



**Luminant**

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CP-201301046  
Log # TXX-13129

REF 10 CFR 2.202

August 28, 2013

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

**SUBJECT:** Comanche Peak Nuclear Power Plant, Docket Nos. 50-445 AND 50-446,  
First Six-Month Status Report in Response to March 12, 2012, Commission Order  
Modifying Licenses with Regard to Requirements For Mitigation Strategies For Beyond-  
Design-Basis External Events (Order Number EA-12-049) (TAC NOS. MF0860 and  
MF0861)

- REFERENCES:**
1. NRC Order Number EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events dated March 12, 2012
  2. NRC Interim Staff Guidance JLD-ISG-2012-01, "Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," Revision 0, dated August 29, 2012
  3. NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide," Revision 0, dated August 2012
  4. Luminant Generation Company LLC's Letter TXX-12158, Initial Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation strategies for Beyond-Design-Basis External events (Order Number EA-12-049), dated October 25, 2012
  5. Luminant Generation Company LLC's Letter TXX-13030, Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation strategies for Beyond-Design-Basis External events (Order Number EA-12-049), dated February 28, 2013

Dear Sir or Madam:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) staff issued an order (Reference 1) to Luminant Generation Company LLC (Luminant Power). Reference 1 was immediately effective and directs Luminant to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities in the event of a beyond-design-basis external event. Specific requirements are outlined in Attachment 2 of Reference 1.

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A151  
MRR

Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance (Reference 2) and an overall integrated plan pursuant to Section IV, Condition C. Reference 2 endorses industry guidance document NEI 12-06, Revision 0 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided Luminant Power's initial status report regarding mitigation strategies. Reference 5 provided Luminant Power's overall integrated plan.

Reference 1 requires submission of a status report at six-month intervals following submittal of the overall integrated plan. Reference 3 provides direction regarding the content of the status reports. The purpose of this letter is to provide the first six-month status report pursuant to Section IV, Condition C.2, of Reference 1, that delineates progress made in implementing the requirements of Reference 1. The attached report provides an update of milestone accomplishments since the overall integrated plan was submitted (Reference 5), including any changes to the compliance method, schedule, or need for relief and the basis, if any.

This letter contains no new regulatory commitments.

If you have any questions regarding this report, please contact Carl B. Corbin at 254-897-0121 or carl.corbin@luminant.com.

I state under penalty of perjury that the foregoing is true and correct.

Executed on August 28, 2013.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By:   
Fred W. Madden  
Director, Oversight & Regulatory Affairs

Attachment: Comanche Peak's First Six Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design- Basis External Events

c - Eric J. Leeds, Director, Office of Nuclear Reactor Regulation  
Steven A. Reynolds, Region IV  
Jessica A. Kratchman, NRR/JLD/PMB  
Balwant K. Singal, NRR  
Resident Inspectors, Comanche Peak

## **Comanche Peak Nuclear Power Plant's (CPNPP) First Six Month Status Report for the Implementation of Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events**

### **1 Introduction**

Comanche Peak developed an Overall Integrated Plan (Reference 1), documenting the diverse and flexible strategies (FLEX), in response to Reference 2. This attachment provides an update of milestone accomplishments since submittal of the Overall Integrated Plan including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

### **2 Milestone Accomplishments**

The following milestone(s) have been completed since the development of the Overall Integrated Plan (Reference 1), and are current as of August 14, 2013.

- FLEX Strategy Evaluation - Complete
- Modifications Evaluations - Complete
- Procedures - PWROG issues NSSS-specific guidelines - Complete

### **3 Milestone Schedule Status**

The following table provides an update to Attachment 2 of the Overall Integrated Plan. It provides the activity status of each item, and whether the expected completion date has changed. The dates are planning dates subject to change as design and implementation details are developed. As of this status report, the target completion dates for all activities are unchanged relative to the Overall Integrated Plan documented in Reference 1. Note, italicized items in the following table were not provided as milestone items in Attachment 2 of the Overall Integrated Plan. However, these items are added here for consistency with the 6 month status update template and will be carried forward in future 6 month status updates.

<b>Milestone</b>	<b>Target Completion Date</b>	<b>Activity Status</b>	<b>Revised Target Completion Date</b>
Submit 60 Day Status Report	Oct 2012	Complete	
Submit Overall Integrated Plan	Feb 2013	Complete	
<b>Submit 6 Month Updates:</b>			
Update 1	Aug 2013	Complete	
Update 2	Feb 2014	Not Started	
Update 3	Aug 2014	Not Started	
Update 4	Feb 2015	Not Started	
Update 5	Aug 2015	Not Started	
<i>FLEX Strategy Evaluation</i>	<i>Aug 2013</i>	<i>Complete</i>	
<i>Walk-throughs or Demonstrations</i>	<i>Apr 2015</i>	<i>Not Started</i>	
Perform Phase 2 Staffing Analysis	Jun 2014	Not Started	
<b>Modifications:</b>			
<i>Modifications Evaluation</i>	<i>Aug 2013</i>	<i>Complete</i>	
Develop Unit 1 Modifications	Mar 2014	Started	
Unit 1 Implementation Outage (1RF17)	Oct 2014	Not Started	
Develop Unit 2 Modifications	Mar 2015	Started	
Unit 2 Implementation Outage (2RF15)	Oct 2015	Not Started	
<b>Storage:</b>			
<i>Storage Design Engineering</i>	<i>Mar 2014</i>	<i>Started</i>	
<i>Storage Implementation</i>	<i>Oct 2014</i>	<i>Not Started</i>	
<b>FLEX Equipment:</b>			
Procure On-Site Equipment	Jul 2014	Started	
Develop "Playbook" with RRC	Nov 2013	Started	
<i>Install Off-Site Delivery Station (if Necessary)</i>	<i>Aug 2014</i>	<i>Not Started</i>	
Regional Response Center Operational	Aug 2014	Started	
<b>Procedures:</b>			
<i>PWROG issues NSSS-specific guidelines</i>	<i>May 2013</i>	<i>Complete</i>	
Issue FSGs	Aug 2014	Started	
Create Maintenance Procedures	Jul 2014	Not Started	
<b>Training:</b>			
<i>Develop Training Plan</i>	<i>May 2014</i>	<i>Not Started</i>	
Implement Training	Aug 2014	Not Started	
<i>Full Site FLEX Implementation</i>	<i>Oct 2015</i>	<i>Started</i>	
Submit Completion Report	Feb 2016	Not Started	

#### 4 Changes to Compliance Method

There are no changes to the compliance method as documented in the Overall Integrated Plan (Reference 1). However, the following table documents necessary corrections or clarifications to the OIP resulting from reconciliation of the submitted Overall Integrated Plan with the modifications evaluation.

Pages	Location	Action
10	First paragraph second sentence	Change A3-30 through A3-35 to <i>A3-31 through A3-34</i>
15	First paragraph second sentence	Change A3-32 to A3-33
15	Second paragraph third sentence	Change A3-31 to A3-32
15	Last paragraph fourth sentence	Change and secondary connections to <i>connection</i> Change Figures A3-16 through A3-17 to <i>Figure A3-18</i>
16	End of first bullet	Add ( <i>total of four new connections</i> )
18	Third paragraph second sentence	Change A3-31 and A3-33 to <i>A3-32 and A3-34</i>
19	Second column first bullet end of first sentence	Add ( <i>total of four new connections</i> )
23	Second paragraph first sentence	Change Phase 2 to <i>Phase 3</i>
30	First column second paragraph first sentence	Change through A3-9 to <i>and A3-8</i>
30	First column last paragraph	Delete last two sentences and replace with: <i>A single portable generator will be staged in staging area 2 for powering the high pressure, low flow pump on both units.</i>
31	First column first paragraph first sentence	Change through A3-9 to <i>and A3-8</i>
31	First column first paragraph last sentence	Change A3-33 to A3-34
42	Fourth bullet	Change A3-11 through A3-15 to <i>A3-13 and A3-14</i>
44	First column third paragraph third sentence	Change at the 820'-6" to <i>near the 810'-6"</i>
44	Last column first paragraph first sentence	Change auxiliary to <i>fuel</i>
49	Third paragraph first and second sentences	Change 10-hp to <i>15-hp</i>
49	Fourth paragraph	Change A3-22 to A3-23
49-50, 52		Delete XB10-1-2
56	Last paragraph first sentence	Change Phase 2 to <i>Phase 3</i>
58	Second column last item	Delete Unit 1

Pages	Location	Action
59	Second column first item	Change condensate line to <i>pipng connected to CST</i>
59	Second column Unit 2 description	Delete Unit 2 and its description
59	Second column item 3	Change Two to <i>Four</i> Change 1 to 2
59	Second column items 4 and 5	Change 2 to <i>Four</i>
63	SSI and SCR sections third column	Delete last sentence and replace with: <i>The connection will be via a hose and submerged eductor arrangement.</i>
65	Second column item number 2	Delete item number 2 and its description, replace with: 2. A 4"x4"x4" tee will be added along RWST overflow line 4-CT-1/2-073-152R-5.
78	Action Item 12 second and fifth columns	Change 2 to 1
83	Figure A3-1	Replace with Figure A3-1 from Appendix A
84	Figure A3-2	Replace with Figure A3-2 from Appendix A
86	Figure A3-4 title	Change Secondary to <i>Primary and Secondary</i>
93	Figure A3-11	Replace with Figure A3-11 from Appendix A
96	Figure A3-14	Replace with Figure A3-14 from Appendix A
98	Figure A3-16	Replace with Figure A3-16 from Appendix A
101	Figure A3-19	Replace with Figure A3-19 from Appendix A
103	Figure A3-22	Delete
110	Figure A3-30	Delete
112	Figure A3-33*	Replace with Figure A3-33 from Appendix A

\* Note Figure A3-34 has not changed but is located on the same page as Figure A3-33.

Additionally, the following modifications originally proposed in the submitted Overall Integrated Plan will not be performed. The basis for each change is documented below.

#### RMWST

The primary and secondary connections for feeding the steam generators conform to the guidance of NEI 12-06 and are sufficient for implementing the core cooling strategies. The modification proposed on pages 59 and 60 of the OIP for the RMWST provides a redundant suction connection for feeding the steam generators, is not required and will not be implemented. Note, this modification is separate from the cross-tie modification discussed on page 59. The cross-tie modification will be implemented.

#### PWST

The Potable Water Storage Tank is not protected from seismic, high wind or missile hazards and contains a small water volume relative to other potentially available tanks located within the protected area yard. The modification proposed on pages 61 and 62 of the OIP for the PWST is not required and will not be implemented.

Phase 3 Large Diesel Generator Electrical Connection

The primary connection for the 4160 VAC FLEX diesel generators will be established using cables manually routed from the 4160/6900 V step-up transformer, through the Safeguards building 810' elevation hallway outer doors to the emergency switchgear buses. The primary connection is protected from all hazards. The external primary connection modification discussed on pages 24 and 55-57 of the OIP will not be implemented.

**5 Need for Relief/Relaxation and Basis for the Relief/Relaxation**

The Luminant Power response (Reference 1) stated that Comanche Peak Units 1 & 2 are crediting use of low-leakage RCP seals in the FLEX Strategies. There is an issue with the current performance of the credited seals and the vendor has developed a plan to improve the seal performance. Luminant is evaluating the need for relaxation from the requirement of Section IV.A.2 of the Order (EA-12-049) regarding full implementation no later than two (2) refueling cycles after submittal of the Overall Integrated Plan, so that the option to credit the low-leakage seal may be pursued. The current required implementation date for Unit 1 is the 2014 fall refueling outage. An extension of one additional refueling cycle may be requested which moves the Unit 1 implementation date to the spring of 2016, still within the maximum allowed time frame of December 2016. The extension would provide additional time to resolve the seal performance issue and fully design and safely implement modifications that affect Units 1 & 2. A new Open Item, OI4, has been included in this submittal.

**6 Open Items from Overall Integrated Plan and Draft Safety Evaluation**

The following table provides a summary of the open items documented in the Overall Integrated Plan and the status of each item.

<b>Overall Integrated Plan Open Item</b>	<b>Status</b>
OI1. Finalize location and protection requirements of FLEX storage buildings. The storage buildings will be designed in accordance with the NEI guidance and the applicable hazards.	Complete. FLEX equipment will be stored in a new single structure designed to reasonably protect from applicable external events and will be located west of Warehouse A outside the Protected Area. The current structure at this location, designated 2K3 in Figure A3-35 of Appendix A, will be removed.
OI2. Perform containment evaluation based on the boundary conditions described in Section 2 of NEI 12-06. Based on the results of this evaluation, required actions to ensure maintenance of containment integrity and required instrument function will be developed as necessary.	The required analysis has not started.

The following table provides a summary of additional open items identified during reconciliation of the submitted Overall Integrated Plan with the modifications evaluation. These open items will be carried forward in future 6 month status updates.

<b>Overall Integrated Plan Open Item</b>	<b>Status</b>
OI3. Development of refueling equipment specifications, determination of fuel consumption rates, assessment of fuel supplies and determination of time frames for refueling of FLEX equipment in Phases 2 and 3 will be developed following generation of specifications for FLEX equipment.	Development of final specifications for all FLEX equipment has started.
OI4. Finalize FLEX strategies and required modifications following resolution of low-leakage RCP seal performance issue.	Issue resolution in progress, including low-leakage RCP seal design changes and testing. Potential impact on Fall 2014 implementation date for Unit 1.

## **7 Potential Draft Safety Evaluation Impacts**

There are no potential impacts to the Draft Safety Evaluation identified at this time.

## **8 References**

The following references support the updates to the Overall Integrated Plan described in this attachment.

1. Comanche Peak Nuclear Power Plant Docket Nos. 50-445 and 50-446 Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049),” dated February 28, 2013.
2. NRC Order Number EA-12-049, “Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events,” dated March 12, 2012.



## **Appendix A**

### **Overall Integrated Plan Figures - Revised and New**

### Attachment 3: Conceptual Sketches

#### Reactor Core Cooling & Heat Removal (Steam Generators Available) Alignments/Flowpaths

The primary connection alignment is designated by the green path and the secondary connection alignment is designated by the red path.

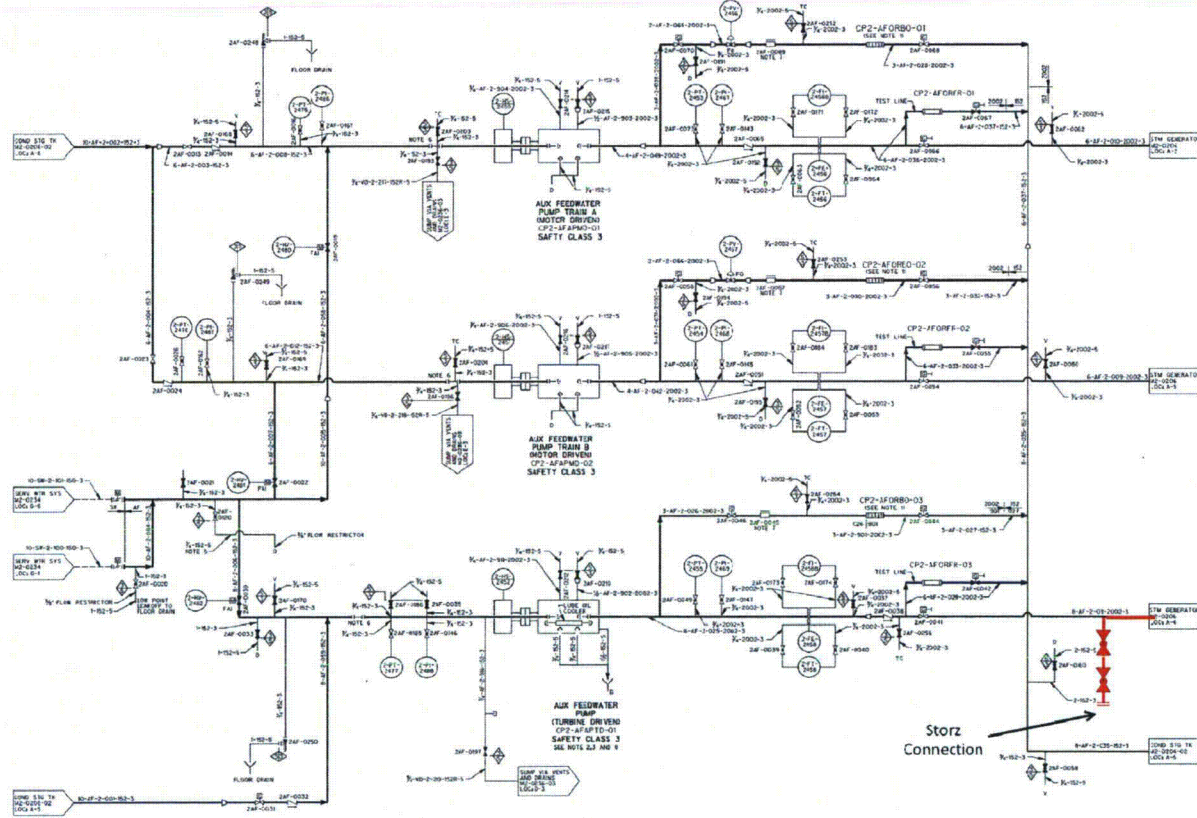


Figure A3-1: Modified M2-0206 Sh. 01 (Reference 8.b) Showing Secondary AFW Connection Alignment and Flowpath (Unit 1 Similar)

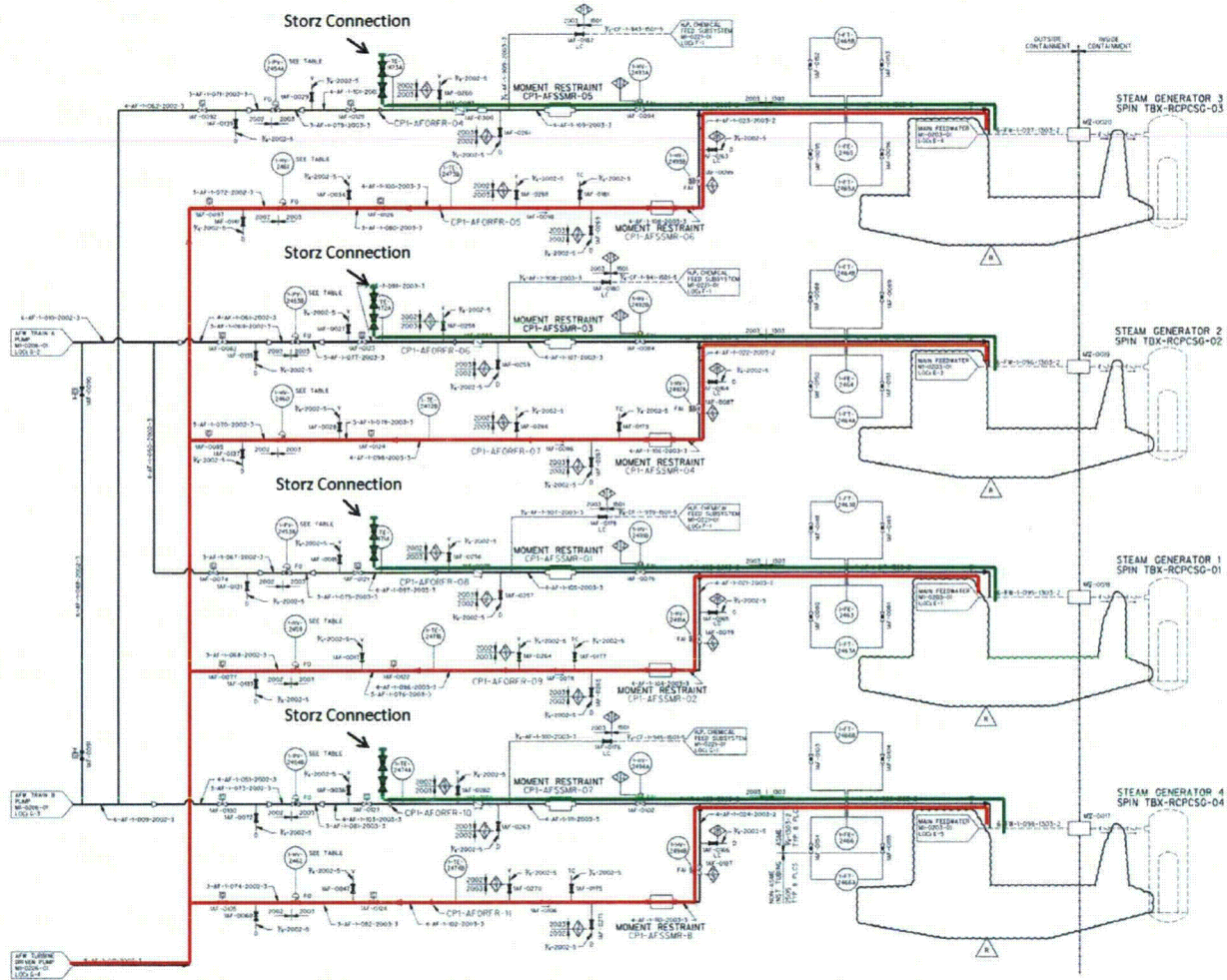
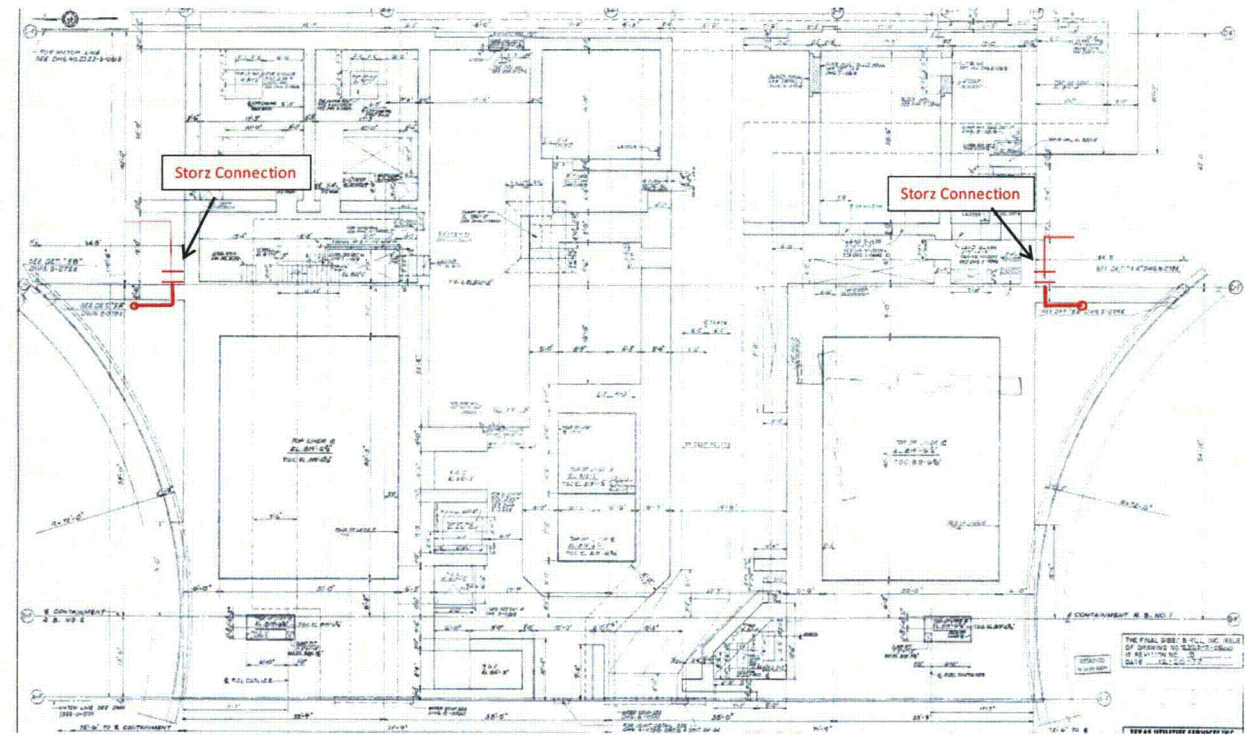


Figure A3-2: Modified M1-0206 (Reference 8.c) Showing Primary Injection Location and Primary and Secondary AFW Flow Paths (Unit 2 Similar)



The SFP Secondary connection is a new system and does not align with any existing system.



SFP Secondary Connection  
Unit 1 & 2  
Elevation 810'-6"

Figure A3-11: Modified 2323-S-0800 Pipe Routing for Spent Fuel Pool Secondary Connection, EL 810'-6" (Reference 8k)

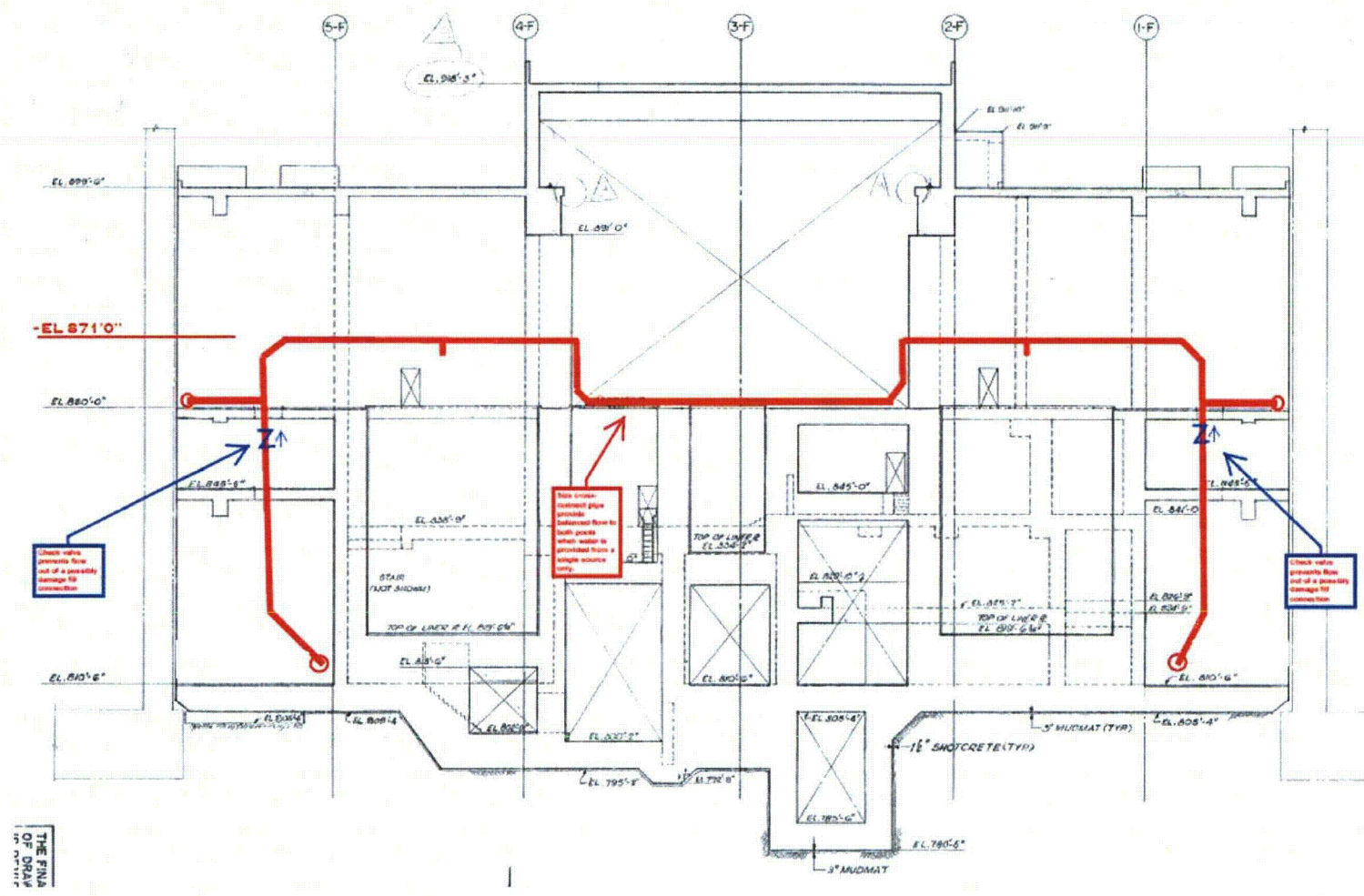


Figure A3-14: Modified 2323-S-0815 Pipe Routing for Spent Fuel Pool Secondary Connection (Reference 8n)



The figures below provide conceptual routings for the FLEX coping strategies.

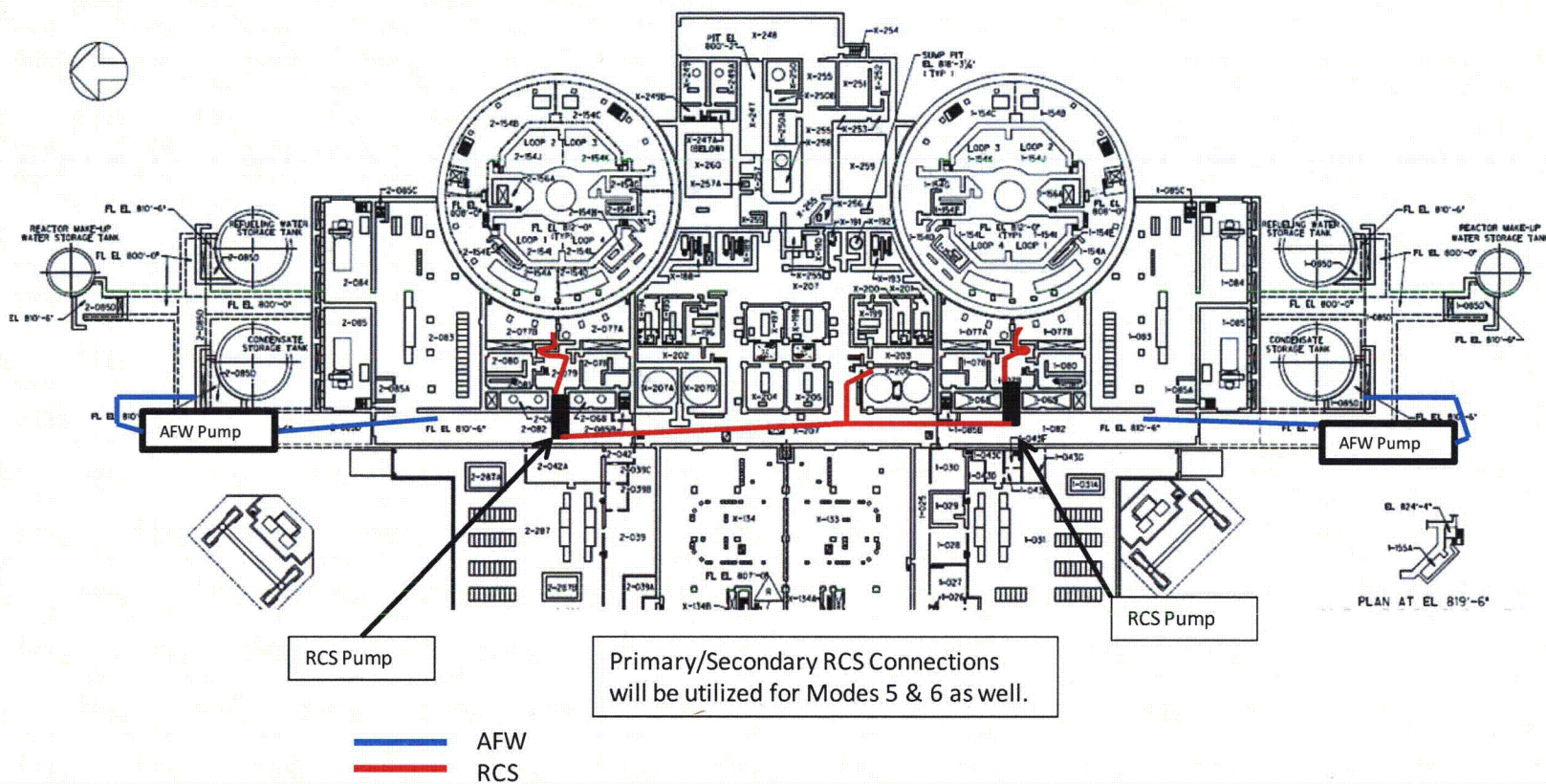


Figure A3-16: Modified A1-0413, Sh. 02 Primary FLEX Connections EL. 810'-6" (Reference 8,q)

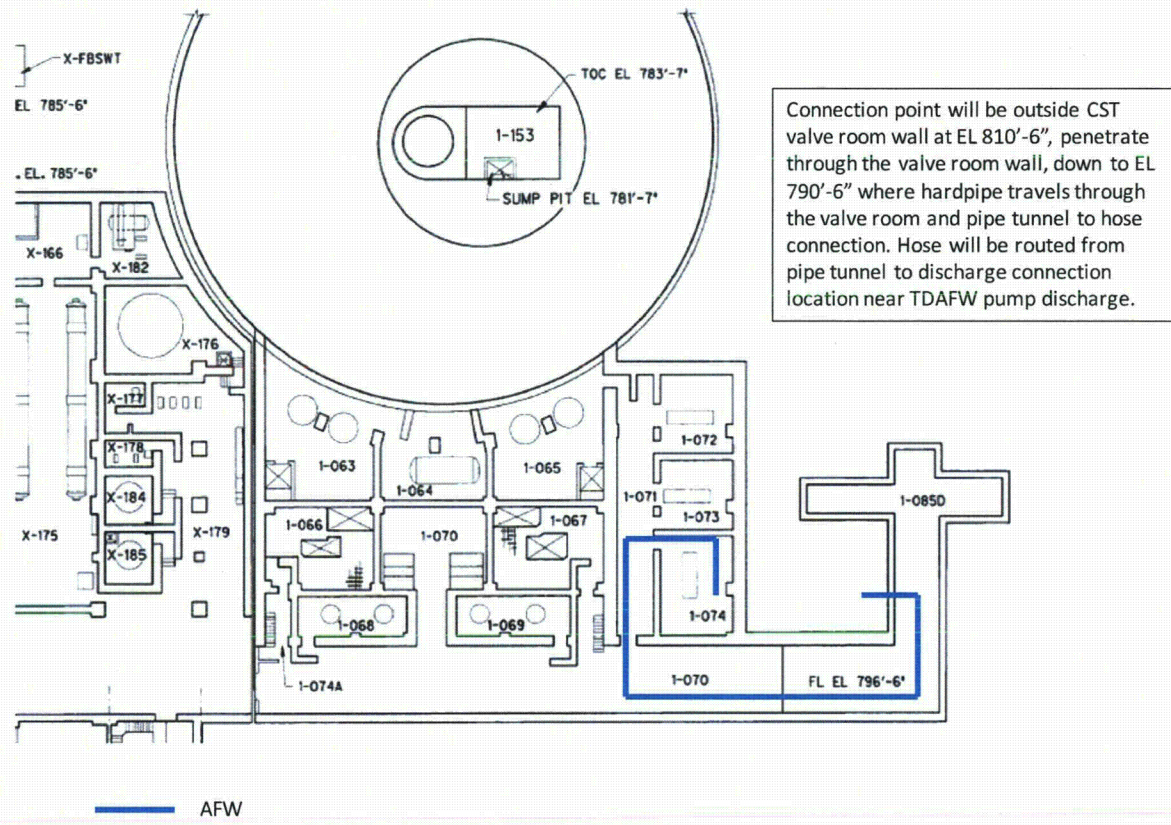


Figure A3-19: Modified A1-0413, Sh. 01 Secondary FLEX Connections EL. 790'-6" (Reference 8r)



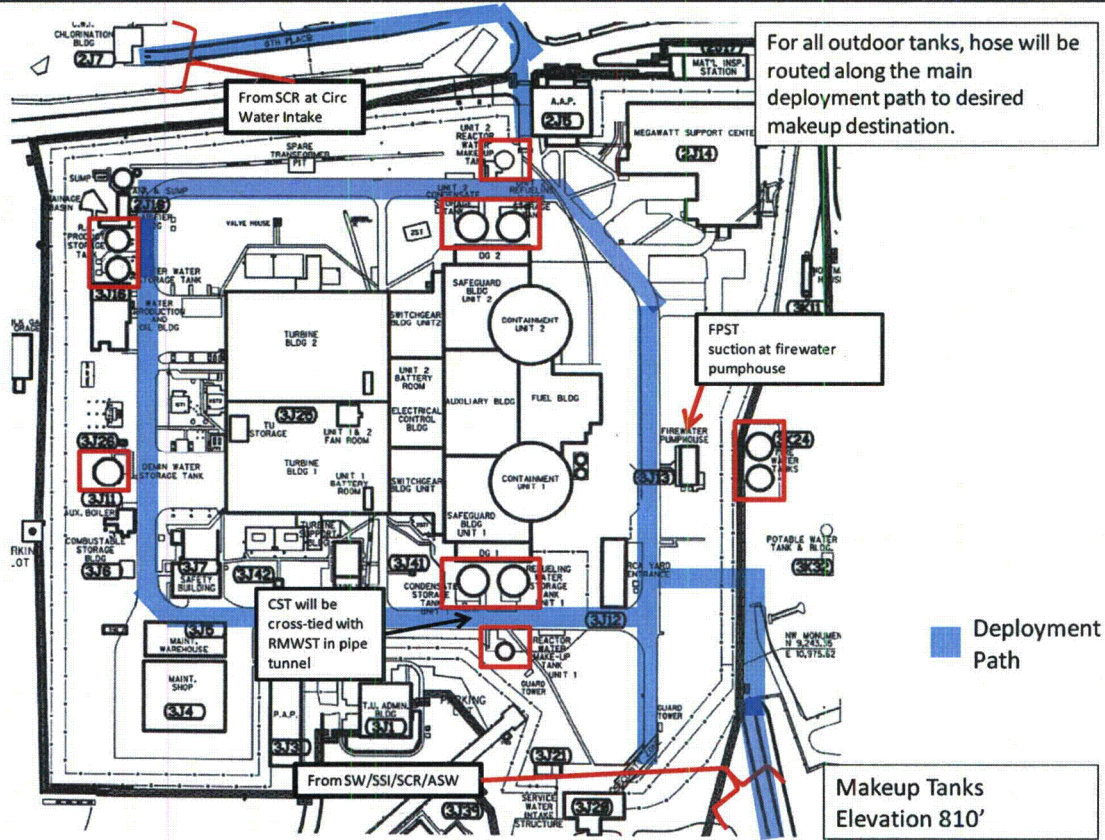


Figure A3-33: Yard Tanks Available and Deployment Path

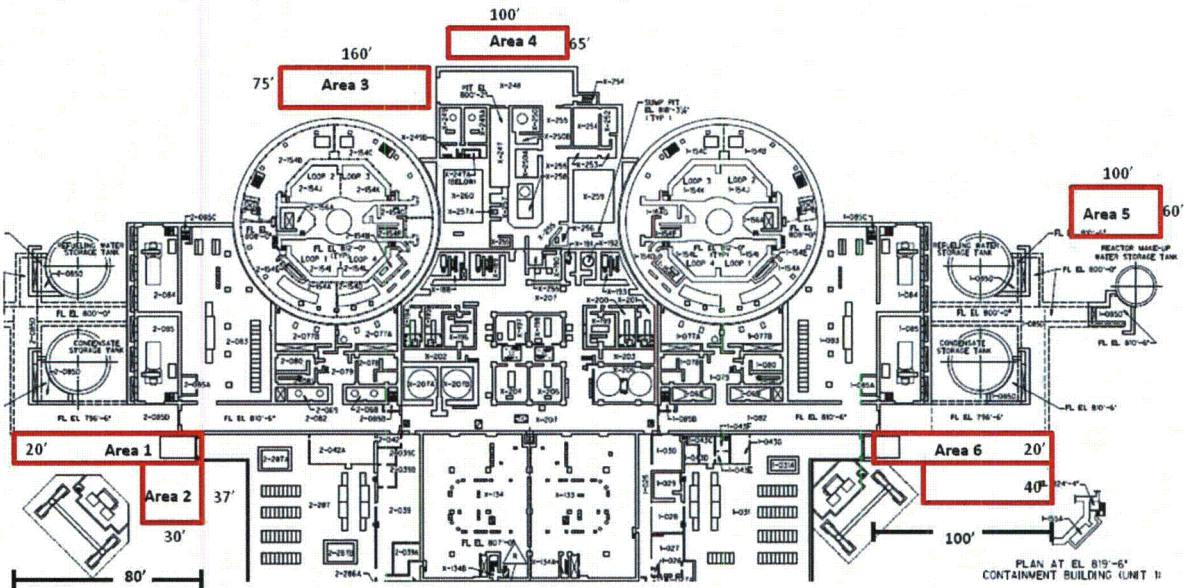


Figure A3-34: Modified A1-0413, Sh. 02 FLEX Staging Areas (Reference 8q)



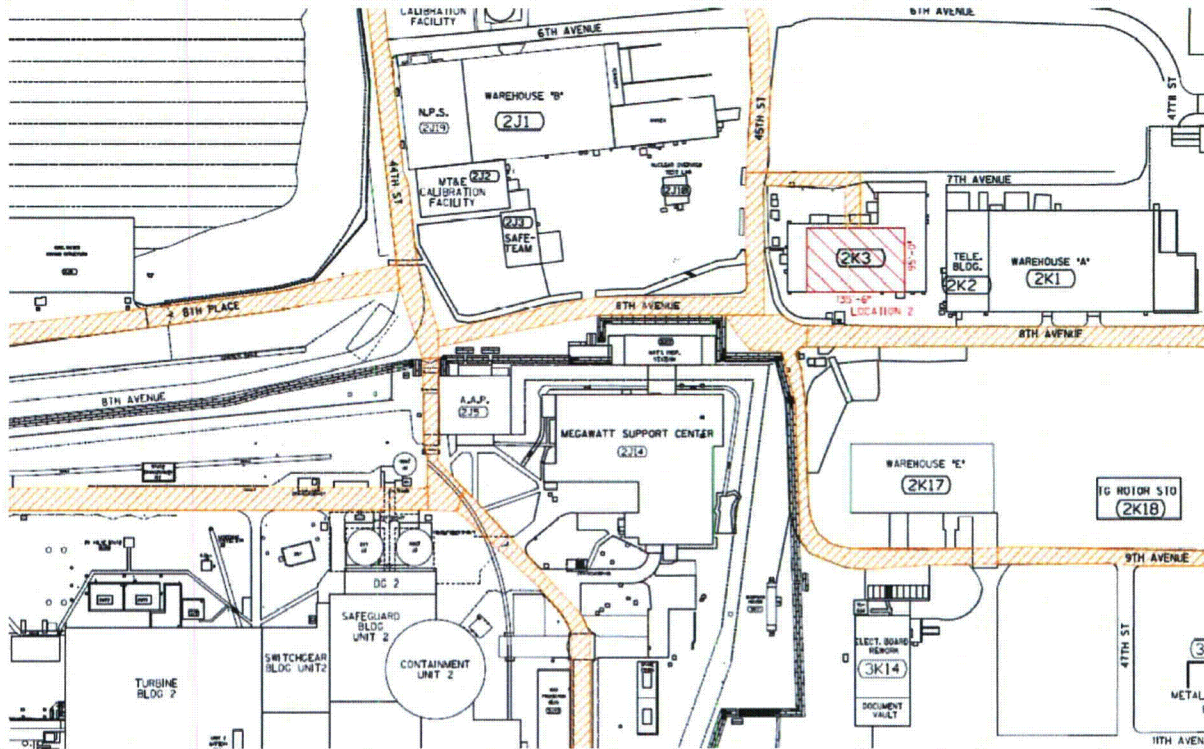


Figure A3-35: FLEX Storage Building Location