



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 11, 2016

Mr. Ken J. Peters
Senior Vice President and Chief
Nuclear Officer (Acting)
Attention: Regulatory Affairs
Luminant Generation Company, LLC
P.O. Box 1002
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT, UNITS 1 AND 2 – INTERIM
STAFF RESPONSE TO REEVALUATED FLOOD HAZARDS SUBMITTED IN
RESPONSE TO 10 CFR 50.54(f) INFORMATION REQUEST – FLOOD-
CAUSING MECHANISM REEVALUATION (CAC NOS. MF1099 AND MF1100)

Dear Mr. Peters

The purpose of this letter is to provide a summary of the U.S. Nuclear Regulatory Commission (NRC) staff's assessment of the reevaluated flood-causing mechanisms described in the March 12, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15278A306), flood hazard reevaluation report (FHRR) submitted by Luminant Generation Company, LLC (Luminant, the licensee) for Comanche Peak Nuclear Power Plant, Units 1 and 2 (Comanche Peak), as well as supplemental information resulting from requests for additional information and audits.

By letter dated March 12, 2012, the NRC issued a request for information pursuant to Title 10 of the *Code of Federal Regulations*, Section 50.54(f) (hereafter referred to as the 50.54(f) letter) (ADAMS Accession No. ML12053A340). The request was issued as part of implementing lessons-learned from the accident at the Fukushima Dai-ichi nuclear power plant. Enclosure 2 to the 50.54(f) letter requested licensees to re-evaluate flood-causing mechanisms using present-day methodologies and guidance. Concurrently with the reevaluation of flooding hazards, licensees were required to develop and implement mitigating strategies in accordance with NRC Order EA-12-049, "Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML12054A735). On March 30, 2015, the Commission provided Staff Requirements Memoranda (SRM) (ADAMS Accession No. ML15089A236) to COMSECY-14-0037, "Integration of Mitigating Strategies for Beyond-Design-Basis External Events and the Reevaluation of Flooding Hazards," dated November 21, 2014 (ADAMS Accession No. ML14309A256), affirming that licensees need to address the reevaluated flooding hazards within their mitigating strategies for beyond-design-basis external events.

The NRC staff has reviewed the information submitted by the licensee and has summarized the results of the review in the tables provided as an Enclosure to this letter. Table 1 provides the current design-basis flood hazard mechanisms. Table 2 provides the reevaluated flood hazard mechanisms; however, the reevaluated flood hazard mechanisms bounded by the current design-basis (Table 1) are not included.

The NRC staff has concluded that the licensee's 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 (i.e., defines the mitigating strategies flood hazard information described in Nuclear Energy Institute (NEI) guidance document NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guide") for Comanche Peak. Further, the NRC staff has concluded that the licensee's reevaluated flood hazard information is a suitable input for other assessments associated with Near-Term Task Force Recommendation 2.1 "Flooding". The NRC staff plans to issue a staff assessment documenting the basis for these conclusions at a later time.

Revision 2 of NEI 12-06 includes a methodology to perform a Mitigating Strategies Assessment (MSA) with respect to the reevaluated flood hazards. On January 22, 2016, the NRC staff approved and made publicly available Japan Lessons-Learned Division (JLD) Interim Staff Guidance (ISG) JLD-ISG-2012-01, Revision 1, "Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," (ADAMS Accession No. ML15357A142), with publication in the *Federal Register* to follow. This ISG endorses Revision 2 of NEI 12-06 (ADAMS Accession No. ML16005A625), dated December 2015. Based on the guidance provided in Revision 2 of the NEI 12-06 guidance document, flood event duration parameters and applicable flood associated effects should be considered as part of the Comanche Peak MSA. The NRC staff will evaluate the flood event duration parameters (including warning time and period of inundation) and flood-related associated effects developed by the licensee during the NRC staff's review of the MSA.

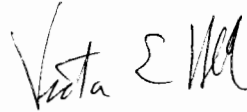
As stated above, Table 2 of the enclosure to this letter describes the reevaluated flood hazards that exceed the current design-basis. In order to complete its response to the information requested by Enclosure 2 to the 50.54(f) letter, the licensee is expected to submit an integrated assessment or a focused evaluation, as appropriate, to address these reevaluated flood hazards, as described in the NRC letter, "Coordination of Request for Information Regarding Flooding Hazard Reevaluation and Mitigating Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML15174A257). This letter describes the changes in the NRC's approach to the flood hazard reevaluations that were approved by the Commission in its SRM to COMSECY-15-0019, "Closure Plan for the Reevaluation of Flooding Hazards for Operating Nuclear Power Plants" (ADAMS Accession No. ML15209A682).

K. Peters

- 3 -

If you have any questions, please contact me at (301) 415-2915 or e-mail at Victor.Hall@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Victor E Hall". The signature is written in a cursive style with a large initial "V".

Victor Hall, Senior Project Manager
Hazards Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosure:
Summary of Results of Flooding
Hazard Re-Evaluation Report

cc w/encl: Distribution via Listserv

ENCLOSURE:

SUMMARY TABLES OF
REEVALUATED FLOOD HAZARD LEVELS

Table 1. Current Design Basis Flood Hazards for Use in the MSA

Mechanism	Stillwater Elevation	Waves/ Runup	Design Basis Hazard Elevation	Reference
Local Intense Precipitation	Not included in DB	Not included in DB	Not included in DB	FHRR Supplement 1 Table 3-3
Streams and Rivers				
Upstream of Squaw Creek Reservoir Dam	789.7 ft NGVD29	5.0 ft	794.7 ft NGVD29	FHRR Supplement 1 Table 3-3
Within Squaw Creek Reservoir at the Safe Shutdown Impoundment Dam	789.7 ft NGVD29	1.6 ft	791.3 ft NGVD29	FHRR Supplement 1 Table 3-3
Within Safe Shutdown Impoundment	790.5 ft NGVD29	Not applicable	790.5 ft NGVD29	FHRR Supplement 1 Table 3-3
Failure of Dams and Onsite Water Control/Storage Structures	Not included in DB	Not included in DB	Not included in DB	FHRR Supplement 1 Table 3-3
Storm Surge	Not included in DB	Not included in DB	Not included in DB	FHRR Supplement 1 Table 3-3
Seiche	Not included in DB	Not included in DB	Not included in DB	FHRR Supplement 1 Table 3-3
Tsunami	Not included in DB	Not included in DB	Not included in DB	FHRR Supplement 1 Table 3-3
Ice-Induced Flooding	Not included in DB	Not included in DB	Not included in DB	FHRR Supplement 1 Table 3-3

Table 1. Current Design Basis Flood Hazards for Use in the MSA

Mechanism	Stillwater Elevation	Waves/ Runup	Design Basis Hazard Elevation	Reference
Channel Migrations/Diversions	Not included in DB	Not included in DB	Not included in DB	FHRR Supplement 1 Table 3-3

Note 1: Reported values are rounded to the nearest one-tenth of a foot.

Table 2. Reevaluated Flood Hazards for Flood-Causing Mechanisms for Use in the MSA

Mechanism	Stillwater Elevation	Waves/ Runup	Reevaluated Hazard Elevation	Reference
Local Intense Precipitation	810.6 ft NGVD29	Minimal	810.6 ft NGVD29	Letter to the NRC dated September 25, 2015, "Comanche Peak Nuclear Power Plant (CCNPP) Docket Nos. 50-445 and 50-446 Submittal of Request for Additional Information Regarding Fukushima Lessons Learned - Flooding Hazard Reanalysis Report", ADAMS Accession No. ML15278A306 and Letter to the NRC dated February 3, 2016, "Comanche Peak Nuclear Power Plant, Docket Nos. 50-445 and 50-446, Submittal of Request for Additional Information Regarding Fukushima Lessons Learned – Flooding Hazard Reanalysis Report", ADAMS Accession No. ML16041A029.
Streams and Rivers				
PMF Scenario + Wave runup on Cooling Water Intake Structure Side	792.6 ft NGVD29	2.3 ft	794.9 ft NGVD29	FHRR Supplement 1 Table 3-3
PMF Scenario + Wave runup on Safe Shutdown Impoundment Dam From Squaw Creek Reservoir Side	792.7 ft NGVD29	1.9 ft	794.6 ft NGVD29	FHRR Supplement 1 Table 3-3
PMF Scenario + Wave Runup on Safe Shutdown Impoundment Dam from Safe Shutdown Impoundment Side	792.7 ft NGVD29	1.5 ft	794.2 ft NGVD29	FHRR Supplement 1 Table 3-3
PMF Scenario + Wave Runup on Service Water Intake Structure Embankment	792.7 ft NGVD29	0.6 ft	793.3 ft NGVD29	FHRR Supplement 1 Table 3-3
PMF Scenario + Wave Runup on Service Water Intake Structure Vertical Face	792.7 ft NGVD29	3.1 ft	795.8 ft NGVD29	FHRR Supplement 1 Table 3-3

Note 1: The licensee is expected to develop flood event duration parameters and applicable flood associated effects to conduct the MSA. The staff will evaluate the flood event duration parameters (including warning time and period of inundation) and flood associated effects during its review of the MSA.

Note 2: Reevaluated hazard mechanisms bounded by the current design basis (see Table 1) are not included in this table.

Note 3: Reported values are rounded to the nearest one-tenth of a foot.

K. Peters

- 3 -

If you have any questions, please contact me at (301) 415-2915 or e-mail at Victor.Hall@nrc.gov.

Sincerely,

/RA/

Victor Hall, Senior Project Manager
Hazards Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosure:
Summary of Results of Flooding
Hazard Re-Evaluation Report

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC	JLD R/F	RidsNRRJLD Resource
VHall, NRR	LQuinn-Willingham, NRO	RidsNroDsea Resource
RidsNrrDorlLpl4-1 Resource	RidsNrrDorl Resource	RidsNrrPMComanchePeak Resource
RidsRgn4MailCenter Resource	RidsNrrLASLent	RidsOgcMailCenter Resource
RidsOpaMail Resource	RidsAcrcAcnw_MailCtr Resource	CCook, NRO
ARivera-Varona, NRO	KErwin, NRO	ACampbell, NRO
MWillingham, NRO	NTiruneh, NRO	BHarvey, NRO
MShams, NRR	LWillingham, NRO	

ADAMS Accession Nos.: PKG ML16041A200; LTR: ML16041A228 ENCL: ML16040A385 *via email

OFFICE	NRR/JLD/JHMB/PM	NRR/JLD/LA	NRO/DSEA/RHM2/TR*	NRO/DSEA/RHM2/BC*
NAME	VHall	SLent	NTiruneh*	ARivera-Varona* cCook for
DATE	02/09/16	02/10/16	02/10/16	02/10/16
OFFICE	NRR/JLD/JHMB/BC	NRR/JLD/JHMB/PM		
NAME	MShams	VHall		
DATE	02/11/16	02/11/16		

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