

---

**From:** Sreenivas, V  
**Sent:** Wednesday, July 09, 2014 4:13 PM  
**To:** Ahn, Hosung  
**Cc:** Miller, Ed  
**Subject:** FW: NA 2.1 FHRR Review: Clarification Question for RAI 3.2-1 Response

FYI

---

**From:** Tom Shaub (Generation - 6) [<mailto:tom.schaub@dom.com>]  
**Sent:** Wednesday, July 09, 2014 11:30 AM  
**To:** Sreenivas, V  
**Subject:** RE: NA 2.1 FHRR Review: Clarification Question for RAI 3.2-1 Response

V,

The answer is No. There are no roof drainage holes on the south side of the Turbine Building Roof. There is a solid parapet wall approximately 1-1/2 to 2 feet above the roof surface along the south edge of the turbine building roof.

Tom

---

**From:** Sreenivas, V [<mailto:V.Sreenivas@nrc.gov>]  
**Sent:** Wednesday, July 09, 2014 9:51 AM  
**To:** Tom Shaub (Generation - 6)  
**Subject:** FW: NA 2.1 FHRR Review: Clarification Question for RAI 3.2-1 Response

Need some clarification. Pl. let me know.

---

**From:** Ahn, Hosung  
**Sent:** Wednesday, July 09, 2014 9:37 AM  
**To:** Sreenivas, V  
**Subject:** NA 2.1 FHRR Review: Clarification Question for RAI 3.2-1 Response

Hi V,

While we, NRC and PNNL staffs, were reviewing the North Anna Flood Hazard Reevaluation Report related to the local intense precipitation flood analyses (specifically FHRR Section 2.1.2), we came up the following clarification question which cannot be answered from FHRR, calculation packages, RAI responses, and FSAR. As the question is very simple and non-technical matter, you can just call the licensee to clarify the question.

Please let me know if you need more clarification.

Hosung Ahn  
NRO/DSEA/RHMB  
301-415-13998

=====

Background

In response to RAI No. 3.2-1 (ML13357A100), the licensee mentioned that “[t]he roof drainage features are assumed to be clogged or non-functional during the probable maximum precipitation (PMP) event.” FHRR (page 2.1-4, 3<sup>rd</sup> full paragraph) states that the Turbine Building roof drainage discharges west to an excavated area around the Station Blockout Building (SBO) when roof drainages are assumed to be inoperable. These statements indicated that there are Turbine Building roof drainage features that are functional for less severe rainfalls than PMP

While we were reviewing the licensee’s local intense precipitation (LIP) flood modeling, we found that the blockage of the Turbine Building roof drainage could induce a higher LIP flooding levels compared to those of the complete blockage scenario used in the FHRR. For instance, a portion of the Turbine Building runoff could be added to the SE and SW flow paths (see attached figure) that could produce a bounding LIP flood scenario. This alternative scenario is valid if and only if there are roof drain holes on the south edge of the Turbine Building roof.

Question

Please clarify whether there are roof drainage holes on the south edge of the Turbine Building or not.

Review Path Forward

If the licensee says “no” to the question above, we will wrap up the review of the LIP flooding and conclude that the licensee’s LIP flood analysis is acceptable.

If yes, we need to issue a supplemental RAI to request more information on the Turbine Building roof drainage features (e.g., slope on the roof bottom, as well as the location and size of drain holes) and how the drain features impacts on the LIP flooding.

=====

---

**CONFIDENTIALITY NOTICE:** This electronic message contains information which may be legally confidential and or privileged and does not in any case represent a firm ENERGY COMMODITY bid or offer relating thereto which binds the sender without an additional express written confirmation to that effect. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this electronic transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.