

Smith, James

Subject: Copy: RE: EXT: Fwd: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018)

Location: HQ-TWFN-05D30-19p-Skype

Start: Fri 02/07/2020 2:00 PM

End: Fri 02/07/2020 3:00 PM

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Smith, James

Required Attendees: Mandeville, Douglas; Guo, Lifeng; Waldron, Ashley; Pineda, Christine; Arlt, Hans; Cheng, Yuan; See, Kenneth; Quinlan, Kevin; Hauer, Lance M (GE Corporate); Blickwedel, Roy (GE Corporate); Davis, Melanie; 'Stephen Dwyer'

Optional Attendees: Von Till, Bill; Roman-Cuevas, Cinthya; Haws, Nathan

Resources: HQ-TWFN-05D30-19p-Tech

Importance: High

Bridgeline: 877-596-8189
Participant passcode: 24829

02/07/2020

Clarification from GE on some of the Previously Provided Responses To RAIs

Purpose:

To clarify whether the information previously requested in the RAIs was sufficient actually exists in the previous responses to RAIs, or if there was a misunderstanding of the RAIs.

Outcome:

To obtain clarification on the previous responses and determine whether the responses were adequate or not.

If there is a difference of opinion of whether the responses were adequately responded to, we can arrange a public teleconference to discuss further at a later date. If GE wishes to amend their responses based on this clarification call, that is acceptable too. If there are issues requiring clarification of modeling issues, we may be able to have a Skype session for each of the NRC reviewers to walk through the modeling process.

Process:

Each of the reviewers have asked side-bar questions of me seeking clarification. They will discuss their comments and GE and its contractors will have an opportunity to provide clarification.

Comments from NRC reviewers

Lifeng Guo

From: "Guo, Lifeng" <Lifeng.Guo@nrc.gov>

Subject: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018)

Date: 14 January 2020 17:26

To: "Smith, James" <James.Smith@nrc.gov>

Cc: "Arlt, Hans" <Hans.Arlt@nrc.gov>

Hi Jim,

I contacted Roy in early December of last year regarding some figures in the Canonie report (1987). I'm still waiting for the report from him (see below).

In addition, I need some clarification regarding Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018). Specifically, are there any water, how much if there is moving down from the bottom fine-grained tailing layer into the underlying alluvium in both soil profile B8 and B10 for the consolidation calculation?

I did not realize that you already sent other questions to Roy yesterday. Could you please forward this email to Roy.

Thanks much,

Lifeng

Hans Arlt

Jim, this is what I propose for tomorrow:

A.]

For myself, the only additional data that GE should send would be the following,

- Additional tables similar to the tables in Appendix A from Appendix Y (i.e., the consolidation report) that would include the monthly UNSAT-H modeling results for the years 2043 through 2062 (i.e., 20 years) for the planned repository profiles at B2, B8, B10, and B11.
 - o The information would include the year, month, PET, precipitation, transpiration, evaporation, runoff, and water storage.

B.]

Inform GE that NRC staff would like to have a 2-hour follow-up technical meeting at some time in the near future. NRC staff would ask technical questions pertaining to the Group 2 RAI Responses - 1st submittal dated October 14, 2019:

- Page 5: RAI 3.8-2 Response on transpiration
- Page 6: RAI 3.8-2 Response on evaporation
- Page 10: RAI 3.8-5 Response on i.
- Page 10: RAI 3.8-5 Response on ii.
- Page 10: RAI 3.8-5 Response on iii.
- Page 13: RAI 3.8-7 Response on a)
- Page 13-14: RAI 3.8-7 Response on c)
- Page 15: RAI 3.8-7 Response on figure provided with e)
- Page 16: RAI 3.8-7 Response on f) ii.

It's up to you and GE if we should start the technical discussion during Friday's meeting, or start it with the yet-to-be-scheduled public meeting.

Hans

Yuan Cheng

(Updated by YC on 01/07/2020)

1. Questions as open items

a. Probable maximum precipitation: As indicated in the LAR, the licensee recently updated PMP depths that were generated by the Arizona Department of Water Resources (ADWR) PMP Evaluation Tool (ML19157A173). The updated 1-hour PMP depth is 6.14 inches averaged over the total area of the Pipeline Arroyo watershed. Other updated PMP depths for multiple duration from 2 hours to 6 hours are varied between 6.45 and 6.47 inches. These area-averaged PMP depths are within a small difference (0.02 inch). The staff considers the small difference to be questionable since the durations are in a large range from 2-hour to 6-hour. The licensee needs to explain the small difference of the PMP depths for 2-hour and 6-hour durations. **This is an open item to be resolved by the licensee.**

b. Current mesh-size (2 ft in x-direction and 2 ft in y-direction and 1 ft in z-direction) in Flow 3D model: Does using a smaller mesh-size in the model significantly change the maximum flow velocity?

c. Slope stability of Pipeline Arroyo banks: Is the slope stability of vertical banks evaluated along the Pipeline Arroyo for a PMF event?

The staff reviewed the Pipeline Arroyo with the Field Photographs 3, 4 and 5 of Appendix B of Attachment I.8 of Volume I of the LAR (ML18267A275) and visited the site on June 11, 2019. Based on the photographs and the site observation, the staff considers that the stiff slopes of stream banks are unstable, and the channel is an erosional pathway. The slope failures and the streambed erosions appear inevitable. Consequently, the licensee provided riprap chute design to prevent the bank slopes from failures and protect the streambed from erosions. But the licensee did not provide the slope stability study and streambed foundation bearing capacity for the riprap chute. The lack of those technical analyses and information is **an open item**.

d. Channel bed stability: Are deposition and erosion on the streambed examined even though the stream alignment has not changed since 1981? Does the foundation design for the Riprap Chute show that the design channel will not sink into the existing alluvium streambed?

e. Inflow hydrograph: Does the licensee assign the inflow hydrograph of a PMF event to the boundary of a HEC-RAS 2-D model using the result of HEC-HMS modeling at the point J-R11us?

f. Initial flow condition: Is 6,870 ft reasonable as an initial water surface elevation of the Pipeline Arroyo flood modeling (Page 4 of 5 in Attachment I.6 of Appendix I of the LAR)?

g. Depression Area: Is the blue area located at the southern part of the repository area correct (Figures 4b, 5b, and 6b of Attachment I.6)? Is this blue area a proposed depression storage area or an accumulation area for surface runoff?

2. License Conditions

a. Removal of Evaporation Ponds: Do the two existing evaporation ponds and the Branch Swale H as indicated in Section I.4.2 of Appendix I of the LAR need to be addressed in a License Condition as a next task to be completed after the proposed Reclamation Plan?

YC's Special note: In Section 4.1.2.4 of Volume I of the LAR, and in Section I.4.2 of Appendix I of Volume I of the LAR, the licensee indicated that the existing Branch Swale H has no outlet. In the future, the licensee plans to connect the swale to the reach of the downstream South Diversion Channel through the existing evaporation ponds. The existing two evaporation ponds will be removed at that time. The licensee assumes that the future Branch Swale H outlet will be restored as the NRC-approved reclamation design in 1991 (Canonie, 1991; NRC ADAMS ML17121A552) and the downstream South Diversion Channel will be completed per NRC-approved tailings reclamation plan, prior to license

transfer. According to the licensee's indications as summarized above, the staff proposes that the following **license conditions** be included in the NRC's approval on the LAR.

Condition 1:

The impact on local drainage system in the areas adjacent to the two evaporation ponds needs to be reevaluated when the ponds are removed. The removal of the ponds provides extension space for the Branch Swale H to create its downstream outlet. To assure that a new future extension of the Branch Swale H through the pond removal area has enough discharge capacity for a PMF event, the licensee needs to provide technical information to NRC staff for the repository site safety evaluation.

Condition 2:

The licensee will provide NRC staff technical information related to the design of the South Diversion Channel associated with the new extension of the Branch Swale H. The NRC staff will evaluate the design of South Diversion Channel for a PMF event.

The above two license conditions are associated with the modifications to Source Material License Conditions 34 and 35. Those License Conditions 34 and 35 are indicated in the Sections 1.1 Licensing Background and 1.5

Effect on Existing License Conditions and Approved Reclamation of the Volume 1 of the LAR.

In Section 4.2.3 of Volume I of the LAR, the licensee indicated no flood control design for the downstream outlet of the sunken basin of the riprap chute. Consequently, the staff recognized that no riprap rock would be installed for preventing the downstream area of the basin outlet from erosion. Although no historical evidence of lateral migration of the Pipeline Arroyo was shown in a series of imagery data, the licensee recommended that a monitoring downstream area of the outlet basin in the Pipeline Arroyo would be needed to identify possible instabilities with the potential to migrate back toward the riprap basin due to downstream channel bank erosion. Based on the licensee's recommendation, the staff proposes License Condition 3 shown as follows:

Condition 3:

The licensee will annually provide the NRC with a monitory record, or the licensee will prepare a remedy plan related to the erosion at the outlet basin downstream area of the riprap chute in the Pipeline Arroyo. Based on the monitory record or the remedy plan provided by the licensee, the NRC staff will re-evaluate annually the sunken basin outlet and downstream channel protections against the lateral migration of the Pipeline Arroyo for a PMF event.

3. Licensee's corrections on Haul Routes are needed

- a. Wrong indication: On Drawing 9-02, the licensee indicated the location of RUNOFF CONTROL DITCH with the circle label "1/9-08." The indicated location should be redirected from the west side of the Pipeline Arroyo to the dotted area with the circle label "F/9-04."
- b. Inconsistent flood recurrent years: In Attachment A of Attachment D.1 of Appendix D, the calculation worksheet of "Calculation Worksheet for Roadside Ditches and Diversion Ditches" indicated "5-year, 24 Hour peak discharge" in the worksheet footnote. This "5- year, 24 Hour peak discharge" should be corrected to "10-year 24 hour peak discharge." The correction is to make consistency with the description of the second column of the worksheet table.
- c. Inconsistent ditch depths: Table D.4-1, "Haul and Access Road Design Basis," in Section D.4.1 of Appendix D, indicates that the depths of all designed ditches are 1 foot. In fact, the depths of designed ditches are more than 1 foot. The licensee needs to correct the 1 foot on Table D.4-1 to match the ditch depths shown on the calculation worksheets in the Attachment A of Attachment D.1 of Appendix D. The licensee also needs to make the ditch depths shown on the calculation worksheets of Appendix D of Volume I consistent with the ditch depths shown on the Design Drawings in Volume II of the LAR.
- d. Froude Numbers for roadside ditch flows: Some of the licensee's calculated Froude numbers are extremely large and they appear unreasonable as shown in the last column of the calculation worksheet, entitled "Calculation Worksheet for Roadside Ditches and Diversion Ditches," in the Attachment A of

Attachment D.1 of Appendix D. The licensee needs to provide the calculation details to the staff for confirming the correctness of calculated Froude numbers.

e. Overtopping flow: On Drawings 4-10 and 4-18 of Section 4 Haul Routes of Volume II Design Drawings, the licensee indicated that Culvert C-11 is a group of four corrugated metal pipes, each having 24" of diameter. The drawings show that the elevation difference between the culvert invert and the road top is 6 ft. The licensee computed headwater depth that is 28.83 ft at the culvert inlet (see Attachment A of Attachment D1 of Appendix D in Volume I of the LAR.) The 28.83 ft of headwater depth of a 5-year peak flow (281 cfs) exceeds the 6 ft of the ditch depth at the inlet. Thus, the capacity of culvert size is not adequate because of the overtopping flow. The staff suggests that the licensee revise the culvert design for the Culvert C-11 and check the culvert layout to fit the existing channel dimension of the Pipeline Arroyo. If the licensee intends to design an allowable overtopping flow, the licensee needs to design scour protection for the road.

f. Inconsistent lengths of culverts: The staff finds that culvert lengths in Section 4 of Design Drawings of Volume 2 of the LAR are not consistent with the lengths in hydraulic computations for the designed culverts shown in Attachment A of Attachment D.1 of Appendix D of Volume I of the LAR. The inconsistencies are summarized as follows.

Culvert ID	Culvert Length shown on Design Drawings of Volume II of the LAR	Culvert Length shown in the Licensee's calculation worksheets (Attachment A of Attachment D.1 of Appendix D of the LAR)
C01	220	200
C03	65	70
C05	55	40
C10	60	40
C12	136	70
C13	56	47.5
C14	56	47.5
C15	65	85
C16	84	70

The staff suggests that the licensee needs to correct the inconsistent culvert lengths. The licensee needs to check the culvert sizes and their dimensional layout to fit the available channel width and slope. The geometric data of dimensional layout should match the input data to the culvert hydraulic computations.

g. Inconsistent pond labels: Comparing Drawing 3-01 of Section 3 of Volume II and Figure I.1-1P and Figure I.1-1E of Attachment I.1 of Appendix I, the staff finds that the ponds included in flood simulations are not consistently labelled, such as Pond 1 and Pond 2 on the Drawing 3-01 need to be switched.

h. A confirmation for the NECR Mine Site Stormwater Controls: The staff does not review the stormwater controls for the NECR Mine Site. The licensee excludes the information of the stormwater controls that should be addressed in Appendix F of Volume I and Section 6 of Design Drawings. The exclusions are indicated by the licensee in a footnote shown on Page v of Volume I of the LAR. The footnote says,

"Note: appendix lettering is consistent with the design submitted to USEPA. Appendices and Drawing Sections specific to the NECR Mine Site, or to USEPA submittal requirements, have been excluded from the LAR submittal."

- i. Incorrect date: At the end of the first paragraph of page 1-1 of Volume I of the LAR, the licensee stated,

"(t)he tailings reclamation plan (Canonie, 1991) for the tailings disposal area (TDA) associated with the former mill was submitted by UNC on August 30, 1991 and approved by NRC on March 1, 1991."

As shown above, the staff finds that the NRC's approval date of March 1, 1991 is earlier than the licensee's submittal date of August 30, 1991. The licensee needs to correct either the submittal date or the approval date.

Meeting Information:

Leader:	MR JAMES SMITH
Phone number:	1-301-492-3234
Contact:	MR MICHAEL HACKETT
Phone number:	1-301-415-7000
Service level:	Unattended
Number of lines:	Total=10 Dialout=0 Meet Me=10 Meet Me Toll=0
Call date:	FEB-07-2020 (Friday)
Call time:	02:00 PM EASTERN TIME
Duration:	1 hr
Confirmation number:	9908187
Company:	NWX-US NUCLEAR REGULATORY COM
CRC:	

Passcodes/Pin codes:

Participant passcode: 24829

For security reasons, the passcode will be required to join the conference.

Dial in numbers:

Country	Toll Numbers	Freephone/ Toll Free Number
USA		877-596-8189

Restrictions may exist when accessing freephone/toll free numbers using a mobile telephone.

In-Conference Features:

All participants must use a touch-tone phone to participate in an Audio Conference. The following features are available for you to use on your phone during an active conference: <ul style="list-style-type: none">◆ Press *0 operator assistance (small fee may apply)◆ Press *6 mute/unmute individual line
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From: Smith, James

Sent: Wednesday, January 29, 2020 1:43 PM

To: Mandeville, Douglas <Douglas.Mandeville@nrc.gov>; Guo, Lifeng <Lifeng.Guo@nrc.gov>; Waldron, Ashley <Ashley.Waldron@nrc.gov>; Pineda, Christine <Christine.Pineda@nrc.gov>; Arlt, Hans <Hans.Arlt@nrc.gov>; Cheng, Yuan <Yuan.Cheng@nrc.gov>; See, Kenneth <Kenneth.See@nrc.gov>; Quinlan, Kevin <Kevin.Quinlan@nrc.gov>

Cc: Von Till, Bill <Bill.VonTill@nrc.gov>; Roman-Cuevas, Cinthya <Cinthya.Roman-Cuevas@nrc.gov>

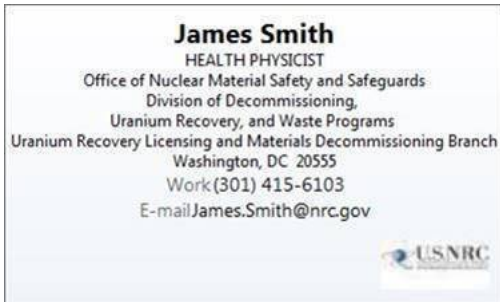
Subject: RE: RE: EXT: Fwd: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC

(July 2018)

Importance: High

I haven't heard from everyone, but so far, February 7th, seem to be the preferred date. If I don't hear from the rest of you by COB today, I will set it up for February 7th.

Jim



From: Smith, James

Sent: Tuesday, January 28, 2020 10:25 AM

To: Mandeville, Douglas <Douglas.Mandeville@nrc.gov>; Guo, Lifeng <Lifeng.Guo@nrc.gov>; Waldron, Ashley <Ashley.Waldron@nrc.gov>; Pineda, Christine <Christine.Pineda@nrc.gov>; Arlt, Hans <Hans.Arlt@nrc.gov>; Cheng, Yuan <Yuan.Cheng@nrc.gov>; See, Kenneth <Kenneth.See@nrc.gov>; Quinlan, Kevin <Kevin.Quinlan@nrc.gov>

Cc: Von Till, Bill <Bill.VonTill@nrc.gov>; Roman-Cuevas, Cinthya <Cinthya.Roman-Cuevas@nrc.gov>

Subject: FW: RE: EXT: Fwd: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018)

FYI

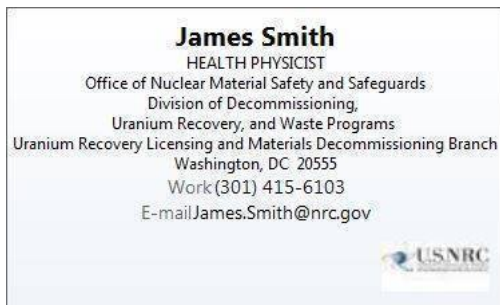
We have some proposed dates from GE for the clarification call, please let me know what works the best.

If possible, we prefer having the call on February 7th.

- Thursday, January 30th between 1:30 pm and 3pm Mountain Time (MT)
- Friday, January 31st between 8 am and 1 pm MT
- Thursday, February 6th between 8 am and 10 am MT and between 1:30pm and 3 pm MT
- Friday, February 7th between 8 am and 2 pm MT.

Thanks

Jim



From: Hauer, Lance M (GE Corporate) <lance.hauer@ge.com>

Sent: Tuesday, January 28, 2020 10:11 AM

To: Smith, James <James.Smith@nrc.gov>

Cc: Davis, Melanie <melanie.davis@stantec.com>; Blickwedel, Roy (GE Corporate) <Roy.Blickwedel@ge.com>; Arlt, Hans <Hans.Arlt@nrc.gov>; Guo, Lifeng <Lifeng.Guo@nrc.gov>; Cheng, Yuan <Yuan.Cheng@nrc.gov>; 'Stephen Dwyer' <dwyerengineering@yahoo.com>; Waldron, Ashley <Ashley.Waldron@nrc.gov>; Roman-Cuevas, Cinthya <Cinthya.Roman-Cuevas@nrc.gov>; Pineda, Christine <Christine.Pineda@nrc.gov>

Subject: [External_Sender] RE: EXT: Fwd: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018)

Hi Jim,

I'm looking forward to meeting you and working together. I had worked on the UNC NECR mine project during the investigation and remedy planning process and have some knowledge of the mill site. While I have big shoes to fill, I hope to be able to step in for Roy quickly and keep efforts on track.

I've checked our team's availability over the next two weeks and below are some options for a call. If possible, we prefer having the call on February 7th.

- Thursday, January 30th between 1:30 pm and 3pm Mountain Time (MT)
- Friday, January 31st between 8 am and 1 pm MT
- Thursday, February 6th between 8 am and 10 am MT and between 1:30pm and 3 pm MT
- Friday, February 7th between 8 am and 2 pm MT.

Finally, I've attached NRC form 313 documenting the change in project manager from Roy to me, which I'll mail in hardcopy as well.

Best regards,
Lance

Lance Hauer, P.E.

Legacy Site Team Leader – Environmental Remediation
Global Operations, Environment, Health & Safety
GE

T 484 213 0300

E Lance.Hauer@ge.com
www.ge.com

412 Creamery Way
Exton, PA 19341

From: Smith, James <James.Smith@nrc.gov>
Sent: Thursday, January 23, 2020 11:18 AM
To: Hauer, Lance M (GE Corporate) <lance.hauer@ge.com>
Cc: Davis, Melanie <melanie.davis@stantec.com>; Blickwedel, Roy (GE Corporate) <Roy.Blickwedel@ge.com>; Arlt, Hans <Hans.Arlt@nrc.gov>; Guo, Lifeng <Lifeng.Guo@nrc.gov>; Cheng, Yuan <Yuan.Cheng@nrc.gov>; 'Stephen Dwyer' <dwyerengineering@yahoo.com>; Waldron, Ashley <Ashley.Waldron@nrc.gov>; Roman-Cuevas, Cinthya <Cinthya.Roman-Cuevas@nrc.gov>; Pineda, Christine <Christine.Pineda@nrc.gov>
Subject: RE: EXT: Fwd: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018)

Hi Lance-

I don't think we have met. I am the Project Manager for the UNC Church Rock license amendment request to move the mine spoils to the tailings impoundment.

The attached three emails requested clarification from GE on some previously provided responses to RAIs. We'd like to have a call in the next two weeks to discuss the issues to see whether we are just missing the forest for the trees in the responses, or whether there is a need for GE to provide an addendum to the responses. Can you give us a few dates and times for teleconference that will work with for you and your contractors?

Thanks

Jim



From: Blickwedel, Roy (GE Corporate) <Roy.Blickwedel@ge.com>
Sent: Thursday, January 23, 2020 11:05 AM
To: Smith, James <James.Smith@nrc.gov>
Cc: Hauer, Lance M (GE Corporate) <lance.hauer@ge.com>; Davis, Melanie <melanie.davis@stantec.com>
Subject: [External_Sender] EXT: Fwd: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018)

Hi Jim,

Yes thanks. Feeling much better.

So for the past month we have been transitioning my projects to Lance Hauer pending my retirement. He has essentially taken over all of the UNC projects including Church Rock and NECR. He is very familiar with NECR; not sure if you both overlapped at all previously or not. I copied him on this. Probably best for him to pick it up from here due to the short time left.

It has been a great pleasure working with you Jim, and with the Commission in general for the past 21 years!

All the best,
Roy

iFrom: Smith, James <James.Smith@nrc.gov>

Sent: Thursday, January 23, 2020 9:42 AM

To: Blickwedel, Roy (GE Corporate) <Roy.Blickwedel@ge.com>

Subject: RE: Re: EXT: Fwd: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018)

Hey Roy-

Are you doing any better? Any chance we could have that call next week?

Thanks,

Jim



From: Blickwedel, Roy (GE Corporate) <Roy.Blickwedel@ge.com>

Sent: Wednesday, January 15, 2020 9:13 AM

To: Smith, James <James.Smith@nrc.gov>

Cc: Davis, Melanie <melanie.davis@stantec.com>; Arlt, Hans <Hans.Arlt@nrc.gov>; Guo, Lifeng <Lifeng.Guo@nrc.gov>

Subject: [External_Sender] Re: EXT: Fwd: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018)

Hi Jim,

Sorry for delays in responding. Been sick the past couple days. Should be back on my feet soon. Thanks for your patience.

Roy

Sent from my iPhone

On Jan 15, 2020, at 08:49, Smith, James <James.Smith@nrc.gov> wrote:

Hey Roy

Can you add this to the list of discussion items for the pending clarification teleconference?

Thanks

Jim

Begin Forwarded Message:

From: "Guo, Lifeng" <Lifeng.Guo@nrc.gov>
Subject: UNC Church Rock: Figures in the Geohydrologic Report by Canonie Environmental (1987), and Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018)
Date: 14 January 2020 17:26
To: "Smith, James" <James.Smith@nrc.gov>
Cc: "Arlt, Hans" <Hans.Arlt@nrc.gov>

Hi Jim,

I contacted Roy in early December of last year regarding some figures in the Canonie report (1987). I'm still waiting for the report from him (see below).

In addition, I need some clarification regarding Table 2 and Table 3 in the "Consolidation and Groundwater Evaluation Report", prepared by Dwyer Engineering, LLC (July 2018). Specifically, are there any water, how much if there is moving down from the bottom fine-grained tailing layer into the underlying alluvium in both soil profile B8 and B10 for the consolidation calculation?

I did not realize that you already sent other questions to Roy yesterday. Could you please forward this email to Roy.

Thanks much,

Lifeng

From: Blickwedel, Roy (GE Corporate) <Roy.Blickwedel@ge.com>
Sent: Wednesday, December 04, 2019 7:28 AM
To: Guo, Lifeng <Lifeng.Guo@nrc.gov>
Subject: [External_Sender] RE: Figures in the Geohydrologic Report by Canonie Environmental (1987)

Hi Lifeng,

Nice to hear from you. I will check for a pdf version of the Canonie Report. I have been through several office moves since I last knew where it was on disk so it may not bear fruit. Give me a week to see what I can do.

Roy

From: Guo, Lifeng <Lifeng.Guo@nrc.gov>

Sent: Tuesday, December 3, 2019 3:30 PM

To: Blickwedel, Roy (GE Corporate) <Roy.Blickwedel@ge.com>

Subject: EXT: Figures in the Geohydrologic Report by Canonie Environmental (1987)

Hi Roy,

It has been quite a while since we last spoke, and I hope all is well with you.

I has some trouble reading some of the figures in the digital version of the Canonie report; it was poorly produced. I was wondering if you have a pdf of the report. I previously had a hard copy of the report you sent earlier and did not keep it during last move of office as I was pulled out of the project.

Please let me know and thanks,

Lifeng

Lifeng Guo, PhD, PG

Hydrogeologist

Uranium Recovery and Materials Decommissioning Branch

Division of Decommissioning, Uranium Recovery, and Waste Programs

Office of NMSS

U.S. Nuclear Regulatory Commission

Phone: (301) 415-7962