NRR-DRMAPEm Resource

From: Uribe, Juan
Sent: Monday, May 13, 2019 4:42 PM
To: Stewart, Winston O; Grzeck, Lee
Subject: Robinson Integrated Assessment Information Needs- Set 1
Attachments: Robinson IA Information Needs- Set 1.docx

Winston/Lee,

As described a couple of weeks ago, the NRC staff has developed a list of information needs that would allow the staff to continue to move forward with the Robinson IA review. The attached document has three information needs issued under Set #1. The first two are related to model input/output files and model execution. I am under the impression we will need a webinar with shared screens to resolve this one. The third is pretty straightforward and relates to a reference used by Duke and a request to place it in the ERR.

Once you have had a chance to go over the document, I am available for additional clarifications/discussions if needed. Otherwise, in a few days we can touch base again and start checking calendars in order to schedule a date for a webinar.

Thanks, and have a great day.
Juan

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From: Uribe, Juan

Created By: Juan.Uribe@nrc.gov

Recipients:
"Stewart, Winston O" <Winston.Stewart@duke-energy.com>
Tracking Status: None
"Grzeck, Lee" <Lee.Grzeck@duke-energy.com>
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H.B Robinson Steam Electric Plant, Unit 2
Integrated Assessment Flooding Review
EPID L-2018-JLD-0172

Information Needs

Background:
By letter dated July 18, 2017 (ADAMS Accession No. ML17192A452), the NRC staff issued a generic audit plan to perform regulatory audits of licensees' responses concerning flooding hazard reevaluations (including focused evaluations (FEs) and integrated assessments (IAs)) on an as-needed basis, to support the NRC staff's review and issuance of the associated NRC staff assessments. The audit is being conducted following the guidance of NRC Office of Nuclear Reactor Regulation, Office Instruction LIC-111, "Regulatory Audits," dated December 29, 2008 ADAMS Accession No. ML082900195),

The NRC staff has performed a review of the Robinson IA submittal received by letter dated December 19, 2018 (ADAMS Accession No. ML18360A154) and identified several areas where additional information is needed in order to complete its review. The additional information needs are described below.

Information Need # 1-1
To support the conclusions described in the Robinson IA, electronic files used in the analyses and described in calculations ROB-17-001 Rev0 (REFERENCE), ROB 14-003 Rev1 (REFERENCE), and ROB-18-002 Rev0 (REFERENCE) have been provided for the NRC staff's review. The electronic files are used as input to the USACE HEC-HMS and HEC-RAS software.

According to the calculation documentation, either HEC-RAS version 4.1.0 or version 5.0.3 were used by the licensee. The NRC staff has been unable to open the HEC-RAS files and run the model using the same version of HEC-RAS as the licensee (either HEC-RAS version 4.1 or version 5.0.3).

1. For electronic files associated with ROB 14-003 Rev1 (using HEC-RAS v 4.1), a message from the software indicates that a reference to DSS files other than the project file cannot be found, and it asks to change the reference to the local file(s). If Yes is selected and a model run is attempted, a list of errors is produced regarding boundary data spanning the computation window. If No is selected and a model run is attempted, a list of errors is produced saying the HMS.DSS file cannot be found. The correct unsteady flow data and HMS.DSS file are necessary for the staff's confirmatory review of the IA information.

2. For electronic files associated with ROB-17-001 Rev0 (using HEC-RAS v 5.0.3), there is no HMS.DSS file in any of the model directories (either for HEC-HMS or HEC-RAS). While opening the model produces no errors, if a model run is attempted, a list of errors is produced saying the HMS.DSS file cannot be found. A HMS.DSS file is necessary for the staff's confirmatory review of the IA information.

3. No problem was found for the electronic files associated with ROB-18-002 Rev0 (using HEC-RAS v 4.1) when running Plans "MATHEW_CONS_UCI" and "MATTHEW_CONS_MEAN." However, when switching to another plan (e.g., "IA_2_AESA_10^-4," "IA_2_AESA_10^-3," or "IA_2_AESA_PMP") a message from the software indicates that a reference to DSS files other than the project file cannot be found, and it asks to change the reference to the local file(s). If Yes is selected and a model run is attempted, the model runs as expected. If No is selected and a

model run is attempted, a list of errors is produced saying the HMS.DSS file cannot be found. Confirmation that the correct HMS.DSS is being selected is necessary for the staff's confirmatory review of the IA information.

Additionally, Calculation ROB-17-001 Rev0 Attachment 4, Section 5, Item "HEC-RAS Model Calibration," describes several changes to the HEC RAS model including changes to Ineffective Areas, Lateral Inflow Locations, Tainter gates, and others. It is unclear to staff if the HEC-RAS model geometries used in the various calculations have the changes indicated in Calculation ROB-17-001 Rev0 Attachment 4, Section 5, Item "HEC-RAS Model Calibration."

Request:
Please provide the directory path or a copy of the DSS file used in each of the analyses and any additional relevant information so that staff can examine the correct model inputs and outputs. Please clarify if the changes made to the HEC-RAS model files as indicated in Calculation ROB-17-001 Rev0 Attachment 4, Section 5, Item "HEC-RAS Model Calibration" are also included in the other calculations (ROB 14-003 Rev1 and ROB-18-002 Rev0).

Information Need # 1-2
To support the Robinson IA, electronic files used in the analyses and described in detail in Calculations ROB-17-001 Rev0 (REFERENCE), ROB 14-003 Rev1 (REFERENCE), and ROB-18-002 Rev0 (REFERENCE) have been provided for the NRC's staff's review. While staff have been able to open the model files by selecting the use of the local file, the model's unsteady flow files do not include "Rules" for the operation of the Lake Robinson dam. NRC staff understands that the HEC-RAS model calibration included the "Rules" but that the analyses were conducted using the Elevation Controlled Gates method.

Request:
Please clarify the use of unsteady flow rules in HEC-RAS. Additionally, please provide the model files used for calibration if they are not included in the currently provided information response set.

Information Need # 1-3
To support the Robinson IA, the licensee used the reference "USACE Task Force Hope (2013). Greater New Orleans Hurricane and Storm Damage Risk Reduction System (HSDRRS) Resiliency". The reference was used to support the position that the embankment would not fail from overtopping. The reference is number 14 of 16 and is found on page 33 of 33 in the document titled "Evaluation of PMF Resulting from Combined Wind-Wave Effect", Calc. / Analysis No RNP-14-003.

Request:
Please place the complete reference document(s) in the Certrec electronic reading room.