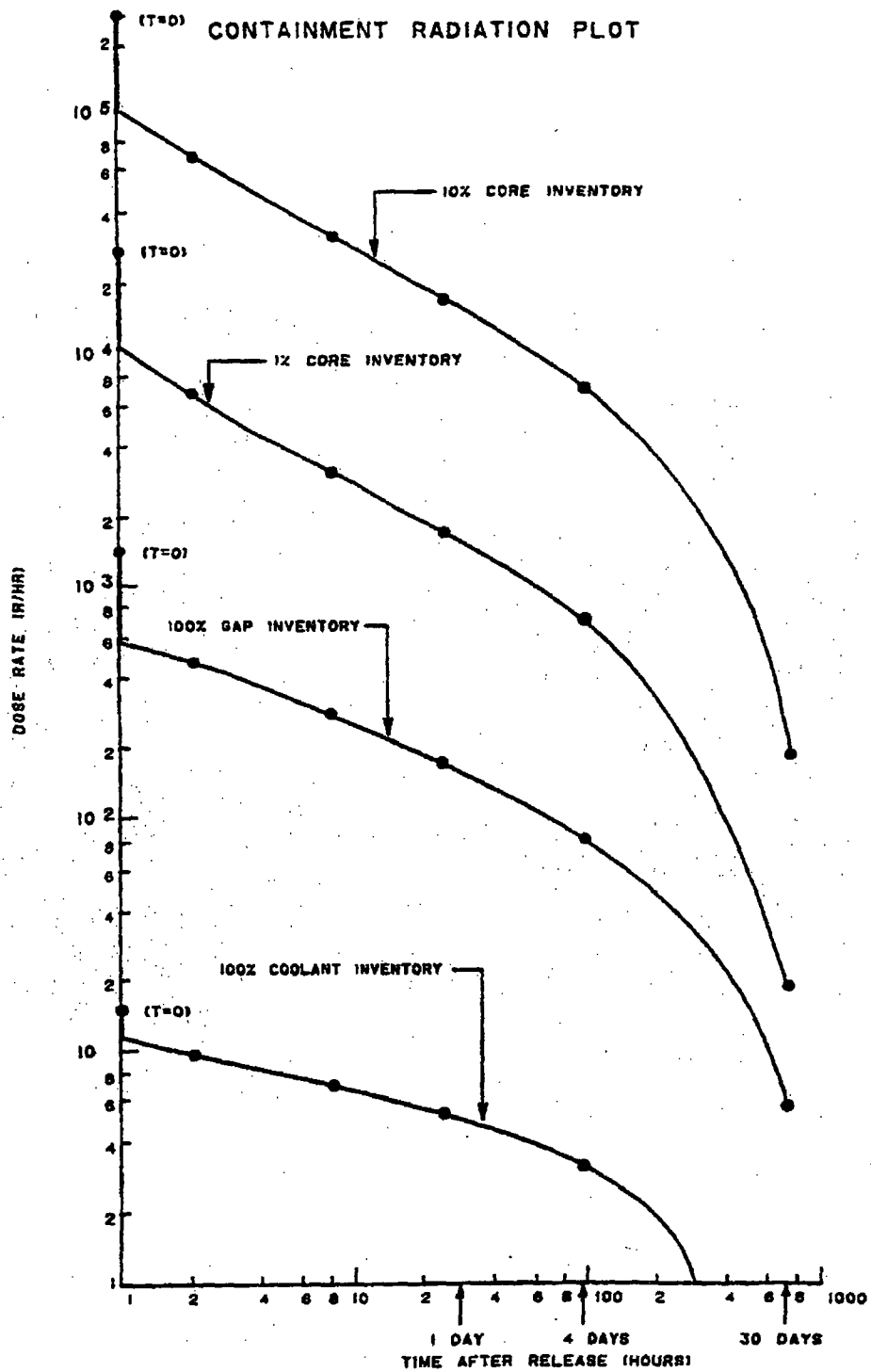
LEGEND



W3 SES EMERGENCY PLAN

FIGURE 7-10

CONTAINMENT RADIATION PLOT



WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-1

CONTROL ROOM PLANT SYSTEMS INSTRUMENTATION

Information which resided here in earlier revisions has been deleted. This information is located in Tables 7.5-1 and 7.5-3 of the Waterford 3 FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-2

PROCESS AND EFFLUENT RADIOLOGICAL MONITORS/SAMPLERS

MONITORS	QUANTITY	TYPE	FUNCTION	POWER SUPPLY	RANGE & JUSTIFICATION ($\mu\text{Ci}/\text{cm}^3$) [*]	ALARM LOCATION
1. CONDENSER VACUUM PUMPS (PRM-IR-0002)	1	Off-Line Beta Scint. & Cadmium Telluride	Alarm	Instrumentation ac bus	10^{-7} - 10^{+5} Table 11.3-5	Main Control Room
2. CCW MONITOR A/B (PRM-IR-5700)	1	Off-Line Gamma Scint.	Alarm	Instrumentation ac bus	10^{-8} - 10^{-2} Table 11.1-3	Main Control Room and Locally
3. CCW MONITOR A (PRM-IR-7050AS)	1	Off-Line Gamma Scint.	Alarm	Safety-related ac bus	10^{-8} - 10^{-2} Table 11.1-3	Main Control Room and Locally
4. CCW MONITOR B (PRM-IR-7050BS)	1	Off-Line Gamma Scint.	Alarm	Safety-related ac bus	10^{-8} - 10^{-2} Table 11.1-3	Main Control Room and Locally
5. SGB MONITOR (PRM-IR-0100X)	1	Off-Line Gamma Scint.	Alarm	Instrumentation ac bus	10^{-6} - 10^{-1} Table 11.2-11	Main Control Room and Locally
6. LIQUID WASTE MANAGEMENT (PRM-IR-0647)	1	Off-Line Gamma Scint.	Alarm and automatic termination of flow	Instrumentation ac bus	10^{-6} - 10^{-1} See Table 12.2-11#	Main Control Room
7. GASEOUS WASTE MANAGEMENT (PRM-IR-0648)	1	Off-Line Beta Scint.	Alarm and automatic termination of flow	Instrumentation ac bus	4×10^{-4} - $4 \times 10^{+2}$ Table 12.2-11# delayed 90 days	Main Control Room
8. BORON MANAGEMENT (PRM-IR-0627)	1	Off-Line Gamma Scint.	Alarm and automatic termination of flow	Instrumentation ac bus	10^{-6} - 10^{-1} Table 12.2-8#	Main Control Room
9. DRY COOLING TOWER SUMP #1 (PRM-IR-6775)	1	Off-Line Gamma Scint.	Alarm and automatic Sump Pump Isolation	Instrumentation ac bus	4.2×10^{-8} - 4.2×10^{-2} Table 11.1-3	Main Control Room and Locally

Values of this table should be divided by approximately 10 for average condition.

* The tables listed in this column are located in the FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-2 (Continued)

PROCESS AND EFFLUENT RADIOLOGICAL MONITORS/SAMPLERS

MONITORS	QUANTITY	TYPE	FUNCTION	POWER SUPPLY	RANGE & JUSTIFICATION ($\mu\text{Ci}/\text{cm}^3$)*	ALARM LOCATION
10. REACTOR BUILDING SUMP (PRM-IR-6777)	1	Off-Line Gamma Scint.	Alarm	Instrumentation ac bus	10^{-8} - 10^{-2} Isotopic Conc. is unknown	Main Control Room and Locally
11. DRY COOLING TOWER SUMP #2 (PRM-IR-6776)	1	Off-Line Gamma Scint.	Alarm and automatic Sump Pump Isolation	Instrumentation ac bus	4.2×10^{-8} - 4.2×10^{-2} Table 11.1-3	Main Control Room and Locally
12. INDUSTRIAL WASTE SUMP - TURBINE BUILDING (PRM-IR-6778)	1	Off-Line Gamma Scint.	Alarm. Upon high radiation signal closes valve 7WM-V186 and opens valve 7WM-V650. Upon emptying the sumps, operator to re-establish normal flow to oil separator manual.	Instrumentation ac bus	10^{-8} - 10^{-2}	Main Control Room and Locally
13. CIRCULATING WATER DISCHARGE (PRM-IR-1900)	1	Off-Line Gamma Scint.	Alarm and initiate Automatic Closure of Blowdown Flow	Instrumentation ac bus	4.2×10^{-8} - 4.2×10^{-2} Table 11.2-13	Main Control Room and Locally
14. FHB EXHAUST A (PRM-IR-5107A)	1	Off-Line Particulate Iodine Gas	Alarm	Instrumentation ac bus	Part. 10^{-11} - 10^{-5} Iodine 10^{-9} - 10^{-3} Gas 10^{-7} - 10^{-1}	Main Control Room and Locally
15. FHB EXHAUST B (PRM-IR-5107B)	1	Off-Line Particulate Iodine Gas	Alarm	Instrumentation ac bus	Part. 10^{-11} - 10^{-5} Iodine 10^{-9} - 10^{-3} Gas 10^{-7} - 10^{-1}	Main Control Room and Locally
16. PLANT STACK (PRM-IR-0100.1S) (PRM-IR-0100.2S)	1	Off-Line Particulate Iodine Gas	Alarm and automatic Terminate Containment Purge	Instrumentation ac bus	Part. 10^{-11} - 10^{-5} Iodine 10^{-9} - 10^{-3} Gas 10^{-7} - 10^{-1}	Main Control Room and Locally

* The tables listed in this column are located in the FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-3

AREA RADIATION MONITORS

Information which resided here in earlier revisions has been deleted. This information is located in Table 12.3-2 of the Waterford 3 FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-4

AIRBORNE RADIATION MONITORS

Information which resided here in earlier revisions has been deleted. This information is located in Table 12.3-3 of the Waterford 3 FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-5
RADIATION SURVEY/MONITORING INSTRUMENTATION

Information which resided here in earlier revisions has been deleted. This information is located in Tables 12.5-2 and 12.5-3 of the Waterford 3 FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-6

LABORATORY FACILITY EQUIPMENT LIST (Typical)

EQUIPMENT DESCRIPTION

1. Argon Plasma Spectrometer
2. Gamma Spectrometer
3. Liquid Scintillation Counter
4. Manual Gas Flow Proportional Counter
5. Ion Chromatograph

COUNTING ROOM INSTRUMENTATION

Information which resided here in earlier revisions has been deleted. This information is located in Table 12.5-1 of the Waterford 3 FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-7

HEALTH PHYSICS EQUIPMENT

Information which resided here in earlier revisions has been deleted. This information is located in Table 12.5-4 of the Waterford 3 FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-8

EMERGENCY ENVIRONMENTAL SAMPLING

In responding to an emergency or accident at a fixed nuclear facility, the following guidelines will be used for environmental sampling priorities:

AIR SAMPLES

As soon as possible after a reported accident at a fixed nuclear facility, remove and change all routine air particulate and charcoal filters in the affected area. Place air sampler on full duty cycle. Be prepared to change air samples daily. Portable air samplers will be used on an as-needed basis.

SURFACE WATER SAMPLES

As soon as possible after a reported accident at a fixed nuclear facility, collect at least a one-gallon surface water sample from at least two downstream locations. Samples may have to be taken every 2-4 hours for the first 24 hours following a release. Collect surface water samples from at least one upstream location. Prepare for large-volume sampling and composites.

POTABLE WATER SAMPLES

As soon as possible after a reported accident at a nuclear facility, collect at least a one-gallon drinking water sample from the potable water sample stations. Sample raw water intake points or raw water at the treatment plant.

RAW MILK SAMPLING

As soon as possible, collect at least a one-gallon sample of raw milk at each potentially affected dairy. Sample the dairy every two days. Sample water from source used to water livestock. Sample pasture grass and/or feed.

VEGETATION AND CROPS

Obtain samples of critical food crops and other vegetation as soon as possible.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-9

SUMMARY OF ONSITE COMMUNICATION SYSTEM CAPABILITIES AND NOISE CONSIDERATION DURING TRANSIENTS AND/OR ACCIDENTS

Information which resided here in earlier revisions has been deleted. This information is located in Table 9.5-6 of the Waterford 3 FSAR.

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-10

EMERGENCY RESPONSE FACILITIES COMMUNICATIONS

COMMUNICATION CIRCUIT	PLAN REFERENCE	LOCATION	COMMUNICATOR	OFFSITE AGENCIES LOCATION	INFORMATION TRANSMITTED	CIRCUIT TYPE	BACKUP/ALTERNATE CIRCUITS
Operational Hotline	7.5.2.1	Control Room TSC-ECC EOF Backup EOF Remote S/D Panel	Emergency Communicator Offsite Communicator	St. Charles EOC St. Charles 911 Center St. John EOC St. John E-911 Center LDEQ GOHSEP Waterford 1 & 2	Emergency Notification, Plant Conditions, Protective Action Recommendation	Dedicated Circuit with Two Digit Dial Access	PABX or Civil Defense Radio Network
Industrial Hotline	7.5.2.2	SM Office Control Room-CRS Control Room-Comm. EOF Remote S/D Panel TSC-ECC	Emergency Communicator Offsite Communicator Operator	St. Charles EOC St. Charles 911 Center Member Industries	Industrial Emergency - type, location and severity	Dedicated Circuit - Automatic Ring	PABX
Control Room Intercom	7.5.2.5	Control Room (Floor) TSC-ECC OSC Backup OSC EOF Backup EOF	TSC Operations Coordinator Operations Communicator EOF Technical Advisor OSC Operations personnel	None	Plant Status and Operational Information	Intercom Circuit	Sound Powered System
Health Physics Intercom	7.5.2.7	TSC-ECC OSC Backup OSC +7 RAB -4 RAB EOF Backup EOF	Radiological Coordinator Rad Chem Coordinator Radiological Assessment Coordinator Dose Assessor	None	Onsite Health Physics and Radiological Information	Intercom Circuit - one- digit dial access	PABX
Sound-Powered System (Emergency Ckt)	7.5.1.3	TSC-ECC Control Room (Administrative Area) Control Room (Floor) OSC Backup OSC EOF	RO NAO Operations Communicator OSC Communicator	None	Plant Status and Operational Information	Sound-Powered jack connected.	N/A
Pine Bluff Network	7.5.2.10	SM Office Control Room-CRS TSC-ECC Remote S/D Panel	Emergency Communicator TSC Communicator Operator	Transmission System Security Complex Waterford SES 1 & 2 Little Gypsy		Dedicated Circuit - Automatic Ring	PABX
Southern Control Network	7.5.2.11	SM Office Control Room-CRS TSC-ECC Remote S/D Panel	Emergency Communicator TSC Communicator Operator	Gretna Transmission Operations Center Waterford SES 1 & 2 Little Gypsy		Dedicated Circuit - Automatic Ring	PABX

WATERFORD 3 SES EMERGENCY PLAN

TABLE 7-10 (Continued)

EMERGENCY RESPONSE FACILITIES COMMUNICATIONS

COMMUNICATION CIRCUIT	PLAN REFERENCE	LOCATION	COMMUNICATOR	OFFSITE AGENCIES LOCATION	INFORMATION TRANSMITTED	CIRCUIT TYPE	BACKUP/ALTERNATE CIRCUITS
NRC Emergency Notification Network (ENS)	7.5.2.3	Control Room-Comm. TSC-ECC EOF	Emergency Communicator ENS Communicator Licensing Coordinator	NRC Operations Center	Emergency Notification/Plant Condition	Dial Telephone	Commercial Telephone
NRC Health Physics Network (HPN)	7.5.2.4	TSC-ECC -4 RAB EOF OSC	Radiological Coordinator RAC	NRC Operations Center All NRC Offices All Nuclear Power Stations	Radiological Information	Dial Telephone	Commercial Telephone
Public Address System	7.5.1.2	Select PABX Locations	Station Personnel	None	General Information, Emergency Information	Two-digit Dial Access	None
State Civil Defense Radio Network	7.5.1.4c	Control Room-Comm. EOF Backup EOF CAS SAS PAP	Emergency Communicator Offsite Communicator	St. Charles EOC St. John EOC GOHSEP	Emergency Information	N/A	N/A
Radiological Field Monitoring Radio Network	7.5.1.4d	Control Room EOF Backup EOF OSC Portable Vehicles	Emergency Communicator Offsite Team Communicator Field Teams	None	Emergency Offsite Communicators with Station Personnel	800 MHz Radio Frequency	PABX/ Low Band Radio Frequency / Pay Telephone
Waterford 3 Operations Radio Network	7.5.1.4a	SM Office Control Room-CRS TSC-ECC OSC CAS SAS PAP Remote S/D Panel Portable	SM Operations Department	None	Normal Operations Information	N/A	N/A
Waterford 3 Maintenance Radio Network	7.5.1.4a	Control Room-CRS Control Room TSC-ECC OSC CAS SAS PAP Remote S/D Panel Portable	SM TSC Communicator Maintenance Department Emergency Teams Operations Department	None	Normal Maintenance Information and Emergency Onsite Communications	N/A	N/A
Waterford 3 Security Radio Network	7.5.1.4b	CAS SAS PAP Portable	Security Personnel	None	Normal and Emergency Security traffic	N/A	N/A

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TABLE 7-10 (Continued)

EMERGENCY RESPONSE FACILITIES COMMUNICATIONS

<u>COMMUNICATION CIRCUIT</u>	<u>PLAN REFERENCE</u>	<u>LOCATION</u>	<u>COMMUNICATOR</u>	<u>OFFSITE AGENCIES LOCATION</u>	<u>INFORMATION TRANSMITTED</u>	<u>CIRCUIT TYPE</u>	<u>BACKUP/ALTERNATE CIRCUITS</u>
Waterford 3 PABX	7.5.1.1	All Facilities	Station Personnel	None	Intrplant Communication Information	Dial Telephone	Sound-Powered System
EOF/Energy Education Center PABX	7.5.1h	EOF Control Room TSC-ECC OSC	EOF Communicator SM TSC Communicator Emergency Director OSC Supervisor	None	Communication Information	Intrplant Telephone	Dial Waterford 3 SES PABX
Emergency Coordinator/EOF Director Hotline	7.5.2.6	EOF TSC-ECC	Emergency Director Emergency Plant Mgr	None	Emergency Management Decision making Information	Dedicated Circuit - Auto Ring	PABX
RAC/RC Hotline	7.5.2.6	EOF TSC-ECC	RAC Rad Coordinator	None	Health Physics Decision making Information	Dedicated Circuit - Auto Ring	PABX
Technical Advisor Hotline	7.5.2.6	EOF BU/EOF JIC	Offsite Liaison JIC Tech Asst	St. Charles Parish EOC St. John Parish EOC GOHSEP	Emergency News Release Information	Dedicated Circuit	PABX
Ops/Engineering Coordinator/Lead Engineer Hotline	7.5.2.6	EOF TSC-ECC	Lead Engineer	None	Engineering Information	Dedicated Circuit - Auto Ring	PABX
EOF/Energy Education Center Page System	7.5.1h	EOF	Emergency Director	None	Emergency Status Briefing Information	Dial Access	N/A
SM/TSC OPS Coordinator Hotline	7.5.2.6	SM Office TSC-ECC	SM Operations Coordinator	None	Plant Status and Operational Information	Dedicated Circuit - Auto Ring	PABX
OSC Work Control Coordinator/TSC Maintenance Coordinator Hotline	7.5.2.6	TSC-ECC OSC	TSC Maintenance Coordinator OSC Work Control Coordinator	None	Emergency Status and Repair Team Information	Dedicated Circuit - Auto Ring	PABX
Satellite Telephones	7.5.2.12	Various	Station Personnel	None	Emergency Information	Satellite Telephone	N/A

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8.0 MAINTENANCE OF EMERGENCY PREPAREDNESS

Entergy Operations, Inc. maintains, as separate documents, this Emergency Plan and the Implementing Document. Efforts are made to assure continuous emergency preparedness and operational readiness among Entergy Operations, Inc. personnel and the offsite response agencies and organizations. The Vice President, Operations, Waterford 3 has the overall authority and responsibility for emergency response planning as related to the W3SES. This responsibility includes not only the W3SES Emergency Plan and Implementing Procedures, but also includes its interrelationships with State, Federal and parish plans; agreement letters; and other related plans, programs, and procedures.

The Emergency Planning Manager, within the Nuclear Safety Assurance Department, is delegated the responsibility and authority as the Emergency Planning Coordinator to ensure the overall requirements of emergency response planning are achieved. The Emergency Planning Manager will carry out this responsibility through the efforts of the Emergency Planning Department and by coordination with other organizations within Entergy Operations, Inc. and Entergy, offsite agencies and non-utility organizations.

8.1 Organizational Preparedness

In order to establish and maintain a high degree of preparedness at all levels of the W3SES Emergency Organization, Entergy Operations, Inc., has established an Emergency Planning Training Program. This program consists of periodic training and supplemental reading as delineated by Waterford 3 Training procedures, and participation in drills and exercises.

8.1.1 Training

All personnel at the W3SES shall take part in a formal training program under the direction of the Manager, Training and Development. In general, this training program provides for the indoctrination of Entergy Operations, Inc. employees and contractors in addition to providing specialized training for licensed operators, chemists and Radiation Protection personnel, and personnel assigned specific responsibilities in the emergency organization.

The Manager, Training and Development, is responsible for ensuring that personnel in each onsite department receive the appropriate training and is responsible for offsite and non-utility training. To carry out this responsibility, a dedicated Emergency Planning Trainer has been assigned to the Waterford-3 Training Department. The training program for the W3SES Emergency Plan includes the following:

- 8.1.1.1 All personnel in the W3SES Protected Area who require unescorted access shall successfully complete the appropriate General Employee Training indoctrination course prior to being granted unescorted access and at least annually thereafter. This course provides instruction on station alarms and the expected responses of those individuals not assigned to the emergency response organization during emergencies, including evacuation routes, assembly points, and accountability procedures.
- 8.1.1.2 All Waterford 1 & 2 personnel who will coordinate actions in relation to an emergency condition at Waterford 3 will be required to attend, per calendar year, a training session on emergency response actions for Waterford 1 & 2, due to an emergency condition at Waterford 3.

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- 8.1.1.3 Personnel assigned to the W3SES emergency organization with specific Emergency Plan duties and responsibilities receive specialized training for their respective assignments. The Emergency Plan Training Program delineates which personnel shall receive specialized training, and the type of training to be received. The minimum required frequency of this training shall be at least per calendar year. Specialized initial training and periodic retraining to be provided to each of the following categories of emergency personnel:

- a. Emergency Directors;
- b. Emergency Plant Managers;
- c. Accident assessment personnel, including Control Room shift personnel;
- d. Radiological monitoring teams;
- e. Fire Brigades;
- f. Repair teams;
- g. First aid and rescue teams;
- h. Security personnel

- 8.1.1.4 The Louisiana Department of Environmental Quality (LDEQ), assisted by the Governor's Office of Homeland Security & Emergency Preparedness (GOHSEP), develops, conducts, coordinates and promotes a training program throughout the State of Louisiana and assists the parishes in developing training policy for parish radiological response readiness. The parishes are responsible for planning and conducting preparedness training of respective emergency response personnel. Entergy Operations, Inc. works closely with the LDEQ, parish Emergency Directors, and local authorities in the conduct and coordination of the training programs.

In addition, orientation and training of State and parish agencies and personnel involved in the W3SES emergency planning effort is made available by Entergy Operations, Inc. The offsite organizations listed below shall be invited, on at least a per calendar year basis, to participate in a training program.

1. Louisiana Department of Environmental Quality
2. Governor's Office of Homeland Security & Emergency Preparedness
3. St. Charles Parish Office of Emergency Preparedness
4. St. John the Baptist Parish Civil Defense Organization
5. Louisiana State Police
6. St. Charles Parish Sheriff's Department
7. Media personnel from television, radio or newspaper.

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8.1.1.4 (Cont'd)

The following additional organizations will receive training based on their role in an emergency at the W3SES. This training will occur per calendar year.

1. Hahnville Volunteer Fire Department
2. Ochsner Clinic Foundation
3. West Jefferson Medical Center
4. St. Charles Hospital Ambulance Service
5. Ochsner Flight Care Medical/Flight Crew

The LDEQ program relates the importance of effective planning for emergency organizations and the offsite (State, parish and local) emergency organizations. The Entergy Operations, Inc., Emergency Plan Training Program includes training on interfacing with W3SES personnel, site access and security procedures, plant layout, dosimetry issuance and use, firefighting systems location and use, basic radiation protection, and protective action guide decision making. The training provided to each offsite organization is based upon the organization's function under the Emergency Plan.

In addition to this training, Entergy Operations, Inc., shall also provide orientation and training to the above support organizations as specified in respective letters of agreement and as required to ensure a high state of emergency preparedness and response capability between these organizations and the W3SES organization. The local services support organizations and personnel who may provide onsite emergency assistance shall be encouraged to become familiar with the W3SES facility (including the physical plant layout and key station personnel).

- 8.1.1.5 The Emergency Planning Coordinator is responsible for ensuring that personnel assigned to the Emergency Planning Department maintain an adequate degree of training and qualification through their participation in training courses, seminars, industry meetings and conferences as necessary.

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8.1.2 Drills and Exercises

Drills and exercises are conducted in order to test the state of emergency preparedness. The prime objective of this form of training is to verify the emergency preparedness of all participating personnel, organizations and agencies. Each drill or exercise is conducted to meet the following objectives:

1. Ensure that the participants are familiar with their respective duties and responsibilities;
2. Verify the adequacy of the W3SES Emergency Plan and the methods used in the Emergency Plan Implementing Procedures;
3. Test communications networks and systems;
4. Check the availability of emergency supplies and equipment; and
5. Verify the operability of emergency equipment.

8.1.2.1 The Emergency Planning Coordinator is responsible for the overall planning, scheduling, and coordination of all Emergency Planning related drills and exercises. Some of the drills will be performed under the direction of other organizations as defined in the Implementing Document. As required by the Implementing Document, drills and exercises are subject to the approval of the General Manager Plant Operations. In addition, the Vice President, Operations, Waterford 3 approves the Biennial Exercise.

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- 8.1.2.2 Scheduled drills and exercises shall be held involving appropriate offsite as well as onsite emergency personnel, organizations, and agencies. These drills and exercises shall be conducted, simulating as closely as possible actual emergency conditions. Drill scenarios can and shall be prepared that involve participation of several emergency teams and all or specific parts of the onsite, nearsite and offsite emergency organizations including varying degrees of participation of parish, State, and Federal organizations and agencies, and local service support personnel and organizations. The Emergency Planning Coordinator shall notify the offsite emergency response organizations and agencies at least thirty (30) days in advance of the scheduled date of the drill or exercise. Collection and analysis of all sample media as appropriate (e.g., water, grass, soil and air) shall be included in the drills.
- 8.1.2.3 During practice drills, on-the-spot correction of erroneous performance shall be made and a demonstration of the proper performance offered by the instructor.
- 8.1.2.4 Recommendations for revisions to the W3SES Emergency Plan and/or the Emergency Plan Implementing Procedures and/or the upgrading of emergency equipment and supplies as a result of a drill or exercise shall be forwarded to the Emergency Planning Coordinator by observers or participants. Recommended changes that are approved by the Emergency Planning Manager shall be incorporated into the Emergency Preparedness Program. Records shall be maintained on each drill and exercise, which shall be conducted as described below:

(1) Emergency Exercise

A major exercise simulating a Site Area Emergency or General Emergency shall be held every two years. This exercise shall include mobilization of State and local personnel and resources sufficient to show the capability to respond to an accident. Involvement by offsite response organizations will be consistent with Federal regulations. Actions shall be taken to ensure that adequate emergency response capabilities are maintained during the interval between biennial exercises by conducting periodic drills, including at least one drill involving a combination of some of the principal functional areas of the Waterford 3 Emergency Planning Program.

The scenario shall be varied from exercise to exercise such that all major elements of the plans and preparedness organizations are tested within a six-year period. Provisions shall be made to start an exercise between 6:00 p.m. and 4:00 a.m., once every six years. Some exercises will be unannounced. The unannounced and offhours objectives may be satisfied as part of a separate drill. Scheduled exercises will not be postponed due to inclement weather unless unusual weather conditions exist that could pose undue risk to personnel or demand the full attention of the plant staff and/or support personnel. Critique of this biennial exercise shall be provided by Federal and State observers/evaluators and Entergy Operations, Inc. qualified observers.

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8.1.2.4 (1) (Cont'd)

Remedial exercises may be required if it is determined that elements of the Emergency Plan are not satisfactorily tested during an exercise such that agencies of the Federal government cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency.

In the event that State or local governments refuse to participate in Emergency Planning activities, an exercise can be conducted with Waterford-3 and other governmental entities that elect to participate in the Emergency Planning process.

(2) Communication Drills and Tests

A. Communication Drills -

Communications with State and local governments within the plume exposure pathway Emergency Planning Zone shall be tested monthly. Communications with Federal emergency response organizations and states within the ingestion pathway shall be tested quarterly.

Communications between the nuclear facility, State and local emergency operations centers, and field assessment teams shall be tested annually and may be performed as part of an exercise or other scheduled drill. Communication drills will be designed to test the understanding of messages and the operability of equipment.

B. Communication Tests -

Provisions for Communications with NRC Headquarters and the Region IV Office Operations Center from the Control Room, TSC and EOF shall be tested monthly.

(3) Fire Drills

Fire drills shall be conducted in accordance with the Waterford 3 Fire Protection Program.

(4) Medical Emergency Drills

A medical emergency drill, involving a simulated contaminated individual, which contains provisions for participation by the local support services agencies (i.e., ambulance and offsite medical treatment facility), shall be conducted annually. The offsite portions of the medical drill may be performed as part of an exercise or other scheduled drills.

(5) Radiological Monitoring Drills

At least one drill per calendar year shall involve radiological monitoring both onsite and offsite and the collection and analysis of sample media (e.g., water, grass, soil and air), and provisions for communications and record keeping. This drill may be performed as part of an exercise or other scheduled drills.

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8.1.2.4 (Cont'd)

(6) Health Physics Drills

A semi-annual drill shall involve response to, and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment. This drill may be performed as part of an exercise or other scheduled drills.

(7) Control Room Protective Response Drill

A semi-annual drill shall involve the use of air-supplied respiratory equipment by Control Room personnel in order to assess their capability to don the equipment within two minutes.

8.1.2.5 Scenarios for each of the exercises and selected site drills will include, as a minimum, the following:

1. The basic objective(s) and appropriate evaluation criteria.
2. The date(s), time period, place(s) and participating organizations and agencies.
3. The simulated events.
4. A time schedule of real and simulated initiating events.
5. A narrative summary describing the conduct of the exercise or drills to include such things as simulated casualties, offsite fire department assistance, rescue of personnel, use of protective clothing, employment of radiological monitoring teams, and public information activities.

8.1.2.6 Observers from the Federal, State and local governments will be invited to observe and critique the required exercises for the purpose of evaluating the ability of the organizations to respond as called for in the Plan. The exercise objectives will be established by the involved organizations and provided to official observers as requested (normally approximately 90 days before the exercise). Advance copies of the exercise package, including cue cards, will be provided to the official observers as requested (normally approximately 60 days before the exercise). The critique shall be conducted as soon as practicable after the exercise, and a formal evaluation should result from the critique. The LDEQ Administrator will be responsible for reviewing and evaluating offsite observer comments.

The Vice President, Operations, Waterford 3 will ensure that action is taken to make needed improvements including Emergency Plan procedural changes. The Emergency Planning Coordinator is given the responsibility for implementing corrective actions with the concurrence of the General Manager Plant Operations, the results of which will be reported to the Vice President, Operations, Waterford 3.

8.1.2.7 Ingestion Pathway exercises are conducted with the State of Louisiana on a periodic basis. The frequency of these exercises is determined by a schedule established by the Federal government.

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8.2 Educational Information to the Public

For those members of the public residing within the 10-mile Emergency Planning Zone and for the transient population, Entergy Operations, Inc., will provide written information on the following topics:

1. Basic radiological health.
2. W3SES Emergency Planning Program.
3. Actions that would be taken to protect the public.
4. The method that will be used to warn the public of a real or potential emergency condition at W3SES and the action expected of the public.

Methods of providing this information may include direct mail or information brochures. At least annually Entergy Operations, Inc., will update the information where required for members of the public within the 10-mile Emergency Planning Zone.

8.3 Review and Updating of the Emergency Plan and Implementing Documents

The Waterford 3 Emergency Plan, together with the appended letters of agreement and the Emergency Plan Implementing Procedures, Emergency Plan Implementing Instructions and Emergency Plan Supporting Procedures, will be reviewed at least annually and updated as necessary.

Personnel performing reviews of the Emergency Plan and/or Implementing Document shall take into account corporate policy, State policy and plans, parish plans, training, drills and exercises and the various agreements and understanding with Federal, State and local support agencies and organizations.

- 8.3.1 The Emergency Planning Coordinator is responsible for coordinating the annual reviews of the Waterford 3 Emergency Plan and Implementing Document. The On-Site Safety Review Committee will review changes to the Emergency Plan. Appointed Qualified Reviewers will review changes to the Emergency Plan Implementing Instructions, Emergency Plan Implementing Procedures and Emergency Plan Supporting Procedures in accordance with the Waterford 3 site Qualified Reviewer Program requirements.
- 8.3.2 In addition, the Emergency Planning Coordinator shall, through letters, meetings, seminars, or other means available, ensure that all elements of the total emergency organization (e.g., Entergy Operations, Inc., State, Federal, parish, etc.) are informed of the Waterford 3 Emergency Plan, the Implementing Document and revisions thereto.
- 8.3.3 The Waterford 3 Emergency Plan Implementing Procedures, Instructions and Supporting Procedures are incorporated into the Waterford 3 Nuclear Station procedures program. As such, these documents will be prepared, reviewed, approved, controlled, distributed and revised, including the performance of appropriate 10CFR50.54(q) reviews, in accordance with Waterford 3 SES administrative procedures. Document holders (e.g., Entergy Operations, Inc., State, parish and Federal agencies, etc.) will receive revisions to these documents, according to established methods, as they are issued.
- 8.3.4 Telephone numbers included in the Emergency Plan call list are updated at least quarterly.

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- 8.3.5 A review of Emergency Action Levels (EALs) shall be conducted by Entergy Operations, Inc. with State and local agencies on an annual basis. State and local agency review and concurrence is obtained prior to the approval and implementation of EAL changes.
- 8.3.6 Results of each annual review and update will be reported to the General Manager Plant Operations and Vice President, Operations, Waterford 3 as necessary.

8.4 Maintenance and Inventory of Emergency Equipment and Supplies

The Emergency Planning Coordinator is responsible for planning and scheduling the inventory and inspection of designated emergency equipment and supplies. Individuals are assigned to perform these activities at least once each calendar quarter and after each use.

Designated emergency equipment and supplies and their locations are listed in the Implementing Document. Portable radiation monitoring equipment included in these inventories is calibrated in accordance with approved procedures. To the extent practicable, emergency equipment is selected on a rotational basis from normal station equipment to assure proper operational status and familiarity with its use.

Instruments/equipment removed from the emergency equipment inventory for calibration or repair will be replaced with normal station equipment such that the emergency equipment is always at its full complement. Normal station equipment is available in sufficient quantity such that this does not hinder normal operations.

Equipment, supplies and parts having shelf-lives are checked and replaced as necessary.

Any deficiencies found during the inventory and inspection will be either cleared or documented for corrective action. A report of each inventory and inspection, including documented deficiencies, will be prepared and submitted to the Emergency Planning Manager or his designee. The Emergency Planning Coordinator is responsible for ensuring deficiencies are corrected.

8.5 Review/Audit of Emergency Preparedness Program

A review/audit of emergency preparedness is conducted by persons who have no direct responsibility for the implementation of the emergency preparedness program. A review will be performed as necessary, based on an assessment by the licensee against performance indicators, and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect emergency preparedness, but no longer than 12 months after the change. In any case, all elements of the emergency preparedness program must be reviewed at least once every 24 months.

- 8.5.1 The Review is to be scheduled and coordinated with the Emergency Planning Coordinator.
- 8.5.2 Results of the review shall be submitted to the General Manager Plant Operations, the Vice President, Operations, Waterford 3, and the Safety Review Committee within 30 days after it is completed. Deficiencies will be resolved in accordance with the Corrective Action program.
- 8.5.3 That part of the review involving State and parish plans shall be submitted to the Louisiana Department of Environmental Quality, the Governor's Office of Homeland Security & Emergency Preparedness, St. Charles Parish, and St. John the Baptist Parish for their evaluation.

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9.0 RECOVERY

In any emergency situation, the immediate action is directed to limiting the consequences of the incident in a manner that shall afford maximum protection to the general public, to plant personnel and to equipment. Once the immediate corrective and protective actions have been established and effective control over the incident exists, the emergency actions shift to a recovery phase. The recovery actions are directed toward restoring the plant, as nearly as possible, to its pre-emergency condition.

This section provides criteria and guidance for entering the recovery phase and the responsibilities for establishing a Recovery Organization.

9.1 Transition from Emergency Organization to Recovery Organization

The transition to a recovery organization can only be effected after the plant conditions are stable and the probability of any adverse effect on the general public or damage to the plant has been substantially reduced. The Emergency Director has the responsibility to determine when the emergency situation is stable and entry into the recovery phase can be affected. Guidelines for determining when the emergency situation can be considered stable and a Recovery Organization can be established (if necessary) are as follows:

- a. The plant is in a stable configuration with adequate core cooling capability,
- b. In-plant radiation levels are stable or decreasing with time,
- c. The release of radioactive material to the environment is controlled and there is no significant potential for additional uncontrolled releases,
- d. Fire, flooding or similar emergencies are under control,
- e. The final conditions as described in the Emergency Plan Implementing Procedures are met, or specific responsibilities have been assigned so as to follow those procedures to completion.

Following a determination that the emergency situation is stable or that the emergency conditions no longer exist, the Emergency Plant Manager will notify and obtain the concurrence of the Emergency Director prior to disbanding the emergency organization.

The Emergency Director is responsible for ensuring that all emergency procedures are complete and closed out or that the Recovery Organization is available with adequate staffing and definition of responsibilities to continue the performance of those procedures. All emergency response and support organizations, including the NRC, LDEQ, GOHSEP, St. Charles EOC, St. John the Baptist EOC, etc., if activated, shall be notified as described in Section 6.2.1 of the termination of the emergency and/or the initiation of the Recovery Organization. In the event that, upon termination of the emergency condition, the plant is in its pre-emergency condition and capable of routine operation within its Technical Specifications, the Emergency Director may effect the transition to the normal operating organization in the manner previously described.

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9.2 Recovery Organization

In those cases where post-accident conditions indicate the recovery operations will be complicated or will extend over a relatively long period of time (after bringing the plant to a stable condition), Entergy Operations, Inc., will shift from Emergency Response Organizations (i.e., onsite and nearsite support) to a long-term Recovery Organization. Its basic structure will be dependent on the nature of the accident, the post-accident conditions, and the nature and magnitude of the effort needed to maintain the plant in a safe condition and to restore the plant to pre-accident conditions. This organization will be established from the combined resources of the Waterford 3 Emergency Response Organizations.

9.2.1 Responsibility for Establishing Recovery Organization

9.2.1.1 Recovery Manager

Upon the EOF becoming operational and responsibility transferred, the Emergency Director will assume overall responsibility for recovery until relieved by the Recovery Manager. The Recovery Manager is responsible to develop the Recovery Organization, including specific responsibilities of individuals, and a chain of command to meet the objectives of Section 9.2.2. The Recovery Manager will coordinate with the EOF Director and Emergency Coordinator as necessary to develop both the Recovery Organization and administrative activities necessary for a smooth transition from the Emergency Organizations to the Recovery Organization. The Recovery Manager is responsible for the activities of the Recovery Organization.

The Waterford 3 Safety Review Committee (SRC) shall be responsible for the review of the nuclear safety aspects of the significant activities of the Recovery Organization to verify that the activities did not constitute an unresolved safety question.

9.2.1.2 Emergency Plant Manager

During emergency conditions where activation of the Emergency Operations Facility is not required, the Emergency Plant Manager is then responsible for the development of a Recovery Organization as necessary to meet the objectives of Section 9.2.2. For events of a minor nature, the normal plant organization may be adequate to fulfill these objectives.

9.2.2 Objectives of Recovery Organization

9.2.2.1 Short-Term Objectives

The initial recovery organization must be established to meet the following objectives on a 24-hour-per-day basis:

- a. Maintain the plant in a stable condition.
- b. Establish additional assurance of plant stability by providing additional safety system capability.

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9.2.2.1 (Cont'd.)

- c. Maintain control of the release of radioactive material to the environment.
- d. Maintain control of personnel exposures.
- e. Maintain adequate communication with Federal, State and local agencies.
- f. Maintain adequate capabilities for release of factual and timely information to the general public.

9.2.2.2 Long-Term Objectives

The long-term objectives of the recovery organization are:

- a. Restore the plant to pre-emergency conditions.
- b. Dispose of all waste material generated during the emergency and recovery phases.
- c. Evaluate the cause of the emergency, the response to the emergency, and any potential effects of the emergency on future plant operations.

9.3 Mode of Operations

The objective basis for the mode of operations of assigned recovery activities is to maintain compliance with applicable federal regulations, State permits and plant Technical Specifications. Specifically, the radiation exposure limits of 10CFR20 shall apply and any discharges shall be controlled in accordance with the National Pollution Discharge Elimination System permit and the radiological limits as defined in the plant Technical Specifications. In addition, to the extent practical, based on equipment availability, accessibility, and the safety aspects of the post-emergency plant conditions, applicable limiting conditions for operations (LCOs) and surveillance requirements of the plant Technical Specifications will be complied with. For those LCOs and surveillance in which compliance is impractical, the NRC will be informed and consulted regarding the safety implications of continued operation in that mode.

To the extent practical, the administrative controls imposed on normal operation will be maintained during the recovery phase.

Procedures shall be generated for each specific operation and maintenance evolution and will be reviewed for potential nuclear safety, personnel safety or environmental impact by a technically competent review group. As necessary, the review group will be identified in the development of the Recovery Organization, as will the individual(s) having final signature authority on all procedures. Normal plant administrative procedures will be modified to accommodate the Recovery Organization.

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9.3.1 Recovery Organization

The Recovery Organization would vary depending on the nature of the preceding emergency conditions. The functional requirements of the Recovery Organization would however closely resemble the normal Nuclear Operations Department responsibilities. As such, the normal organization may be sufficient to handle recovery operations. Key roles that would generally be required for a major recovery operation are identified below and shown in Figure 9-1. Assignment of these roles/functions is addressed in the Emergency Plan Implementing Procedures.

9.3.1.1 Recovery Manager

The Recovery Manager will be responsible for overall recovery activities. The position would report to the Chief Operating Officer of Entergy Operations, Inc.

9.3.1.2 Recovery Project Manager

The Recovery Project Manager would report to the Recovery Manager and be responsible for overall engineering, construction and procurement activities.

9.3.1.3 Recovery Project Engineer

The Recovery Project Engineer would report to the Recovery Project Manager and be responsible for engineering activities in support of the recovery operation.

9.3.1.4 Recovery Construction Manager

The Recovery Construction Manager would report to the Recovery Project Manager and be responsible for construction or plant modification in support of the recovery operations.

9.3.1.5 Recovery Administration Manager

The Recovery Administration Manager would report to the Recovery Manager and be responsible for overall administration, and logistics activities in support of the recovery operations.

9.3.1.6 Recovery Licensing Manager

The Recovery Licensing Manager would report to the Recovery Manager and be responsible for overall regulatory coordination and compliance.

9.3.1.7 Recovery Radiological Manager

The Recovery Radiological Manager would report to the Recovery Manager and be responsible for health physics and radwaste activities in support of the recovery operation.

WATERFORD 3 SES EMERGENCY PLAN

9.3.1.8 Recovery Operations Manager

The Recovery Operations Manager would report to the Recovery Manager and be responsible for coordination of plant operations in support of the recovery operation.

9.3.1.9 Recovery Public Relations Manager

The Recovery Public Relations Manager would report to the Recovery Manager and be responsible for coordination of public relations information related to the recovery operations.

The Recovery Organization must be defined based on the initiating accident conditions. The Organization would expand or contract accordingly.

9.3.2 Reentry

The recovery program as defined herein includes activities associated with initial reentry into affected station areas. Detailed instructions for conducting reentry are given in the Emergency Plan Implementing Procedures; however, the basic goals for reentry activities include:

- a. A comprehensive radiation surveillance of plant facilities such that radiological problem areas are defined.
- b. Visual observation of hazards or potential hazards is made and evaluated.
- c. Appropriate warning signs and rope barriers are established to isolate the identified reentry problem areas.

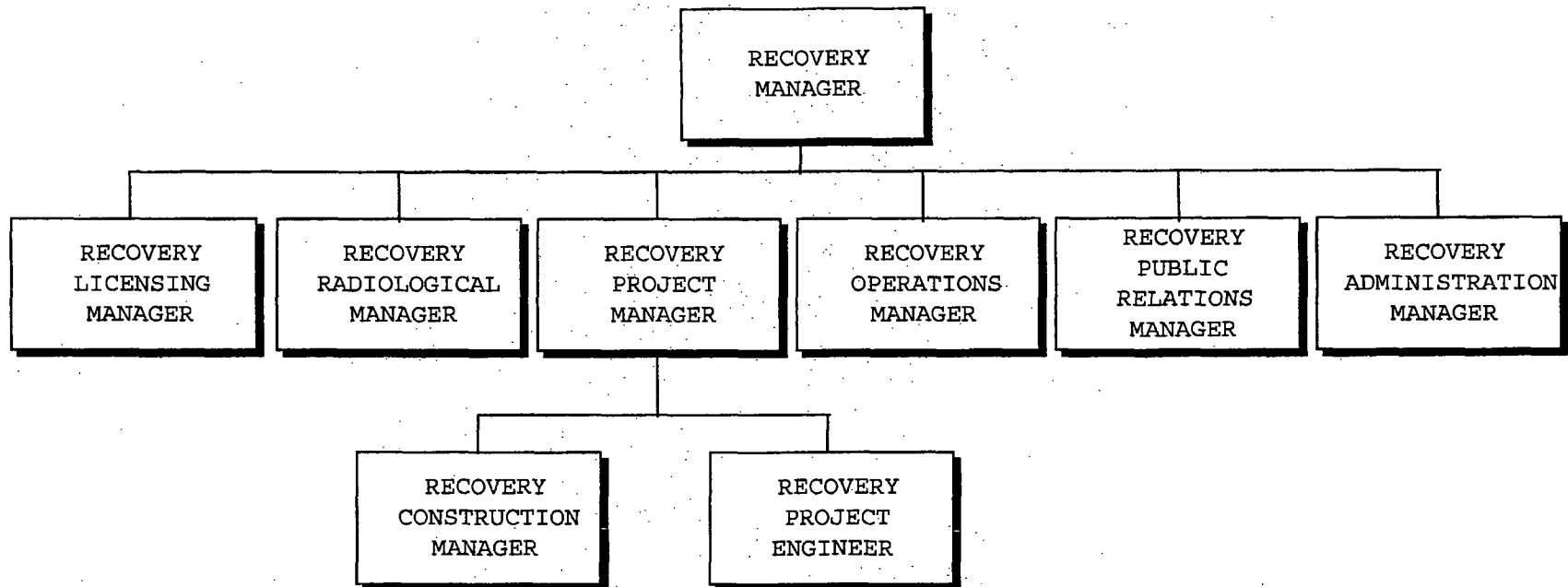
9.3.3 Restoration

The last element of the recovery program is restoration of operations. The overall purpose of restoration is to prepare for resumption of full power operations. This program shall include a detailed investigation of the accident causes and consequences both to the plant and the environment. Determinations shall be made as to the repair work required to perform necessary modifications to plant equipment and/or operating procedures. Repair work and approved modifications shall be carried out as authorized. Test programs to confirm fitness and acceptability to return to service shall be developed and executed.

W3 EMERGENCY PLAN

FIGURE 9-1

LONG - TERM RECOVERY ORGANIZATION



WATERFORD 3 SES EMERGENCY PLAN

APPENDIX A

MUTUAL ASSISTANCE PLAN

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX A

The Mutual Assistance Plan which under earlier revisions resided in this appendix has been deleted. The Mutual Assistance Plan has been superceded by the INPO Emergency Resources Manual which is provided by INPO as a separate document.

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX B

EVACUATION TIME STUDY

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX B

The Waterford Steam Electric Station Unit No. 3 Evacuation Time Estimate is provided as a separate document. The Evacuation Time Estimate is provided to offsite agencies when it is updated.

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX C

LETTERS OF AGREEMENT

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX C

The Annual Confirmation Letters and the current Letters of Agreement with each of the agencies, which under earlier revisions resided in this appendix, have been removed. These documents are now maintained in the Emergency Planning Department files. Entergy Operations, Inc. maintains agreements and/or contracts with the following organizations in support of Waterford 3 emergency response.

United States Coast Guard
Louisiana Department of Public Safety
Office of the Sheriff, St Charles Parish
Hahnville Volunteer Fire Department
Union Pacific Railroad Company
Southland Fire & Safety
Westinghouse Electric Company LLC
Bristow U.S. LLC
Entergy Services – Transmission System
Entergy Services – Fossil
MYU Helicopters
Panther Helicopters

NOTE: The Letters of Agreement associated with the Emergency Medical Assistance Program (EMAP) are located in Appendix I as part of the EMAP.

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX D

LOUISIANA PEACETIME RADIOLOGICAL RESPONSE PLAN

Rev. 044

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX D

The Louisiana Peacetime Radiological Response Plan is provided as a separate document.

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX E

LOUISIANA PEACETIME RADIOLOGICAL

RESPONSE PLAN - ATTACHMENT 1

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX E

The Louisiana Peacetime Radiological Response Plan Attachment 1 is provided as a separate document.

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX F

MEMORANDUM OF UNDERSTANDING WITH THE LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX F

The Memorandum of Understanding with the Louisiana Department of Environmental Quality which under earlier revisions resided in this appendix has been deleted. The Memorandum of Understanding with the Louisiana Department of Environmental Quality has been superseded by State Law.

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX G

TYPICAL EMERGENCY RESPONSE EQUIPMENT LISTS

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX G

TYPICAL EMERGENCY RESPONSE EQUIPMENT LISTS

Equipment listings in this Appendix are typical of the type of equipment located at each facility listed. Exact equipment inventories can be found in the implementing Document under Section III, Supporting Procedures, EP-003-040, Emergency Equipment Inventory.

WATERFORD 3 SES EMERGENCY PLAN
APPENDIX G
OSC STORAGE ROOM

Ludlum 177 (or equivalent) with Pancake Probe

Ludlum 12 (or equivalent) with Pancake Probe

RSO-50 (or equivalent)

Teletector (or equivalent)

RO2 (or equivalent)

RO2A (or equivalent)

CS-137 Check Source

Air Sampler (High Volume)

Air Filters

Silver Zeolite Cartridges

Smears

Protective Clothing - full sets

SCBA'S

SCBA Spare Cylinders

Batteries

Dosimeter 0-200 mR

Dosimeter 0-1.5 R

Dosimeter 0-10 R

DLR's

Dosimeter Charger

Electronic Dosimeters

Barricade Ribbon

Tape 2-inch

Radiation Postings w/Inserts

Radioactive Material Bags

Stopwatch

Plastic Suits

Clipboard

Survey Forms

Stepoff Pads

Sample Bags

Potassium Iodide

Handheld Radio

Handheld Radio Charger

Air Purifying Respirator w/Canister

Flashlight

Constant Air Monitor

Constant Air Monitor Check Source

Regulated Air Sampler

Frisking Station Equipment

WATERFORD 3 SES EMERGENCY PLAN
APPENDIX G
TSC EMERGENCY KIT LOCKER

Ludlum 177 (or equivalent) w/Pancake Probe
RSO-5 (or equivalent)
Air Sampler (High Volume)
SCBA's
SCBA Spare Cylinders
Dosimeter 0-200 mR
Dosimeter 0-1.5R
DLR's
Dosimeter Charger
Stopwatch
6V Lanterns
Batteries
Tape, 2-inch
Clipboard
Potassium Iodide
Air Filter Paper
Sample Envelopes
Silver Zeolite Cartridges
Protective Clothing - full sets
CS-137 Check Source
Frisking Station Equipment

WATERFORD 3 SES EMERGENCY PLAN
APPENDIX G
FIELD MONITORING KITS

EP-002-060
EP-002-061
R02 (or equivalent)
CS-137 Check Source
Air Sampler (Battery Powered)
Spare Air Sampler Fuses
Sample Holder
Air Sample Filters
Potassium Iodide
Silver Zeolite Cartridges
Screwdriver
Smears
Shovel
Stopwatch
Liquid Sample Containers
Clipboard
Writing Tablets
Pens
Mark-a-lot
Flashlight
Scissors
Batteries
Roll of Quarters
Paper Coveralls
Sample Bags
Sample Labels
Cotton Insert Gloves
Rubber Gloves
Air Purifying Respirator w/Canister
Shoe Covers
Survey Location Maps
Tape 2-inch
Ludlum 177 or Ludlum 12 (or equivalent) w/Pancake Probe
0-200 mR Dosimeters
0-1.5 R Dosimeters
0-10 R Dosimeters
Dosimeter Charger
Handheld Radios
Handheld Radio Chargers

**WATERFORD 3 SES EMERGENCY PLAN
APPENDIX G
EOF EMERGENCY LOCKER**

Ludlum 177 (or equivalent) w/Pancake Probe
RSO-50 (or equivalent)
CS-137 Check Source
Tape, 2-inch
Potassium Iodide
Protective Clothing - full sets
6V Lanterns
Flashlight
Batteries
Stopwatch
Clipboard
Dosimeter 0-200 mR
DLR's
Respirators - full face
Combination Particulate and Charcoal Cartridge
Air Sampler (Hi - Vol)
Silver Zeolite Cartridges
Air Sampling Filters
Radioactive Material Bags
Sample Bags
Dosimeter Charger
Pens
Smears
Spare Air Sampler Fuses

WATERFORD 3 SES EMERGENCY PLAN
APPENDIX G
PERSONNEL DECON KITS

EP-002-032
HP-002-704
Plastic Bags (Assorted)
Towels, Cloth - Washing and Drying
Paper Towels
Soft Brush
Shaving Cream
Razors
Hand Soap
Gloves, Disposable
Ludlum 12 or Ludlum I77 (or equivalent) w/Pancake Probe
CS-137 Check Source
Flashlight
Batteries
Masselin Cloth
Smears
Tweezers
Scissors
Q-Tips

**WATERFORD 3 SES EMERGENCY PLAN
APPENDIX G
HEALTH PHYSICS HOSPITAL LOCKER**

E-520 Beta/Gamma Meter (or equivalent)
Ludlum 12 or Ludlum 177 (or equivalent) w/Pancake Probe
Dosimeter 0-200 mR
Dosimeter Charger
CS-137 Check Source
Tape, 2-inch
Absorbent Paper (or Herculite)
Radiation Rope/Ribbon
Radiation Postings w/Inserts
15-Gallon Poly Bottle
Plastic Liners
Stepoff Pads
Scissors
Radioactive Material Stickers
Yellow and Magenta Tape
Stanchion
Clipboard w/Dosimeter ID Number
Pens/Pencils
Notebook
Writing Tablets
Smears
Decontamination Table Top
Hose with Hand Shower Connection
Potassium Iodide
Batteries
Decon Soap
DLR's
Masselin Mop
Masselin Cloth
Waste Containers (Yellow)

WATERFORD 3 SES EMERGENCY PLAN
APPENDIX G
HEALTH PHYSICS AMBULANCE KIT

Ludlum 12 (or equivalent) w/Pancake Probe
Rubber Overshoes
Rubber Gloves
Tape
Absorbent Material
Pens
Survey Forms
Clipboard
Smears
DLR's
Plastic Booties
Pre-Cut Herculite
Batteries
Barricade Tape
Paper Coveralls
Radioactive Material Bags
CS-137 Check Source
Dosimeters 0-200 mR

**WATERFORD 3 SES EMERGENCY PLAN
APPENDIX G
ASSEMBLY AREA SUPERVISOR KIT**

**Bull Horn
Air Horn
Flashlight
Cellular Phone
Handheld Radio**

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX H

PROCEDURE CROSS REFERENCE BETWEEN THE EMERGENCY PLAN IMPLEMENTING PROCEDURES AND THE EMERGENCY PLAN

**WATERFORD 3 SES EMERGENCY PLAN
APPENDIX H**

PROCEDURE CROSS REFERENCE

Document Section I	Implementing Instructions	Emergency Plan Sections
EP-001-001	Recognition and Classification of Emergency Conditions	1.1.16, 1.1.17, 1.1.19, 4.0, 4.1, 4.2, 4.3, 5.1.2.1, 5.1.2.2a1, 6.1
EP-001-010	Unusual Event	1.1.84, 4.1.1, 4.3, 5.1.2.1, 5.1.2.2a1, 6.1.3
EP-001-020	Alert	1.1.4, 4.1.2, 4.3, 5.1.2.2a1, 6.1.3
EP-001-030	Site Area Emergency	1.1.78, 4.1.3, 4.3, 5.1.2.2a1, 6.1.3
EP-001-040	General Emergency	1.1.39, 4.1.4, 4.3, 5.1.2.2a, 5.1.2.2a1, 6.1.3
Document Section II	Implementing Procedures	Emergency Plan Sections
EP-002-010	Notifications and Communications	5.1.2.1, 5.1.2.2a2, 5.1.2.2j, 5.1.2.2k, 5.1.2.3a5, 5.1.2.3n, 5.1.2.3o, 5.3, 6.1.3c, 6.2.1, 6.2.2.2, 6.2.2.4, 6.2.2.5, 6.2.2.6, 6.2.2.7, 7.5
EP-002-015	Emergency Responder Activation	5.1.2, 6.2.1.1, 6.2.2, 6.2.2.3
EP-002-030	Emergency Radiation Exposure Guidelines and Controls	3.1.2.1c, 5.1.2.2a8, 5.1.2.2c, 5.1.2.2e, 6.6.2, 6.6.3, 6.7.1, 7.4.8, 9.2.2.1, 9.3
EP-002-031	In-Plant Radiological Controls and Surveys During Emergencies	5.1.2.2c, 5.1.2.2e, 6.6.2, 6.6.3.1, 7.1.3, 7.4.2, 7.4.3, 7.4.8
EP-002-032	Monitoring and Decontamination	5.1.2.2c, 5.1.2.2e, 5.1.2.2v, 6.6.1.1, 6.7.3, 6.7.4, 7.1.3, 7.4.2.7, 7.4.2.8, 7.4.8, 7.4.10
EP-002-033	Administration of Iodine Blocking Agents	5.1.2.2c, 5.1.2.3i, 6.6.2, 6.7.2

**WATERFORD 3 SES EMERGENCY PLAN
APPENDIX H**

PROCEDURE CROSS REFERENCE

Document Section II	Implementing Procedures	Emergency Plan Sections
EP-002-034	Onsite Surveys During Emergencies	5.1.2.2c, 5.1.2.2e, 6.6.3.1, 7.1.3, 7.4.2.6, 7.4.2.7, 7.4.3, 7.4.8
EP-002-050	Offsite Dose Assessment	1.1.5, 5.1.2.1, 5.1.2.2c, 5.1.2.2d, 5.1.2.3j, 5.1.2.3l, 6.3.2.4, 6.3.3.3, 6.4.2, 6.4.3, 7.4.11a
EP-002-052	Protective Action Guidelines	1.1.70, 1.1.71, 4.0, 5.1.2.1a, 5.1.2.2a, 5.1.2.2c, 5.1.2.3a, 5.1.2.3i, 6.6.1.2, 7.1.1, 7.1.2, 7.2.1
EP-002-060	Radiological Field Monitoring	5.1.2.1g, 5.1.2.2c, 5.1.2.2d, 5.1.2.2e, 5.1.2.2l, 5.1.2.2z6, 5.1.2.3i, 5.1.2.3k, 5.1.2.3m, 6.3.2.3, 6.3.3.2, 6.4.1, 6.4.2, 7.1.2, 7.1.3, 7.2.1, 7.4.2.6, 7.4.3, 7.4.4, 7.4.11b
EP-002-061	Emergency Environmental Monitoring	6.3.2.3, 6.3.3.2, 6.4.1, 6.4.2, 7.4.2.6, 7.4.4, 7.4.11b
EP-002-071	Site Protective Measures	1.1.79, 3.1.2.1c, 6.6.1.1, 7.4.8
EP-002-081	Search and Rescue	5.1.2.2u, 5.1.2.2z3, 6.6.1.1b
EP-002-090	Core Damage Assessment	1.1.5, 3.1.2.1a, 5.1.2.1c, 5.1.2.2h, 5.1.2.2i, 5.1.2.3c, 5.1.2.3e, 6.1.2, 6.3, 7.4.1, 7.4.2, 7.4.11c
EP-002-091	Emergency Chemistry	5.1.2.1h, 5.1.2.2g, 7.4.3, 7.4.12, 7.4.13
EP-002-100	Technical Support Center (TSC) Activation, Operation, and Deactivation	1.1.81, 5.1.2.2, 7.1.2

**WATERFORD 3 SES EMERGENCY PLAN
APPENDIX H**

PROCEDURE CROSS REFERENCE

Document Section II	Implementing Procedures	Emergency Plan Sections
EP-002-101	Operational Support Center (OSC) Activation, Operation, and Deactivation	1.1.61, 5.1.2.2, 7.1.3
EP-002-102	Emergency Operations Facility (EOF) Activation, Operation, and Deactivation	1.1.25, 5.1.2.3, 7.2.1
EP-002-130	Emergency Team Assignments	5.1.2.1.1, 5.1.2.2a, 5.1.2.2e, 5.1.2.2u, 5.1.2.2z
EP-002-140	Reentry	9.3.2
EP-002-150	Emergency Plan Implementing Records	5.1.2.2, 5.1.2.3f, 5.1.2.3h
EP-002-170	Recovery	1.1.74, 3.3, 9.0
EP-002-190	Personnel Accountability	5.1.2.1b, 5.1.2.2b, 5.1.2.2u, 5.1.2.2v, 5.1.2.2y, 6.6.1.1b
Document Section III	Supporting Procedures	Emergency Plan Sections
EP-003-020	Emergency Preparedness Drills and Exercises	3.4, 8.1.2
EP-003-030	Emergency Program Review, Updating and Modification	3.4, 8.3, 8.4, 8.5
EP-003-040	Emergency Equipment Inventory	8.4, App. G
EP-003-050	Emergency Organization Documentation and Control	5.0, 6.2.1.1, 8.3
EP-003-060	Emergency Communications Guidelines	6.2.1.2
EP-003-070	Emergency Communications Systems Routine Testing	3.4, 8.1.2.4(2)

WATERFORD 3 SES EMERGENCY PLAN
APPENDIX H

PROCEDURE CROSS REFERENCE

<u>Document Section IV</u>	<u>Implementing Procedures</u>	<u>Emergency Plan Sections</u>
EP-004-010	Toxic Chemical Contingency Procedure	4.3.3, 6.6.1
EP-004-015	Offsite Personnel Staging During a Toxic Chemical Emergency	6.6.1.1
EP-004-020	Backup EOF Activation, Operation and Deactivation During a Toxic Chemical Emergency	7.2.1
<u>Document Section V</u>	<u>Supporting Procedures</u>	<u>Emergency Plan Sections</u>
UNT-007-018	First Aid and Medical Care	5.1.2.1.1b, 5.1.2.2z2, 5.3.4.1, 5.3.4.2, 5.3.4.3, 5.3.4.4, 6.2.1.2a, 6.7.3, 6.7.4, 6.7.5, 7.4.10, App. G, App. I
<u>Document Section VI</u>	<u>Training Procedures</u>	<u>Emergency Plan Sections</u>
EN-TQ-110	Emergency Response Organization Training	8.1.1.3

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX I

EMERGENCY MEDICAL ASSISTANCE PROGRAM (EMAP)

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX I

EMERGENCY MEDICAL ASSISTANCE PROGRAM

TABLE OF CONTENTS

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NOTE: The Annual Confirmation Letters and Letters of Agreement, which under earlier revisions were included in the Attachments portion of this appendix, have been removed. These letters are now maintained in the Emergency Planning Department files.

WATERFORD 3 SES EMERGENCY PLAN
APPENDIX I

1.0 SCOPE AND APPLICABILITY

The Waterford 3 Emergency Medical Assistance Program (EMAP) provides the basis for handling onsite medical emergencies, including injured/ill persons that are radioactively contaminated or have received exposures to ionizing radiation above limits, requiring action by offsite medical personnel/services.

EMAP assigns general responsibilities to Entergy Operations, Inc. and to support hospitals. EMAP describes the essential elements for provision of emergency medical services. Thus, EMAP provides the overall plans, specific requirements, and commitments required for the development of a detailed implementing document for managing medical emergencies.

Waterford 3 procedures provide the detailed information and protocols for management of onsite medical emergencies. The implementing document is distributed to those individuals, facilities, or organizations involved in response to medical emergencies.

2.0 REFERENCES

- 2.1 Waterford 3 Emergency Plan
 - Section 6.0, Emergency Response Measures
 - Section 7.0, Emergency Response Facilities and Equipment
 - Section 8.0, Maintenance of Emergency Preparedness
- 2.2 Waterford 3 Emergency Plan Implementing Documents
 - EP-003-020, Emergency Preparedness Drills and Exercises
 - EP-003-040, Emergency Equipment Inventory
 - EP-002-032, Monitoring and Decontamination
 - UNT-007-018, First Aid and Medical Care
- 2.3 St. Charles Parish Emergency Operations Plan, Annex J, Health and Medical
- 2.4 Ochsner Clinic Foundation Radiation Accident Plan
- 2.5 West Jefferson Medical Center Procedures for the Decontamination and Treatment of the Radioactively Contaminated Patient
- 2.6 State of Louisiana Peacetime Radiological Response Plan, Attachment 1 - Waterford 3 Steam Electric Station
- 2.7 State of Louisiana Peacetime Radiological Response Plan, Chapter 10, Medical and Public Health Services
- 2.8 Facilities and Medical Care for Onsite Nuclear Power Plant Radiological Emergencies, ANSI/ANS - 3.7.1 - 1979
- 2.9 Public Health Service Guide for Developing Health Disaster Plans, DHEW, 1974
- 2.10 Emergency Medical Services System Act of 1973 (P.L. 93-154 as amended)

WATERFORD 3 SES EMERGENCY PLAN
APPENDIX I

3.0 RESPONSIBILITIES

3.1 Entergy Operations, Inc. and Entergy Louisiana, LLC.

- 3.1.1 Initiate all appropriate provisions of EMAP in the event of an onsite medical emergency.
- 3.1.2 Coordinate all aspects of providing onsite emergency medical services.
- 3.1.3 Provide initial first aid via designated, trained shift personnel.
- 3.1.4 Provide technical guidance and assistance to protect emergency medical personnel involved in the treatment/ transportation of the radiation accident patient and to minimize the spread of radionuclide contamination.
- 3.1.5 Provide a Health Physics technician to assist support hospital emergency departments with monitoring and decontamination of the radiation accident patient.
- 3.1.6 Provide personnel, equipment and facilities for the radiological monitoring and decontamination of any and all ambulance vehicles and equipment used for transport of the radiation accident patient and involved hospital facilities/equipment.
- 3.1.7 Provide initial and training per calendar year to support hospital personnel in decontamination procedures, use of radiation emergency equipment and supplies, basic health physics indoctrination, radiological aspects of emergency medical treatment, and procedural elements of EMAP and associated Emergency Plan Implementing Procedures.
- 3.1.8 Coordinate emergency medical drills per calendar year, involving a simulated contaminated patient, which will require participation by local (offsite) emergency medical services/agencies.
- 3.1.9 Provide to the support hospitals a Radiation Emergency Kit containing equipment/supplies necessary for personnel protection; Radiation Emergency Area set-up; patient monitoring, decontamination and sample taking; and waste handling.
- 3.1.10 Provide for quarterly inspection, inventory, operational checking, and maintenance/calibration of all Health Physics and emergency medical equipment/supplies stored for emergency use.
- 3.1.11 Coordinate release of information to news media regarding emergency occurrences at Waterford 3.

3.2 Ochsner Clinic Foundation (hereinafter Ochsner)

- 3.2.1 Accept and treat injured/ill personnel from Waterford 3, including personnel that are radioactively contaminated or have been exposed to ionizing radiation.
- 3.2.2 Maintain the capability and facilities to provide emergency medical treatment, monitoring and decontamination to injured/ill personnel from Waterford 3 for 24 hours per day.

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX I

- 3.2.3 Provide, upon Entergy Operations, Inc., request, qualified medical personnel for consultation and/or onsite assistance in managing medical emergencies with associated radiation contamination/overexposure, and/or administration of radioprotective drugs to affected persons.
 - 3.2.4 Provide storage space for the Radiation Emergency Kit provided by Entergy Operations, Inc.
 - 3.2.5 Participate to the fullest extent possible in training programs and emergency medical drills intended to maintain emergency preparedness.
 - 3.2.6 Accept and transport, via Flight Care helicopter, injured or ill personnel from Waterford 3, whether or not they are radioactively contaminated or overexposed to the support hospital designated by Entergy Operations, Inc.
- 3.3 West Jefferson Medical Center
- 3.3.1 Accept and treat injured/ill personnel from Waterford 3, including personnel that are radioactively contaminated or have been exposed to ionizing radiation.
 - 3.3.2 Maintain the capability and facilities to provide emergency medical treatment, monitoring and decontamination to injured/ill personnel from Waterford 3 for 24 hours per day.
 - 3.3.3 Provide storage space for the Radiation Emergency Kit provided by Entergy Operations, Inc.
 - 3.3.4 Accept and transport, via the Flight Care helicopter ambulance service, injured/ill personnel from Waterford 3 (including personnel that are radioactively contaminated or have been exposed to ionizing radiation) to the support hospital designated by Entergy Operations, Inc.
 - 3.3.5 Participate to the fullest extent possible in training programs and emergency medical drills intended to maintain emergency preparedness.
- 3.4 St. Charles Parish Hospital
- 3.4.1 Accept and treat personnel from Waterford 3, having experienced an injury or illness that are not radioactively contaminated or overexposed to ionizing radiation.
 - 3.4.2 Provide 24-hour primary (first-due) emergency medical transportation (ambulance) to accept and transport, via the St. Charles Parish Hospital Ambulance Service, injured/ill personnel from Waterford 3 (including personnel that are radioactively contaminated or have been exposed to ionizing radiation) to the support hospital designated by Entergy Operations, Inc.
 - 3.4.3 Participate to the fullest extent possible in training programs and emergency medical drills intended to maintain emergency preparedness.

**WATERFORD 3 SES EMERGENCY PLAN
APPENDIX I**

- 3.5 U.S. Department of Energy
 - 3.5.1 Provide radiation medicine and health physics consultation through the Radiation Emergency Assistance Center/Training Site (REAC/TS) operated by Oak Ridge Associated Universities.
 - 3.5.2 Provide patient referral facilities of Ochsner and West Jefferson Medical Center through the Radiation Emergency Assistance Center/Training Site operated by Oak Ridge Associated Universities in conjunction with Oak Ridge Hospital of the United Methodist Church.

4.0 PRECAUTIONS

- 4.1 Emergency medical treatment takes precedence over decontamination. Life-support procedures must be instituted prior to decontamination (i.e., bleeding must be stopped and breathing restored).
- 4.2 Treatment and transfer of contaminated injured/ill personnel to support hospital facilities must include appropriate actions to minimize spread of contamination to uncontaminated areas and emergency medical personnel.

5.0 MANAGEMENT OF MEDICAL EMERGENCIES

- 5.1 Entergy Operations, Inc. Emergency Medical Services
 - 5.1.1 Decontamination and First Aid Facilities

Facilities for monitoring, decontaminating and/or providing first aid/emergency care treatment of personnel are located in the Health Physics Area on the -4.0 ft. Mean Sea Level (MSL) elevation of the Waterford 3 Reactor Auxiliary Building. Decontamination showers, sinks, eyewash supplies, personnel monitoring equipment, as well as basic emergency medical equipment and supplies are contained within this area. In addition, first aid lockers are provided in strategic locations onsite as described in station procedures.
 - 5.1.2 Emergency Teams

Emergency teams including the First Aid Team and the Search and Rescue Team (as described in Section 5.0 of the Waterford 3 Emergency Plan) can be assembled to render necessary assistance. Shift personnel maintaining first aid/emergency care certification are available on a 24-hour per day basis to assist injured/ill personnel either at the accident scene or in the First Aid Area. Health Physics personnel will be available on a 24-hour per day basis to process personnel radiation dosimetry, monitor for radiation contamination and decontaminate affected personnel.

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX I

5.1.3 Emergency Medical Transportation

St. Charles Parish Hospital Emergency Medical Service, Advanced Life Support, staffed/equipped, provides primary (first-due) emergency medical services to transport injured/ill personnel to offsite support hospitals (reference Attachment 8.3). The vehicle(s) operated to provide this care and transportation are designed to meet U.S. D.O.T. Federal specifications for "Star of Life Ambulance" (KKKA-1822A) and carry the patient care, security, access, and miscellaneous equipment recommended by the American College of Surgeons. The vehicle(s) have two-way radio communications capability to the St. Charles Parish Sheriff's Office for dispatch and coordination and to the support hospitals (Ochsner and West Jefferson Medical Center) and St. Charles Parish Hospital for appropriate medical control, consultation and notification. Personnel protective equipment, monitoring devices and patient contaminant control materials are provided by Entergy Operations, Inc., upon ambulance vehicle entrance to the Waterford 3 plant site. Ochsner provides Flight Care helicopter ambulance service (advanced life support staffed/equipped) for patient care and transportation should circumstances require air evacuation to support hospitals and/or immediate medical intervention in cases of life-threatening trauma/cardio-respiratory arrest.

5.2 Medical Support Facilities

5.2.1 Ochsner

Ochsner, 1514 Jefferson Highway, New Orleans, Louisiana 70121 (located approximately 20 miles from Waterford 3) is a 532-bed acute care medical facility designated as the regional trauma center (ACS Level I) and Medical Resource Hospital.

As a professional partnership providing 31 medical and surgical specialists, including the Department of Radiation Oncology (which coordinates the medical care and treatment of radiation-associated injuries) and the Departments of Nuclear Medicine, Radiology, Hematology and Emergency Medical Service-Industrial Medicine, Ochsner provides the capability to accept and provide treatment to patients experiencing radiation-associated injury/illness.

Ochsner arrangements for managing medical emergencies involving radiation include configuration of an isolated radiation emergency area adjacent to the emergency department and utilization of a designated radiation management team for patient treatment/decontamination.

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5.2.2 West Jefferson Medical Center

West Jefferson Medical Center, 1101 Medical Center Boulevard, Marrero, Louisiana 70072 (located approximately 20 miles from Waterford 3) is a 462-bed acute care medical facility designated as an area-wide trauma center (ACS Level II).

West Jefferson Medical Center arrangements for managing medical emergencies involving radiation include configuration of an isolated radiation emergency area adjacent to the emergency department and utilization of a designated radiation management team for patient treatment/decontamination.

5.2.3 Nearest Available Medical Facility - St. Charles Parish Hospital

St. Charles Parish Hospital, Post Office Box 87, 1057 Paul Maillard Road, Luling, Louisiana 70070 (located approximately 8 miles from W3SES) is a 99-bed acute care general hospital providing 24-hour emergency room services with an on-duty physician. Fifty (50) acute care beds are located in the main building and 49 psychiatric beds are located within the two back wings of St. Charles Manor. Entrance to the Psychiatric Unit is on Angus Drive.

As a parish general hospital, St. Charles Parish Hospital is capable of managing medical and surgical emergencies that do not involve radiation exposure or radioactive contamination.

5.3 Patient Handling and Treatment

5.3.1 First Aid/Emergency Care (Onsite)

Emergency medical care to injured/ill personnel is initiated regardless of whether the injury/illness is radiation or non-radiation associated. Shift personnel, certified in first aid/emergency care techniques, are available onsite on a 24-hour per day basis to render assistance to injured/ill personnel at the accident scene.

5.3.2 Radiation Monitoring and Decontamination

Injured/ill personnel exiting controlled access areas or found to be contaminated are monitored and decontaminated prior to being transported to support medical facilities, provided such decontamination does not adversely affect the health and safety of the patient.

In cases of life-threatening trauma/illness or persistent contamination, where patients must be transported to support medical facilities prior to complete decontamination, measures are taken to minimize the spread of contamination.

A Waterford 3 Health Physics technician shall accompany contaminated patient(s) to the support hospital to supervise control of contamination and to serve in an advisory capacity to the hospital Radiation Management Team for monitoring and decontamination of the radiation accident patient and involved hospital facilities/equipment.

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5.3.3 Physician Consultation/Onsite Assistance

For managing life-threatening medical emergencies, wound decontamination, and/or treatment requiring administration of radioprotective drugs, medical consultation, and/or onsite physician assistance is available through qualified medical personnel of Ochsner.

Consultation for managing persistent or difficult cases of radiation contamination/overexposure is available through qualified medical/Health Physics personnel of the Radiation Emergency Assistance Center/Training Site (REAC/TS).

5.3.4 Notifications

Transportation of a contaminated or overexposed injured/ill patient from Waterford 3 to a support hospital requires advanced notification of support hospitals (reference Section 5.3.6.2).

5.3.5 Emergency Medical Transportation

5.3.5.1 Transportation Modalities

The primary means of emergency medical transportation is the St. Charles Parish Hospital Ambulance Service.

Air transportation via Ochsner's Flight Care helicopter ambulance service supplements ground transportation in situations where the injured/ill patient is determined to be medically unstable or when ground transportation would be inadvisable.

The Waterford 3 Emergency Coordinator, in consultation with members of the First Aid Team, will determine the priorities for the mode of emergency medical transportation based on the need for immediate medical intervention, the comfort of the patient, and the vehicles available.

5.3.5.2 Ambulance Monitoring/ Decontamination

Following admission of the contaminated patient(s) to the support hospital Radiation Emergency Area, the ambulance vehicle, associated equipment and emergency medical personnel are surveyed by the Waterford 3 Health Physics technician assisting the hospital Radiation Management Team. If contamination is determined, the ambulance is returned to Waterford 3 for decontamination prior to release to active duty. An exception can be made should the vehicle in question be the only emergency ambulance available to answer an emergency call and the area of contamination can be adequately contained or sealed against further spreading.

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5.3.5.3 Medical Communications

Emergency medical communications between the support hospitals (Ochsner and West Jefferson Medical Center) and the ambulance services (St. Charles Parish Hospital Emergency Medical Service and/or Ochsner's Flight Care helicopter) utilize the HEAR network radio system (regional hospital disaster Channel).

5.3.6 Support Hospital

5.3.6.1 Selection of Support Hospital

Depending upon the severity of injury/illness, the number of affected individuals, and the presence and degree of radiation contamination/ overexposure, the Waterford 3 Emergency Coordinator determines patient(s) destination.

5.3.6.2 Hospital Notifications

Support hospitals receive prior notification of patients being transported to their emergency departments for emergency medical care. Notification includes:

- a. Number of patients;
- b. Number of radioactively contaminated/injured patients;
- c. Type/degree of radioactive contamination or overexposure;
- d. Assessment of injury/illness type and severity;
- e. Method of emergency medical transportation to be utilized; and
- f. Estimated time of arrival.

5.3.6.3 Emergency Department Admission

Support hospital emergency department admission and treatment of injured/ill patient(s) is governed by standard operating procedures. However, in the event that the injured/ill patient is radioactively contaminated, normal admissions procedures are superseded by the appropriate procedures for managing medical emergencies involving radiation contained within the support hospital's Emergency Management Plan.

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5.3.6.4 Inter-Hospital Patient Transfer

For extreme radiation accident cases requiring long-term treatment, the Department of Energy provides patient referral facilities to Ochsner and West Jefferson Medical Center through the Radiation Emergency Assistance Center/Training Site operated by Oak Ridge Associated Universities in conjunction with Oak Ridge Hospital of the United Methodist Church.

5.4 Public Information

Entergy is responsible for release of information to news media regarding circumstances related to emergency occurrences at Waterford 3, including nature and extent of the occurrence; time and date it occurred; number of persons (believed to be) injured; and medical destination of those injured. Release of information on the medical condition of injured persons is the responsibility of the treating medical facility, after notifying the Duty Entergy Spokesperson or the Emergency News Center Director as to what information is to be released.

Support hospitals will release information, initially and periodically, on persons injured in Waterford 3 emergency occurrences, although not on the occurrences themselves.

Support hospitals will release no information on DOA victims or Waterford 3 emergencies until next of kin and the Duty Entergy Spokesperson or the Emergency News Center Director have been notified.

5.5 Synopsis

As indicated, medical support for Waterford 3 is based on a three-tier approach involving;

- a. Onsite first aid/emergency care and triage;
- b. Offsite emergency medical treatment at support hospitals; and, where necessary,
- c. Definitive radiological evaluation and/or treatment from the Radiation Emergency Assistance Center/Training Site (REAC/TS).

To understand the EMAP response to medical emergencies, the following scenario is provided.

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5.5.1 Scenario

Initially, the Control Room operators are notified of a medical emergency occurrence through contact with personnel at the emergency scene. Control Room operators in turn alert the First Aid Team to respond and render immediate medical attention.

The First Aid Team makes a determination as to whether the medical emergency will require offsite medical assistance and whether the involved individual is radioactively contaminated or overexposed.

In the event that the injured/ill individual(s) requires offsite medical attention, emergency medical transportation, provided by the St. Charles Parish Hospital Ambulance Service or the Ochsner Flight Care helicopter is dispatched through the St. Charles Parish Sheriff's Office for St. Charles Parish Hospital and by telephone for Ochsner via request from the Shift Manager. Patients requiring offsite medical care are transported to the selected support hospital for medical treatment.

Injured/ill personnel exiting a controlled access area and requiring offsite medical attention are monitored and decontaminated prior to being transported to support medical facilities, provided such decontamination does not adversely affect the health and safety of the patient. In cases of life-threatening trauma/illness or persistent contamination, measures are taken to minimize the spread of contamination during transport to the support hospital.

A Waterford 3 Health Physics technician accompanies the contaminated patient to the support hospital to serve in an advisory capacity to the hospital Radiation Management Team. This individual assists in the monitoring and decontamination of the involved ambulance vehicle or helicopter.

Support hospitals are primarily responsible for patient resuscitation and stabilization, decontamination, and providing initial treatment of radiation injuries, if such treatment is indicated.

In the event that the patient has incurred excessive radiation exposure and/or internal contamination, the services of the Radiation Emergency Assistance Center/Training Site (REAC/TS) may be called upon. This assistance may include direct consultation with REAC/TS physicians and/or transfer of the patient to REAC/TS for specialized treatment (radiosurgical decontamination, reverse isolation, bone marrow transplantation, and/or whole blood cell transfusion) as determined necessary by the patient's conditions.

Following treatment and transfer of the radiation accident patient (to direct hospital admission status or another facility for specialized care), all involved facilities, equipment, and personnel are monitored and decontaminated (as necessary) prior to release by the Waterford 3 Health Physics technician.

6.0 MEDICAL EMERGENCY TRAINING

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6.1 Onsite Emergency Response Personnel

Waterford 3 personnel assigned to Emergency Teams (reference Section 5.1.2) receive general Emergency Plan instruction/training and, dependent upon team assignments, instruction/training in specific subjects.

6.2 Offsite Emergency Response Personnel and Support Organization Personnel

Entergy Operations, Inc. provides support hospital (Ochsner and West Jefferson Medical Center) emergency departments and Radiation Management Team members, St. Charles Parish Hospital Ambulance Service and Ochsner's Flight Care helicopter flight/medical crew with initial and instruction/training per calendar year in decontamination procedures, use of radiological emergency equipment and supplies, basic health physics indoctrination, radiological aspects of emergency medical treatment, and procedural elements of the EMAP and associated Emergency Plan Implementing Procedures.

7.0 MEDICAL EMERGENCY DRILLS

A medical emergency drill (supervised instruction period intended to test, develop and maintain skills in emergency operations) involving a simulated contaminated individual, and containing provisions for support hospital and ground or air ambulance services participation, is conducted at least annually. The offsite portions of the medical emergency drill may be performed as part of an exercise or other scheduled drills (emergency simulation of offsite radiological release requiring response by offsite organizations, including mobilization of state and parish emergency personnel/resources, adequate to verify the capability to respond to accident scenarios requiring response).

Qualified individuals observe and critique the drills for the purpose of evaluating the ability of participating organizations to respond as called for in EMAP. Any inadequacies found as a result of the drill critique are documented, with necessary improvements incorporated in EMAP and/or supporting Emergency Plan Implementing Procedures.

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8.0 LETTERS OF AGREEMENT LISTING

The current Letters of Agreement maintained with the hospitals listed below, which under earlier revisions resided in this appendix, have been removed. These documents are now maintained in the Emergency Planning Department files. Entergy Operations, Inc. maintains agreements with the following hospitals in support of Waterford 3 emergency response.

Ochsner Clinic Foundation

St. Charles Parish Hospital

West Jefferson Medical Center

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A. Assignment of Responsibility

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1a	5.2, 5.3, APP. I	5-6	5-2
1b	5.1, 5.2, 5.3, APP. I		5-2
1c		5-1A, 5-1C, 5-2, 5-3, 5-4, 5-6	5-2, 5-3
1d	5.1.2.1a, 5.1.2.2a, 5.1.2.3a		
1e	5.1.2.1		
3	APP. A, C, D, E, F, I		
4	5.1.1.1		

B. Onsite Emergency Organization

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1	5.1.1.1, 5.1.2.1, 5.1.2.2	5-2	
2	5.1.2.1a		
3	5.1.2.1a, 5.1.2.1b, 5.1.2.2a		
4	5.1.2.2a, 5.1.2.3.1a		
5	5.1.2, 5.4		5-1
6		5-6	
7a	5.1.2.3	5-3	
7b	5.1.2.3	5-3	
7c	5.1.2.3	5-6	
7d	5.1.2.4	5-4	
8	5.2, APP. A, C, F		
9	5.3.1, 5.3.2, 5.3.4, APP. C, I	5-6	5-2

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C. Emergency Response Support and Resources

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1a	5.1.2.2a, 5.1.2.3a		
1b	5.3.3.1, 5.3.3.2		
1c	5.3.3.2		
2b	5.1.2.3q	5-3	
3	7.4.3		
4	5.2, 7.4.3, 7.4.4, 7.4.5, 7.4.7, APP. A, C, F		

D. Emergency Classification System

NUREG 0654 GUIDELINES*	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1	4.0		4-4, 4-5
2			4-1, 4-2, 4-3, 4-4

E. Notification Methods and Procedures

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1	6.2		
2	6.2.2		
3		6-2	
4a		6-2	
4b		6-2	
4c		6-2	
4d		6-2	
4e		6-2	
4f		6-2	
4g		6-2	

* Waterford 3's Emergency Classification System is based on NEI 99-01 Methodology of Development of Emergency Action Levels

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E. Notification Methods and Procedures (Cont'd.)

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
4h		6-2	
4i		6-2	
4j		6-2	
4k		6-2	
4l		6-2	
4m		6-2	
4n		6-2	
6	6.2.2.4, 6.2.2.5, 6.2.2.6, 6.2.2.7, 6.6.1.3, 6.8, APP. K		
7	6.8.1, App. K		

F. Emergency Communications

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1a	6.2.1.2, 7.5.2	6-3	7-10
1b	7.5.2		7-10
1c	7.5.2		7-10
1d	7.5.1, 7.5.2		7-10
1e	6.2.1.1, 6.2.2		
1f	7.5.2		7-10
2	6.7.4		
3	8.1.2.4(2)		

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G. Public Education and Information

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1	6.8.2, 8.2		
2	6.8.2, 8.2		
3a	7.2.2		
3b	7.2.1, 7.2.2		
4a	5.1.2.3s, 5.1.2.4a		
4b	5.1.2.4a		
4c	5.1.2.4a7, 5.1.2.4f, 5.1.2.4g		
5	8.1.1.4		

H. Emergency Facilities and Equipment

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1	7.1.2, 7.1.3	7-2, 7-6, 7-7	
2	7.2.1	7-1, 7-3, 7-4	
4	5.1.2, 5.4, 6.2.1.1, 6.2.2	5-1C, 5-2, 5-3, 5-4	5-1
5	7.4		
5a	7.4.5, 7.4.7		
5b	7.4.2, 7.4.11		4-4, 7-2, 7-3, 7-4, 7-5, 7-7
5c	7.4.1, 7.4.11, 4.3.2		4-3, 4-4
5d	7.4.6		
6a	7.4.5, 7.4.7		
6b	7.4.2		7-2
6c	7.4.4, 7.4.3		
7	7.4.4		

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H. Emergency Facilities and Equipment (Cont'd.)

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
8	7.4.5		
9	7.1.3	7-2, 7-7	
10	8.4		
11	APP. G		
12	7.2.1		

I. Accident Assessment

NUREG 0654 GUIDELINES*	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1			4-1, 4-3, 4-4
2	7.4		7-2
3a	7.4.11, 6.3		
3b	7.4.11		
4	7.4.11a		
5	7.4.5, 7.2.1, 7.4.11		
6	7.4.11a		
7	6.4.1, 7.4.4, 7.4.11		
8	7.4, 6.3, 6.4		
9	7.4.11b		
10	7.4.11		

J. Protective Response

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1a	7.5.3, 6.6		
1b	7.5.3, 6.6		
1c	7.5.3, 6.6		

* Waterford 3's Emergency Classification System is based on NEI 99-01 Methodology of Development of Emergency Action Levels

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NUREG 0654 CROSS REFERENCE

J. Protective Response (Cont'd.)

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1d	7.5.3, 6.6		
2	6.6, 7.4.8	7-9	
3	6.6.1.1		
4	6.6.1.1		
5	6.6.1.1		
6a	6.6.2.1, 7.4.8, APP. G		
6b	6.6.2.1, 7.4.8, App. G		
6c	6.6.2.2, APP. G		
7	6.3, 6.6.1.2, 6.4, 4.2		
8	APP. B		
10a	APP. E	7-9, 7-9a, 7-9b, 7-9c, 7-9d	
10b	APP. E	2-4, 2-5	
10c	6.8, 7.5.4, APP. K		
10m	6.6.1.2, APP. B	6-4	

K. Radiological Exposure Control

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1a	6.7		
1b	6.7		
1c	6.7		
1d	6.7		
1e	6.7		
1f	6.7		
1g	6.7		

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K. Radiological Exposure Control (Cont'd.)

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
2	6.7		
3a	7.4.2.7		
3b	7.4.2.7		
5a	6.6.3		
5b	6.7.3, 7.4.8, 7.4.10, 7.1.3		
6a	6.6.3		
6b	6.6.3		
6c	6.6.3		
7	6.6.1, 6.6.2, 7.4.8, 7.4.10		

L. Medical and Public Health Support

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1	6.7.3, 6.7.4, 6.7.5, 5.3.4, APP. I		
2	6.7.3, 7.4.10		
4	5.3.4, 6.7.4, APP. I		

M. Recovery and Reentry Planning and Post-accident Operations

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1	9.3.2		
2	9.2	9-1	
3	9.1		
4	7.4.11a		

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NUREG 0654 CROSS REFERENCE

N. Exercises and Drills

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1a	8.1.2.4(1)		
1b	8.1.2.4(1)		
2a	8.1.2.4(2)		
2b	8.1.2.4(3)		
2c	8.1.2.4(4)		
2d	8.1.2.4(5)		
2e	8.1.2.4(6)		
3a	8.1.2		
3b	8.1.2		
3c	8.1.2		
3d	8.1.2		
3e	8.1.2		
3f	8.1.2		
4	8.1.2.6		
5	8.1.2.6		

O. Radiological Emergency Response Training

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1a	8.1.1		
2	8.1.2		
3	5.1.2.1.1b, 5.1.2.2aa2		
4a	8.1.1		
4b	8.1.1		
4c	8.1.1		
4d	8.1.1		

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NUREG 0654 CROSS REFERENCE

O. Radiological Emergency Response Training (Cont'd.)

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
4e	8.1.1		
4f	8.1.1		
4g	8.1.1		
4h	8.1.1		
4i	8.1.1		
4j	8.1.1		
5	8.1.1		

P. Responsibility for the Planning Effort

NUREG 0654 GUIDELINES	W3SES E-PLAN REFERENCE		
	Section	Figures	Tables
1	8.1.1.5		
2	8.0		
3	8.3.1		
4	8.3		
5	8.3		
6	Appendices		
7	APP. H		
8	Table of Contents		
9	8.5		
10	8.3.4		

APPENDIX K

WATERFORD 3 STEAM ELECTRIC STATION

ALERT/NOTIFICATION SYSTEM REPORT

(SUMMARY)

WATERFORD 3 SES EMERGENCY PLAN

APPENDIX K

The Alert Notification System Report provides a description of the systems used by St. Charles and St. John the Baptist Parishes to alert and notify the public in the event of an accident at Waterford 3. This report provides information on the authorities for the activation of the system and a description of the primary and back-up systems for alert and notification.

The primary alert system is composed of 73 fixed sirens, helicopters equipped with alerting devices, the St. Charles Industrial Hot-Line, the St. John Industrial Mutual Aid Radio System, automatic dialing devices as well as special provisions for the hearing impaired, river traffic and special facilities. The back-up alert system utilizes route alerting in populated and wetland areas, a mobile siren and alert confirmation done by the Local Parishes. The primary notification system uses both local and State release of notification messages, through the Emergency Alert System. Local Parishes also use cable TV override as part of the notification system. System maintenance and testing activities are also covered in the report.

Appended to the report is a technical report which provides specific information on the analysis, verification and testing of the siren system and the helicopter alerting system.

The Alert/Notification System Report is provided as a separate document.