

July 6, 2016

MEMORANDUM TO: Margie A. Kotzalas, Chief  
Programmatic Oversight  
and Regional Support Branch  
Division of Fuel Cycle Safety, Safeguards,  
and Environmental Review  
Office of Nuclear Material Safety  
and Safeguards

FROM: April Smith, Risk and Reliability Engineer /RA Margie Kotzalas for/  
Programmatic Oversight  
and Regional Support Branch  
Division of Fuel Cycle Safety, Safeguards,  
and Environmental Review  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: SUMMARY OF TELEPHONE CALLS ON WESTINGHOUSE'S  
RESPONSE TO GENERIC LETTER 2015-01, JULY 1, 2016 AND  
JULY 5, 2016

## I. Background

On July 1, 2016, U.S. Nuclear Regulatory Commission (NRC) staff held a telephone conference call with staff from Westinghouse Electric Corporation, LLC (Westinghouse) to discuss their response to Generic Letter 2015-01, "Treatment of Natural Phenomena Hazards in Fuel Cycle Facilities" (ML14328A029). The staff issued this generic letter to request licensees to submit information regarding the assessment of natural phenomena events at licensee facilities. Westinghouse submitted information which contained commitments to update its integrated safety analysis (ISA) to address issues the staff identified. The staff requested a telephone conference with Westinghouse to discuss those commitments and others related to Westinghouse's approach to assessing accident sequences induced by natural phenomena. This summary does not contain proprietary information.

CONTACT: April Smith, NMSS/FCSE  
(301) 415-6547

II. Participants

NRC	Westinghouse
Robert Johnson	Nancy Parr
Patrick Koch	
Margie Kotzalas	
Jonathan Marcano	
Christopher Ryder	
April Smith	

III. Discussion

The staff informed Westinghouse of its intent to request written commitments to: (1) update the facility ISA as stated in Westinghouse’s response to the staff requests for supplemental information (RSI) and (2) implement an approach that does not rely on the likelihood of a specified natural phenomena to demonstrate compliance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70.61. Westinghouse stated that it would fulfill the commitment for (1). Westinghouse and the staff discussed the changes to the ISA that Westinghouse would make based upon its responses to Requests for Supplemental Information 1, 2, and 8-15.

Westinghouse further stated that it believed it could fulfill the commitments for (2); however, a specific example would be helpful. The staff provided an example, using [REDACTED]

[REDACTED]

[REDACTED]. The intermediate consequence, in question, is the release of effluent exceeding activity concentrations of 10 CFR 20 Appendix B levels. According to the ISA summary, this intermediate consequence is limited to the surrounding environment; however, a worker that may be in the immediate area of the release would be subjected to only low consequences from an unspecified splash of material that may come in contact with only the worker’s skin.

[REDACTED]

The staff noted that, for the [REDACTED], Westinghouse relied on the initiating event frequency of an earthquake, without demonstrating a consistent level of rigor, to determine no IROFS were needed.

Westinghouse expressed concern with the implied scope of the staff’s assessment of the exposure scenario related to the worker and suggested that implementing such a scope within the ISA could be resource intensive. The staff indicated that it understood Westinghouse’s concerns and need to have further internal discussions.

#### IV. Follow-Up Actions

The NRC agreed to send Westinghouse an e-mail of the proposed commitment request by July 1, 2016. Westinghouse agreed to inform the NRC, by July 6, 2016, of their ability to commit to make these changes in the 2017 ISA Summary update.

#### V. Factual Correctness

Westinghouse reviewed the summary for factual correctness and provided additional questions by e-mail dated July 5, 2016, for which they requested NRC response. Those are questions listed below:

1. We believe all criticality scenarios are evaluated according to your expectations and only the "incredible" scenarios are dismissed.
2. Based on our acceptable Requests for Additional Information (RAI) responses to Questions 1 & 2, we believe that no further action is needed for tornado/wind. Therefore, the scope of work for Commitment #2 is limited to the 2 chemical accident sequences and 1 environmental accident sequence which start on page 136 of ISA Summary #3, Rev. 11 and end on page 155.
3. Based on the conference call, the "Earthquake Initiated Release from the Vaporizer System" Accident Sequence Flow Diagram on page 136 meets expectations.
4. Based on our acceptable response to RAI Question 5, we believe that the use of an Initiating Event score of -3 for the "Earthquake Initiated Spill Inside the Chemical Area" Accident Sequence Flow Diagram on page 137 meets expectations. [REDACTED]
5. This leaves us with a commitment to revise only one scenario, which is the [REDACTED]. This is the only scenario which was not incredible AND was dismissed based on likelihood.

On July 5, 2016, the staff held another conference call with Westinghouse (with the same attendees as the July 1, 2016 call) to discuss further discuss these question. Following the call, Westinghouse submitted an e-mail with its commitment language and background information. The information is as follows:

#### SIMPLE COMMITMENT LETTER

As per your request, this letter documents the following Westinghouse commitments for our Natural Phenomena Hazard (NPH) Generic Letter response.

1. Westinghouse will submit an updated ISA Summary by January 31, 2017 to incorporate the Westinghouse responses to your questions as specified in our letter, LTR-RAC-16-22 on June 21, 2016.

2. Westinghouse will enhance the evaluation for the [REDACTED]. This enhanced evaluation will demonstrate that the performance requirements are met for an Earthquake Initiating Event Frequency of -3.

COMMITMENT BACKGROUND FOR INCLUSION IN CONFERENCE CALL SUMMARY OR TECHNICAL EVALUATION REPORT

Westinghouse committed to completing the following actions:

1. Westinghouse will submit an updated ISA Summary by January 31, 2017 to incorporate the Westinghouse responses to your questions as specified in our letter, LTR-RAC-16-22 on June 21, 2016.
2. Westinghouse will enhance the evaluation for the [REDACTED]. This enhanced evaluation will not be dismissed based on the seismic event likelihood.
  - Based on our conference calls on July 1, 2016 and July 5, 2016, NRC stated that credible high and intermediate consequence scenarios initiated from a Natural Phenomenon Event should not be dismissed based on the Initiating Event Frequency for the NPH event. Based on this statement, a review of the Westinghouse ISA Summary accident sequences was performed to determine the scope of credible accident sequences that were dismissed based on the likelihood of an NPH event. This review resulted in the following conclusions:
    - Flooding hazards are adequately described in the existing ISA Summary. Westinghouse will not perform additional analysis for flooding hazards.
    - Wind and Tornado loading hazards are adequately addressed in the Westinghouse RAI responses to RAI's #1 and #2. These Westinghouse RAI responses will be incorporated into the 2017 ISA Summary Update by July 3, 2017. Westinghouse will not perform additional analysis for these hazards. The Technical Reference for these RAI responses is the report titled "Wind and Precipitation Evaluations of the Columbia Fuel Fabrication Facility," Atkins-NS-TR-COL-16-03, Rev. 0 dated June 2016. In addition, Westinghouse will not perform additional analysis for precipitation events.
    - There were no credible, nuclear criticality safety accident sequences that were dismissed based on likelihood. Westinghouse will not perform additional analysis. For nuclear criticality safety, Westinghouse will incorporate the responses to RAI's #8, #9, #12, #13 and #14 for seismic events into the 2017 ISA Summary Update by January 31, 2017.
3. For accident scenarios not related to nuclear criticality safety, Westinghouse has 3 accident sequence flow diagrams and discussion, starting on page 136 of ISA Summary #3, Rev. 11 and ending on page 155. [REDACTED]  
[REDACTED]  
[REDACTED] The second [REDACTED] will be revised to incorporate the Westinghouse

response to RAI Question 10 & 11. [REDACTED]

[REDACTED] These Westinghouse RAI responses will be incorporated into the 2017 ISA Summary Update by January 31, 2017. Westinghouse will not perform additional analysis for these hazards. [REDACTED]

Westinghouse proposed to send the official letter containing these commitments by July 7, 2016.

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cc: Nancy Parr

response to RAI Question 10 & 11. Note that the two IROFS for this sequence will be the existing "Emergency Response" (PLANT-SEP-901) and a new "See and Flee" (PLANT-SEP-903). These Westinghouse RAI responses will be incorporated into the 2017 ISA Summary Update by January 31, 2017. Westinghouse will not perform additional analysis for these hazards. The third "Earthquake Initiated Failure of UN Bulk Storage Tanks" Accident Sequence Flow Diagram on page 137 will be enhanced to demonstrate that the performance requirements are met. This enhanced evaluation will demonstrate that the performance requirements are met for an Earthquake Initiating Event Frequency of -3.

Westinghouse proposed to send the official letter containing these commitments by July 7, 2016.

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cc: Nancy Parr

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