

November 24, 2015

MEMORANDUM TO: Mohamed K. Shams, Chief
Hazards Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

FROM: Michael L. Marshall, Jr., Senior Project Manager */RA/*
Hazards Management Branch
Japan Lessons-Learned Division
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF CONFERENCE CALL CONFIRMING STAFF
UNDERSTANDING OF BASIS FOR CLOSING OPEN ITEM
IN THE GRAND GULF NUCLEAR STATION, UNIT 1
REEVALUATED FLOOD HAZARD STAFF ASSESSMENT OF
RESPONSE TO 10 CFR 50.54(f) INFORMATION REQUEST –
FLOOD-CAUSING MECHANISM REEVALUATION (CAC NO.
MF1102)

On November 18, 2015, U.S. Nuclear Regulatory Commission (NRC) staff from the Japan Lessons-Learned Division in the Office of Nuclear Reactor Regulation and from the Division of Site Safety and Environmental Analysis in the Office of New Reactors spoke with representatives from Entergy Operations, Inc. (the licensee) to confirm the staff's understanding of activities by the licensee that would resolve an open item in staff assessment of the licensee's reevaluation of the flooding hazard at Grand Gulf Nuclear Station, Unit 1 (Grand Gulf). Specifically, the open item concerned proposed blockage assumptions concerning 4-foot culverts and vehicle barrier openings. The participants in the conference call are listed in Enclosure 1 to this memorandum.

BACKGROUND

By letter dated March 12, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12053A340), 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). 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 reevaluate flood-causing mechanisms using present-day methodologies and guidance. By letter dated March 11, 2013 (ADAMS Accession No. ML13071A457), the licensee responded to this request for Grand Gulf Nuclear Station, Unit 1. In response to NRC staff questions, this response was supplemented by letter dated January 9, 2014 (ADAMS Accession No. ML14014A277). By letter dated November 25, 2014, the NRC staff sent the licensee a staff assessment of the information provided. However the staff assessment included three open items, including the following open item:

Justify the proposed blocking assumptions on the onsite drainage system (e.g., supported by proposed maintenance and flood protection measures implemented

through emergency procedures or administrative controls) consistent with the Integrated Assessment interim staff guidance (NRC, 2012c). In particular, the licensee is requested to justify the assumed 50 percent blockage of the 4-foot culverts and 30 percent blockage for vehicle barrier openings.

Subsequent to issuance of the staff assessment, the NRC staff realized that the licensee likely had in place practices, which would be documented in procedures that would support the licensee's blockage assumption. In order to confirm the basis for closing the open item, the NRC staff requested a telephone conference with the licensee to verify the staff's understanding of the practices in place that would support the licensee's blocking assumptions.

DISCUSSION

During the conference call the licensee confirmed the staff's understanding that inspections are included in procedures for verifying that culvert and vehicle barrier openings are clear of debris. The visual inspections of the culverts are described in the licensee's surveillance procedure 06-TE-1000-V-0001, Revision 101, "CURVERT NO. 1 EMBANKMENT STABILITY/SURVEY" (see Attachment 2). The visual inspections of the vehicle barrier openings are described in the licensee's off-normal event procedure 05-1-02-VI-2, Revision 128, "HURRICANES, TORNADOES, AND SEVERE WEATHER" (see Enclosure 2). Both of these procedures describe how the licensee will implement periodic surveillances, as well as surveillances before and after intense precipitation events.

In addition to confirming the NRC staff's prior understanding, the licensee described the immediate area around the culverts and vehicle barrier openings. In particular, the licensee clarified that security screens discussed in staff's issued staff assessment only pertain to the 15-ft diameter culverts, not the 4-ft diameter culverts. The licensee discussed how there is no historical evidence of blockage during past intense weather events, and that trees around several of the drainage canals had been cut-down and removed to further lessen the chance for leaf debris or fallen trees to block or clog the canals. The licensee, also, discussed how weather forecasts and alerts are transmitted to operators at the site. In addition to privately-operated weather services, the licensee discussed how they receive and monitor weather alerts issued by National Oceanic and Atmospheric Administration's National Weather Service.

Based on the confirmation of the NRC staff's prior understanding, the NRC staff informed the licensee that it had sufficient information to now close the open item. The NRC staff informed the licensee that the NRC staff would document the closure of the open item in a supplement to the staff assessment.

Docket No. 50-416

Enclosures:

1. List of Conference Call Participants
2. Bentley, Donald E., Entergy Operations, Inc.,
email to Hall, Victor, U.S. Nuclear Regulatory
Commission, November 18, 2015.

CONFERENCE CALL PARTICIPANTS

November 18, 2015

<u>Name</u>	<u>Organization</u>
Hosung Ahn	U. S Nuclear Regulatory Commission (NRC)
Don Bentley	Entergy Operations, Inc. (Entergy)
Dan Brown	Areva
Andy Campbell	NRC
Chris Cook	NRC
Victor Hall	NRC
Fred Hopkins	Entergy
Tori Liggans-Robinson	Entergy
Michael Marshall	NRC
Aida Rivera-Varona	NRC

Marshall, Michael

From: Bentley, Donald E <DBENTLE@entergy.com>
Sent: Wednesday, November 18, 2015 4:35 PM
To: Hall, Victor
Cc: Marshall, Michael
Subject: [External_Sender] RE: Procedure numbers

Vic, Mike,

OFF-NORMAL EVENT PROCEDURE 05-1-02-VI-2 Revision 128 HURRICANES, TORNADOES, AND SEVERE WEATHER
SURVEILLANCE PROCEDURE 06-TE-1000-V-0001 Revision 101 CURVERT NO. 1 EMBANKMENT STABILITY/SURVEY

Don

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From: Hall, Victor [mailto:Victor.Hall@nrc.gov]
Sent: Wednesday, November 18, 2015 2:42 PM
To: Bentley, Donald E
Cc: Marshall, Michael
Subject: Procedure numbers

Hi Don,
Please include Michael Marshall on the e-mail with procedure numbers/titles for Grand Gulf. He's going to be writing up the supplemental SA, and I'm out for the next couple of days.
Thanks!
-Vic

Victor Hall
Senior Project Manager
Japan Lessons Learned Division
Office of Nuclear Reactor Regulation
301-415-2915

Based on the confirmation of the NRC staff's prior understanding, the NRC staff informed the licensee that it had sufficient information to now close the open item. The NRC staff informed the licensee that the NRC staff would document the closure of the open item in a supplement to the staff assessment.

Docket No. 50-416

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1. List of Conference Call Participants
2. Bentley, Donald E., Entergy Operations, Inc., email to Hall, Victor, U.S. Nuclear Regulatory Commission, November 18, 2015.

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ADAMS Accession No.: ML15324A086

***via email**

OFFICE	NRR/JLD/JHMB/PM	NRR/JLD/JHMB/PM	NRR/JLD/LA
NAME	MMarshall	VHall	SLent
DATE	11/23/2015	11/23/2015	11/23/2015
OFFICE	NRO/DSEA/RHM/BC	NRR/JLD/JHMB/BC	NRR/JLD/JHMB/PM
NAME	CCook*	MShams	MMarshall
DATE	11/23/2015	11/24/2015	11/24/2015

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