Entergy

Entergy Operations, Inc.
River Bend Station
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William F. Maguire
Site Vice President

RBG-47718

October 24, 2016

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

SUBJECT: Mitigating Strategies Assessment (MSA) for Flooding
River Bend Station – Unit 1
Docket No. ~~55-458~~ 50-458
License No. NPF-47

REFERENCES:

1. NRC letter to Entergy, *RFI Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the NTTF Review of Insights from the Fukushima Dai-ichi Accident*, dated March 12, 2012 (ML12053A340)
2. Entergy letter to NRC, *Required Response 2 to March 12, 2012, Request for Information, Enclosure 2, Recommendation 2.1, Flood Hazard Evaluation Report,* dated June 8, 2012 (letter no. RBG-47248) (ML12167A245)
3. *NRC Staff Requirements Memoranda to COMSECY-14-0037, "Integration of Mitigating Strategies for Beyond-Design-Basis External Events and the Reevaluation of Flooding Hazards"*, dated March 30, 2015 (ML 15089A236)
4. NRC Letter, *Coordination of Requests for Information Regarding Flooding Hazard Reevaluations and Mitigating Strategies for Beyond-Design-Basis External Events*, dated September 1, 2015 (ML15174A257)
5. Nuclear Energy Institute (NEI), *Report NEI 12-06 [Rev 2], Diverse and Flexible Coping Strategies (FLEX) Implementation Guide*, dated December 2015 (ML15348A015)
6. U.S. Nuclear Regulatory Commission, *JLD-ISG-2012-01, Revision 1, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigating Strategies for Beyond-Design-Basis External Events*, dated January 22, 2016 (ML1537A163)
7. NRC Letter, *River Bend Station – Unit 1, Interim Staff Response to Reevaluated Flood Hazards Submitted in Response to 10 CFR 50.54(f) Information Request – Flood-Causing Mechanism Reevaluation, (TAC No. MF3675) dated Sept. 4, 2015*

ADID
NRR

Dear Sir or Madam:

On March 12, 2012, the NRC issued Reference 1 to request information associated with Near Term Task Force (NTTF) Recommendation 2.1 for Flooding. One of the Required Responses in Reference 1 directed licensees to submit a Flood Hazard Reevaluation Report (FHRR). For River Bend Station (RBS), the FHRR was submitted on June 8, 2012 (Reference 2).

Concurrent to the flood hazard reevaluation, RBS developed and implemented mitigating strategies in accordance with NRC Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design-Basis External Events." In Reference 3, the NRC affirmed that licensees need to address the reevaluated flooding hazards within their mitigating strategies for beyond-design basis (BDB) external events, including the reevaluated flood hazards. This requirement was confirmed by the NRC in Reference 4. Guidance for performing MSA for Flooding is contained in Appendix G of Reference 5, endorsed by the NRC in Reference 6. For the purpose of the MSA for Flooding and in Reference 4, the NRC termed the reevaluated flood hazard as the "Mitigating Strategies Flood Hazard Information" (MSFHI). Reference 5, Appendix G, describes the MSA for Flooding.

In Reference 7, the NRC concluded that the "reevaluated flood hazards information, as summarized in the Enclosure, is suitable for the assessment of mitigating strategies developed in response to Order EA-12-049" for RBS.

Attachment 1 to this letter provides the Mitigating Strategies Assessment for Flooding Report for RBS. The assessment concluded that the existing FLEX strategy can be successfully implemented, as modified to require pre-deployment of supporting equipment in preparation for a local intense precipitation event.

This letter contains two new regulatory commitments, as indicated on Attachment 2. Should you have any questions concerning the content of this letter, please contact Tim Schenk at 225-381-4177.

I declare under penalty of perjury that the foregoing is true and correct. Executed on October 24, 2016.

Sincerely,

WFM / dhw

RBF1-16-0120
Attachments: 1. 2016 Mitigating Strategy Assessment for Flooding Documentation Requirements at River Bend Station
2. Commitment Identification Form

cc: Regional Administrator
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NRC Senior Resident Inspector
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Ji Young Wiley
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Baton Rouge, LA 70821-4312

Attachment 1

RBG-47718

2016 Mitigating Strategy Assessment for Flooding Documentation Requirements at River Bend Station

Entergy

ENTERGY NUCLEAR
Engineering Report Cover Sheet

Engineering Report Title:

2016 MITIGATING STRATEGIES ASSESSMENT FOR FLOODING DOCUMENTATION REQUIREMENTS AT RIVER BEND STATION

Engineering Report Type:

New ☒ Revision ☐ Cancelled ☐ Superseded ☐
Superseded by: _____

Applicable Site(s)

IP1	☐	IP2	☐	IP3	☐	JAF	☐	PNPS	☐	VY	☐	WPO	☐
ANO1	☐	ANO2	☐	ECH	☐	GGNS	☐	RBS	☒	WF3	☐	PLP	☐

EC No. 64548

Report Origin: ☐ Entergy ☒ Vendor
Vendor Document No.: ENTCORP038-REPT-001

Quality-Related: ☐ Yes ☒ No

Prepared by: S Boothe see AS8 Date: _____
Responsible Engineer (Print Name/Sign)

Design Verified: A UTtamchandani see AS8 Date: _____
Design Verifier (if required) (Print Name/Sign)

Reviewed by: G Mermigas see AS8 Date: _____
Reviewer (Print Name/Sign)

Approved by: JG Rogers Date: 9-15-16
Supervisor / Manager (Print Name/Sign)

ENERCON Excellence—Every project. Every day.	PROJECT REPORT COVER SHEET	PAGE 2 OF 12

Title:	2016 MITIGATING STRATEGIES ASSESSMENT FOR FLOODING DOCUMENTATION REQUIREMENTS AT RIVER BEND STATION	REPORT NO.: ENTCORP038-REPT-001 REVISION: 0 Client: Entergy Project Identifier: ENTCORP038

Item	Cover Sheet Items	Yes	No
1	Does this Project Report contain any open assumptions, including preliminary information that require confirmation? (If **YES**, identify the assumptions.)	☐	☒
2	Does this Project Report supersede an existing Project Report? (If **YES**, identify the superseded Project Report.) **Superseded Project Report No.** _____	☐	☒

Scope of Revision:
Initial Issue

Revision Impact on Results:
N/A

Safety-Related ☐		**Non-Safety-Related** ☒	
Originator:	**Brian Froese**		
Reviewer:	**Gary Smith**		
Approver:	**Jared Monroe**	**Date:**	**8/24/16**

2016 MITIGATING STRATEGIES ASSESSMENT FOR FLOODING DOCUMENTATION REQUIREMENTS AT RIVER BEND STATION	REPORT NO.: ENTCORP038-REPT-001
	REVISION: 0

PROJECT REPORT REVISION STATUS

REVISION	DATE	DESCRIPTION
0	8/24/16	Initial Issue

ATTACHMENT REVISION STATUS

ATTACHMENT NO.	NO. OF PAGES	REVISION	ATTACHMENT NO.	NO. OF PAGES	REVISION
N/A					

2016 Mitigating Strategies Assessment
Flooding Documentation Requirements
River Bend Station

Acronyms:

- CDB – Current Design Basis
- ELAP – Extended Loss of AC Power
- FHRR – Flood Hazard Reevaluation Report
- FLEX DB – FLEX Design Basis (flood hazard)
- FSG – FLEX Support Guideline
- LIP – Local Intense Precipitation
- MCR – Main Control Room
- MSFHI – Mitigating Strategies Flood Hazard Information (from the FHRR and MSFHI letter)
- MSL – Mean Sea Level
- PMF – Probable Maximum Flood
- PMP – Probable Maximum Precipitation
- RBS – River Bend Station
- SSC - Structures, Systems and Components

Definitions:

FLEX Design Basis: the flood hazard for which FLEX was designed.

FLEX Design Basis Flood Hazard: the controlling flood parameters used to develop the FLEX flood strategies.

1. Summary

The MSFHI provided in the RBS FHRR (Ref. 1) has concluded that the LIP and PMF on the Mississippi River and West Creek are not bounded by the CDB. For the Mississippi River and West Creek PMF, the overall strategy for the storage and deployment of FLEX equipment can still be implemented as designed. For the LIP, the strategy can be modified to address the impacts of the MSFHI.

In the event of a LIP, the flooding levels around the staging locations and deployment routes do not recede sufficiently during the period that equipment is being deployed from the FLEX storage buildings and therefore this Phase 2 action could be challenged. To address this, each piece of equipment in the storage building was evaluated for susceptibility to flooding damage (Ref. 7, Attachment 10.001). With the exception of the pick-up truck, mechanical trailer, and electrical trailer, all equipment was determined to be of sufficient height such that its deployment during Phase 2 would not be challenged by the reevaluated flood levels. For the pickup truck, the front-end loaders can be used as an alternative to tow equipment, as they have the same tow hitch as the pick-up truck. In addition to the potential challenge of deploying the Mechanical and Electrical trailers through floodwater, transporting equipment off the trailers by hand from the trailer to the appropriate locations is not preferable given the distance, weight of equipment, and height of the floodwaters. Therefore, these trailers will instead be pre-deployed once a pre-determined trigger is met and equipment on the trailers will be staged inside of protected structures. Deployment of this equipment to a location near its final installation point would also provide additional margin to equipment staging time.

Per NEI 15-05 (Ref. 4), the plant will have at least 24 hours of notice to accomplish the pre-deployment of these two trailers prior to a LIP event occurring at the site. This will require a revision to the Severe Weather Procedure and an update to the FLEX Strategy. Entergy will incorporate pre-staging the trailers into the FLEX strategy and plant procedures.

Other reevaluated flood hazard mechanisms (i.e.: tsunami, channel migrations/diversions, etc.), are bounded by the FLEX design basis and have no impact on the site. Details of the FLEX strategies along with the bounding flood will be discussed later in this document.

2. Documentation

2.1. NEI 12-06, Rev. 2, Section G.2 – Characterization of the MSFHI

The Interim Staff Response issued by the NRC (Ref. 2) identified three mechanisms that were not bounded by the CDB flood elevation. These are the West Creek PMF, Mississippi River PMF, and LIP. Other reevaluated flood hazard mechanisms (i.e.: tsunami, channel migrations/diversions, etc.), are bounded by the CDB and have no impact on the site.

West Creek PMF

The West Creek reevaluated PMF maximum flood height determined by the MSFHI of 95.1 ft. MSL is 0.8 ft. higher than the CDB flood height of 94.3 ft. MSL. This causes certain areas along the west side of the plant to become inundated (Ref. 1, Figure 3.2-3), but does not challenge the deployment pathways and/or doorways required to ensure FLEX strategies can be implemented successfully.

Mississippi River PMF

The Mississippi River reevaluated PMF maximum flood height of 59.7 ft. MSL is 5.2 ft. higher than the CDB flood height of 54.5 ft. MSL (Ref. 1, Table 4.1-1). Plant grade (95 ft MSL) and any safety-related equipment are well above any wind-wave water level from this event. Therefore, this event does not challenge the FLEX strategies.

LIP

Flood Height

The reevaluated LIP maximum flood height of 98.3 ft. MSL is 2.3 ft. higher than the CDB LIP flood height of 96 ft. MSL. This causes certain areas along the deployment routes to become significantly flooded (>3' maximum) and challenges the deployment of certain equipment for Phase 2 (Ref. 1, Appendix B). This also results in maximum flood levels that are above several of the doorways required for FLEX.

Flood Event Duration

FSG procedure RBS-FSG-005 (Ref. 5) provides instruction for staging Phase 2 FLEX equipment. This includes identification of doors that need to be opened during the staging of this equipment. These doors were cross-referenced against those evaluated in the FHRR (Ref. 1, Table 3.1-1). There are two doors identified in RBS-FSG-005 that the flood level rises above the elevation of the doorsills. These are doors AB-098-03 and CB-098-17. For the LIP event, the floodwater maintains a depth above these critical doorsills for a maximum of 2 hours, which is before Phase 2 equipment is deployed. Therefore, once doorways are opened during Phase 2, flooding through them is not a concern since the flood depth will have receded to below the critical doorsills. Door AB-098-03 is watertight (Ref. 9), so leakage beforehand is not a concern. Door CB-098-17 is not watertight. However, as shown in Figure 5.1-2 of the FHRR (Ref. 1), Door CB-098-14 is watertight

which prevents flooding into the Control Building. Given the flood height only exceeds the doorsill by <0.3' over ~40 minutes (Ref. 1, Page B-19) and the potentially flooded area is relatively small, this does not impact the FLEX strategies. If needed, sand bags are available and are integrated into FSG-005 (Ref. 5).

Deployment and staging of equipment, which starts at 3 hours (Ref. 8) into the event, was evaluated and is not impacted by the flood event duration so long as the Mechanical and Electrical Trailers are pre-staged (Ref. 7, Attachment 10.001) and equipment on the trailers is moved inside of protected structures near its final installation point.

Relevant Associated Effects

The northern storage building is located at an elevation of 132 ft. and the southern storage building is located at an elevation of 110 ft, which are above the LIP maximum flood height of 98.3 ft. MSL. Both are constructed on a concrete 12" slab and have a 6" curb inside the building walls. Additionally, grading and drainage direct storm water runoff in the proper direction, away from the buildings and towards the existing plant storm drainage system (Ref. 6). According to the maximum flood depths in Appendix B of the FHRR (Ref. 1), the flood does not exceed 1' around the area of the Storage Buildings. Therefore, given the concrete slab, curb height, grading, and drainage, the building elevations are sufficient to preclude damage/impact to the stored equipment.

As mentioned in the *Flood Height* and *Flood Event Duration* sections, the maximum flood depths (and associated flood velocities) during a LIP can potentially challenge the deployment and staging of Phase 2 equipment. A time-dependent study of the LIP FLO-2D flooding model in combination with an equipment-specific evaluation was conducted to ensure that all equipment can successfully be deployed and staged at the required times identified in the RBS Staffing Assessment (Ref. 8) or that an acceptable alternative is provided.

For Phase 3, the NSRC's ability to transport equipment to Staging Area B (site location where equipment will be pre-staged, parked, or placed prior to movement into the final location) is covered in the RBS SAFER Response Plan (Ref. 3), which includes multiple means and pathways of transporting NSRC equipment to the site. Therefore, transportation of NSRC equipment to the site is not discussed further in this document. Staging Area B is nearby the North Storage Building, but closer to the site. Since the equipment will use the same deployment pathways as Phase 2 equipment and since this action occurs later in the event (after 24 hours), deployment of Phase 3 equipment is bounded by Phase 2 for a LIP event and therefore no further analysis is necessary. Note that deployment of Phase 3 equipment is not impacted by any other flood mechanisms identified in the FHRR.

Warning Time

A warning time will be implemented consistent with NEI 15-05, Warning Time for Local Intense Precipitation Events (Ref. 4), for pre-deployment of the Mechanical and Electrical Trailers. This was endorsed by the NRC and provides basis for using a 24-hour warning from ½ of the consequential rainfall. Entergy will update the appropriate procedures and FSGs to implement pre-staging of the Mechanical and Electrical FLEX trailers consistent with this MSA.

2.2. NEI 12-06, Rev. 2, Section G.3 – Comparison of the MSFHI and FLEX DB Flood

Table 1 reflects data from the MSFHI for the LIP compared to the site's CDB and FLEX design basis flood.

Table 2 reflects data from the MSFHI for the PMF on West Creek due to a PMP event. A table is not included for the PMF from the Mississippi River because, as stated in Section 2.1, plant grade, safety-related equipment, and all elevations required for the FLEX strategy are well above

any wind-wave water level such that this does not need to be evaluated.

Any parameters where the FLEX DB flood does not bound the MSFHI are evaluated in Section 2.3.

Table 1 - Flood Causing Mechanism (LIP) or Bounding Set of Parameters

Flood Scenario Parameter		Plant Current Design Basis Flood Hazard	FLEX Design Basis Flood Hazard	MSFHI LIP	Bounded (B) or Not Bounded (NB) by FLEX DB
Flood Level and Associated Effects	1. Max Stillwater Elevation (ft. MSL)	96.0	See Note 1	98.3	B
	2. Max Wave Run-up Elevation (ft. MSL)	See Note 2	Same as CDB	Wind/wave interaction was not evaluated coincident with the LIP event. See Note 3	B
	3. Max Hydrodynamic/Debris Loading (psf)	Not identified in the CDB.	See Note 4	See Note 4	B
	4. Effects of Sediment Deposition/Erosion	Not identified in the CDB.	See Note 4	All culverts were assumed blocked for the LIP event.	B
	5. Concurrent Site Conditions	See Note 5	Same as CDB	See Note 6.	B
	6. Effects on Groundwater	See Note 7	Same as CDB	Groundwater level increase due to LIP was not evaluated. Unit 2 Excavation water level is 79.8 ft MSL.	B
Flood Event Duration	7. Warning Time (hours)	Not identified in the CDB.	See Note 8	Not identified.	B
	8. Period of Site Preparation (hours)	No preparation is indicated in the CDB.	None credited.	No special preparation identified.	B
	9. Period of Inundation (hours)	Not identified in the CDB.	See Note 9	FHRR Appendix B Time Series Plots	NB
	10. Period of Recession (hours)	Not identified in the CDB.	See Note 9	FHRR Appendix B Time Series Plots. Also, note that due to the assumption of non-functioning storm drains, some areas do not recede.	NB
Other	11. Plant Mode of Operations	Not identified in the CDB.	All Modes	Normal Operations	B
	12. Other Factors	N/A	N/A	N/A	N/A

Additional notes, 'N/A' justifications (why a particular parameter is judged not to affect the site), and explanations regarding the bounded/non-bounded determination.

1. The RBS FIP (Ref. 2) addresses the maximum flood height elevation of 98.3 ft. MSL from the RBS FHRR (Ref. 1, Table 4.1-1).
2. Wave run-up coincident with LIP at RBS was assessed for the design of the Unit 2 Excavation Berm, but is not part of the CDB with respect to impacts to SSCs.
3. Precipitation does not cause any meaningful wave run-up, such as with dam failure, so this is bounded. This was not evaluated in the FHRR (Ref. 1, Table 4.1-2).
4. The MSFHI did not identify any hydrodynamic loading, debris loading, sediment deposition or erosion. These were not considered credible effects due to the relatively low flow velocities for an LIP event and limited debris sources within the protected area.
5. Antecedent storm results in 2 ft of standing water in Unit 2 Excavation prior to PMP event.
6. No antecedent storm was considered with the LIP event. The Unit 2 Excavation was assumed to be dry at the onset of the LIP event. Since no antecedent storm was considered, this is bounded by the plant's CDB.
7. Plant structures can withstand groundwater levels at 70 ft MSL, 13 ft above normal levels. CDB has Unit 2 Excavation water level of 80.3 ft MSL.
8. No warning time for a flood event was credited in the original FLEX strategy. However, due to the MSFHI, a warning time is credited for pre-deployment of the Mechanical and Electrical Trailers as part of this MSA, utilizing the guidance of NEI 15-05 (Ref. 4). This will be incorporated into the Severe Weather Procedure and FLEX Strategy. No other warning time is credited.
9. Certain areas credited in the FLEX strategy remain inundated beyond 3 hours and therefore this is considered not bounded.

Table 2 - Flood Causing Mechanism B (West Creek PMF) or Bounding Set of Parameters

Flood Scenario Parameter		Plant Current Design Basis Flood Hazard	FLEX Design Basis Flood Hazard	MSFHI PMF	Bounded (B) or Not Bounded (NB) by FLEX DB
Flood Level and Associated Effects	1. Max Stillwater Elevation (ft. MSL)	94.3	See Note 1	95.1	B
	2. Max Wave Run-up Elevation (ft. MSL)	Not evaluated due to insufficient fetch.	Same as CDB	Screened out due to insufficient fetch.	B
	3. Max Hydrodynamic/Debris Loading (psf)	Not identified in the CDB.	See Note 2	Not evaluated due to no inundation around plant structures.	B
	4. Effects of Sediment Deposition/Erosion	In the vicinity of the site, all culverts were assumed blocked.	See Note 3	See Note 3	B
	5. Concurrent Site Conditions	Not identified in the CDB.	See Note 4	See Note 4	B
	6. Effects on Groundwater	Not identified in the CDB.	Not evaluated	Effect on groundwater is not evaluated. Unit 2 Excavation water level is 78.3 ft MSL.	B
Flood Event Duration	7. Warning Time (hours)	1.2 hour lag time.	None credited.	1.2 hour lag time.	B
	8. Period of Site Preparation (hours)	Not identified in the CDB.	None credited.	No special site preparation is identified as necessary for this event.	B
	9. Period of Inundation (hours)	Not identified in the CDB.	See Note 5	See Note 6	B
	10. Period of Recession (hours)	Not identified in the CDB.	See Note 5	No recession time evaluated for this event.	B
Other	11. Plant Mode of Operations	Not identified in the CDB.	All Modes	Normal Operations	B
	12. Other Factors	N/A	N/A	N/A	N/A
	Additional notes, 'N/A' justifications (why a particular parameter is judged not to affect the site), and explanations regarding the bounded/non-bounded determination. 1. The RBS FIP (Ref. 2) addresses the maximum flood height elevation of 98.3 ft. MSL from the RBS FHRR (Ref. 1, Table 4.1-2). 2. Not evaluated since inundated area does not affect the FLEX Strategy. 3. In the vicinity of the site, all culverts were assumed blocked. No erosion of the channel was anticipated due to concrete lining. 4. The PMP event driving the PMF is preceded by a 40% PMP antecedent storm on the West Creek watershed. 5. Portions of the west part of the plant become inundated. However, access to the site from both storage buildings is maintained on the east side. See Section 2.3.1.1 for more detail. 6. Inundation occurs in the Unit 2 Excavation. No dewatering is assumed to be operational for the event, so duration of the inundation is not evaluated.				

2.3. NEI 12-06, Rev. 2, Section G.4 – Evaluation of Mitigating Strategies for the MSFHI

2.3.1. NEI 12-06, Rev. 2, Section G.4.1 – Assessment of Current FLEX Strategies

2.3.1.1. West Creek PMF

All flood scenario parameters for the West Creek PMF are bounded by the FLEX DB. According to the RBS FHRR Figure 3.2-3 (Ref. 1), there are sections along the west side of the plant that become inundated. This includes a portion of the alternate route from the north storage building and primary route for the south storage building. However, the primary route for the north storage building and alternate route for the south storage building remain accessible, and therefore the FLEX strategies are not impacted by this event.

2.3.1.2. LIP

Two flooding scenario parameters for the LIP are not bounded by the FLEX strategy: Period of Inundation (hours), and Period of Recession (hours). To address this, equipment stored in the FLEX Storage Buildings that will be used for the FLEX strategies were evaluated for susceptibility to flooding damage during a LIP event (Ref. 7, Attachment 10.001). A flood height acceptability criterion for each piece of FLEX equipment was determined via walkdown (Ref. 7, Attachment 10.002) and compared against the maximum flood heights along the deployment routes and at the staging areas, which are presented in Appendix B of the FHRR (Ref. 1). Equipment that was not bounded at the staging area or along the deployment route were evaluated on an individual basis.

For equipment not capable of being deployed through the maximum flood depths along the deployment routes and/or at the staging areas, credit for receding floodwaters was taken. For areas of concern, the flood depth versus time data was pulled from the FLO-2D Flooding Model used to develop the FHRR. Note that this model uses the very conservative assumption that all culverts are completely blocked, which is not expected to occur for a LIP event. This increases the maximum flood heights and elongates the flood duration.

The flood depths at the deployment times of specific equipment were evaluated against the equipment acceptability criterion. From this comparison, it was determined that all equipment is bounded and capable of operating as intended to implement the FLEX strategies, with the exception of the pick-up truck, Mechanical trailer, and Electrical trailer. For the pickup truck, the front-end loaders can be used to tow equipment instead, as they have the same tow hitch as the pick-up truck (Ref. 7, Attachment 10.002). This would not conflict with debris removal, as it occurs prior to the deployment of equipment, between 1.0-3.0 hours (Ref. 8), and limited debris generation is expected for a LIP. The Mechanical and Electrical Trailers contain equipment that is sensitive to water damage, such as an electric fuel oil transfer pump, MCR fans, flow meters, infrared thermometers, electric cables, a distribution box, and portable lighting. Although it may be possible to demonstrate this water-sensitive equipment will not be impacted during the deployment of the trailer, it is not desirable to transport it by hand from the trailer staging areas to the appropriate locations through floodwaters as that would risk compromising the equipment.

Therefore, these trailers will be pre-deployed and the equipment on the trailers will be pre-staged inside of protected structures. Per NEI 15-05 (Ref. 4), a warning time of at least 24 hours can be credited for a LIP event utilizing a trigger of ½ the consequential rainfall. The pre-deployment LIP criteria and warning time will

continue to be developed, consistent with the MSA.

The FIP (Ref. 2), specifically Section 2.6.2, will be updated to reflect the equipment deployment and staging challenges during Phase 2 and prestaging of the Mechanical and Electrical trailers. The Sequence of Events captured in Table 3 was reviewed and is not impacted by these changes to the FLEX strategy. Therefore, an update to this table is not expected.

2.3.2. NEI 12-06, Rev. 2, Section G.4.2 – Conclusions

The overall plant response strategies to an ELAP and loss of ultimate heat sink event using the current FLEX procedures, equipment and personnel can be implemented as described in the Final Integrated Plan (Ref. 2) provided the following changes are implemented:

a) Pre-deploy the Mechanical and Electrical Trailers and pre-stage their contents inside a flood-protected structure in the event of an impending LIP.

Entergy will update the appropriate procedures and FSGs to implement pre-staging of these trailers, consistent with this MSA.

2.4. References

1. RBG-47447, Response to Request for Information Regarding Recommendation 2.1 of the Near-Term Task Force review of Insights from the Fukushima Dai-ichi Accident River Bend Station – Unit 1 (51-9207360-000, Entergy Fleet Fukushima Program Flood Hazard Reevaluation Report for River Bend Station) (ML14073A848)
2. Final Integrated Plan Document River Bend Station, September 2015
3. NSRC-005, Rev. 2, SAFER Response Plan for River Bend
4. NEI 15-05, Rev. 6, Warning Time for Local Intense Precipitation Events, April 2015
5. RBS-FSG-005, Rev. 0, Initial Assessment and FLEX Equipment Staging, 07/29/2015
6. EC 44962, Rev. 0, FLEX Equipment Storage Buildings
7. EC 64548, Rev. 0, Admin EC to Issue FLEX Flood Mitigating Strategies Assessment (MSA) Report
8. CIN2015-00042, River Bend NEI 12-01 Phase 2 Staffing Assessment (Rev. 1), April 30, 2015
9. EC 49418 Rev. 0, Evaluate Doors AB098-03 and AB098-04 as Watertight During a Local Intense Precipitation (LIP) to Support Fukushima Flood Reevaluation

Attachment 2

RBG-47718

Commitment Identification Form

Commitment Identification Form

This table identifies actions discussed in this letter for which Entergy commits to perform. Any other actions discussed in this submittal are described for the NRC's information and are **not** commitments.

COMMITMENT	TYPE (Check one)		SCHEDULED COMPLETION DATE (If Required)
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
The Final Implementation Plan, specifically Section 2.6.2, will be updated to reflect the equipment deployment and staging challenges during Phase 2 and pre-staging of the mechanical and electrical trailers.		x	September 1, 2017
Entergy will update the appropriate procedures and FLEX Support Guidelines to implement pre-staging of the mechanical and electrical trailers, consistent with this Mitigating Strategies Assessment.		x	September 1, 2017