

July 31, 2017

MEMORANDUM: Robert K. Johnson, Chief  
Fuel Manufacturing Branch  
Division of Fuel Cycle Safety, Safeguards,  
and Environmental Review  
Office of Nuclear Material Safety  
and Safeguards

FROM: Tyrone D. Naquin **/RA via e-mail/**  
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SUBJECT: TELEPHONE CALL SUMMARY JULY 6, 2017: NATURAL  
PHENOMENA HAZARDS EVALUATION BASIS FOR GLOBAL  
NUCLEAR FUELS - AMERICAS

On July 6, 2017, U.S. Nuclear Regulatory Commission staff held a telephone conference call with staff from Global Nuclear Fuels - Americas to discuss a revised basis of seismic evaluation in response to Generic Letter 2015-01, Natural Phenomena Hazards. I am attaching the telephone summary for your use. The summary contains no proprietary or classified information.

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Enclosure: Telephone Summary

cc: S. Murray

TELEPHONE CALL SUMMARY JULY 6, 2017: NATURAL PHENOMENA HAZARDS  
EVALUATION BASIS FOR GLOBAL NUCLEAR FUELS - AMERICAS  
DATED: July 31, 2017

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<b>NAME</b>	TNaquin	TBrockington	HRodrigues for MKotzalas	<b>TNaquin via e-mail for RKJohnson</b>
<b>DATE</b>	07/26/2017	07/27/2017	07/31/2017	07/31/2017

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**TELEPHONE CONFERENCE CALL SUMMARY  
DEPLETED URANIUM DISPOSITION COST ESTIMATES**

Date and Time: 3:00 p.m., July 6, 2017

Call Participants:	Robert K. Johnson	Adam Hilton
	Ty Naquin	Scott Murray
	Jonathan Marcano	Jim Reeves
	Patrick Koch	Jim Degolyer

Staff discussed a letter sent to Global Nuclear Fuels - Americas (GNF-A) on June 6, 2017 (ML17146A569), which provided clarity on areas where supplemental information was needed in response to Requests for Supplemental Information (RSI) in GNF-A's letter dated April 24, 2017 (ML17115AA097). The June 6, 2017, letter suggested a conference call be held to resolve deficiencies identified.

The purpose of this call was to discuss the draft Supplemental Seismic Evaluation Methodology for GNF-A provided to the U.S. Nuclear Regulatory Commission (NRC) on June 28, 2017 (ML17205A000). This note is a high level note, listing four items that GNF-A plans to include in a new seismic structural evaluation of the FMO/FMOX building. The Supplemental Seismic Evaluation Methodology describes the following: (1) the response modification value GNF-A plans to use in the East-West direction; (2) the probability of exceedance GNF-A plans to use to select the design spectral acceleration; (3) GNF-A plan to consider a particular chapter in a structural specification; and (4) GNF-A plan to evaluate the diagonal brace connections in detail.

GNF-A stated that the overall approach to the planned new seismic structural evaluation of the FMO/FMOX building is what was discussed in a previous conference call (ML17121A025) and would mean evaluating the building as a braced frame with a response modification factor, R, of 3.25. GNF-A will use a design spectral acceleration corresponding to a probability of exceedance of 10 percent in 50 years without the use of a 2/3<sup>rd</sup> reduction. GNF-A will follow the AISC Steel Construction Manual 14<sup>th</sup> Edition and include P- $\Delta$  effects, if needed.

GNF-A discussed the bracing in the East-West direction of the building. GNF-A stated the connections of the diagonal braces are strong and exceed the capacity of the braces. GNF-A noted that preliminary results show some braces are beyond yield and that GNF-A will perform a "true nonlinear analysis" to assess this behavior.

The NRC staff then asked several questions regarding the information provided in the Supplemental Seismic Evaluation Methodology. The NRC staff asked for clarification on the type of Lateral Force Resisting System that GNF-A is considering in the North-South direction for the evaluation as only the East-West direction is discussed in the Supplemental Seismic Evaluation Methodology. GNF-A stated that they had not included this direction of the building in any new preliminary evaluation, but the building has "margin" in this direction and could be evaluated as an Ordinary Moment Frame.

The NRC staff asked if the evaluation will appropriately address all of the building connections as only the connections between the braces and columns is discussed in the Supplemental Seismic Evaluation Methodology. GNF-A stated that they had not evaluated any connections other than the brace-to-column connections in any preliminary evaluation, but they will provide the analysis of the connection in the new evaluation. GNF-A stated the connections between the truss chords and the columns are not near capacity loading and connections at the base of the column do not resist moment.

Enclosure

GNF-A discussed a possible timeline for delivering this new seismic structural evaluation. GNF-A considered the additional time needed to address the NRC's questions regarding the Supplemental Seismic Evaluation Methodology described above. GNF-A stated that it was possible that they could submit the new evaluation by early August. The NRC staff stated that there were no further clarifications needed at this time with the information provided in the Supplemental Seismic Evaluation Methodology and that a detailed evaluation of the results of the new analysis will be performed and documented in a technical evaluation report.

PRINCIPAL CONTRIBUTOR

Ty Naquin  
Patrick Koch