

October 2, 2014

David K. White, PE
Corporate Regulatory Affairs
AREVA Inc.
3315 Old Forest Road
P.O. Box 10935
Lynchburg, VA 24506-0935

SUBJECT: REQUEST FOR CLARIFICATION RELATED TO THE AREVA FILTERED
CONTAINMENT VENTING SYSTEM TO SUPPORT THE CONTAINMENT
PROTECTION AND RELEASE REDUCTION FOR BOILING WATER REACTOR
WITH MARK I AND MARK II CONTAINMENTS RULEMAKING

Dear Mr. White:

The U.S. Nuclear Regulatory Commission (NRC) is in the process of rulemaking as directed by the Commission in a staff requirements memorandum, "Staff Requirements – SECY-12-0157 – Consideration of Additional Requirements for Containment Venting Systems for Boiling Water Reactors with Mark I and Mark II Containments," dated March 19, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13078A017) in response to SECY-12-0157 (ADAMS Accession No. ML12325A704).

The NRC staff is scheduled to publish a draft regulatory basis at the end of December 2014. This paper will provide a cost-benefit analysis for various options and a staff recommendation. Those options will include the use of an engineered filter such as those marketed by Areva as described in a presentation to the NRC staff on July 12, 2012 (ADAMS Accession No. ML12319A530). This letter requests additional information in order to properly reflect the performance of your filter designs in combination with severe accident containment venting of boiling water reactor (BWR) Mark I and Mark II containments.

The NRC staff's analyses of certain severe core damage accidents caused by an extended loss of AC power have shown that the particle size spectrum reaching the filter is dominated by particles less than one micron Aerodynamic Mass Median Diameter. Example mass fraction distributions of Cesium Iodide (CsI) reaching the wetwell and drywell vents are shown in the enclosure. Thus, these particle sizes determine the actual effectiveness of the engineered filter in the application we are assessing. The NRC staff is unable to determine the decontamination factors (DF) for these particle sizes from the integrated DF values and design descriptions provided in Areva's presentation to the NRC staff. It would benefit the NRC staff if Areva provides the DF by the particle size in the range shown in the enclosure, broken down if possible by the contribution from each stage in the filter (e.g., venturi, pool, and demister).

The NRC staff is also requesting the detailed basis for the DF values you provide (i.e., experimental data and modeling). This information is necessary to respond to the Commission's direction to provide the validation and testing needed should an engineered filter be included in the requirements of the rulemaking.

D. White

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The NRC appreciates AREVA's prompt consideration of this request, and requests a preliminary response providing AREVA's intention to provide the information and schedule for response by October 10, 2014.

If you have any questions regarding this letter, please contact me at 301-415-1270 or the rulemaking project manager for the containment protection and release reduction for boiling water reactors with Mark I and Mark II containments rulemaking, Aaron Szabo, at 301-415-1985.

Sincerely,

/RA/

Jennifer L. Uhle, Deputy Director
Office of Nuclear Reactor Regulation

Enclosure:
Mass Fraction Distribution Chart

D. White

- 2 -

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Mass Fraction Distribution Chart

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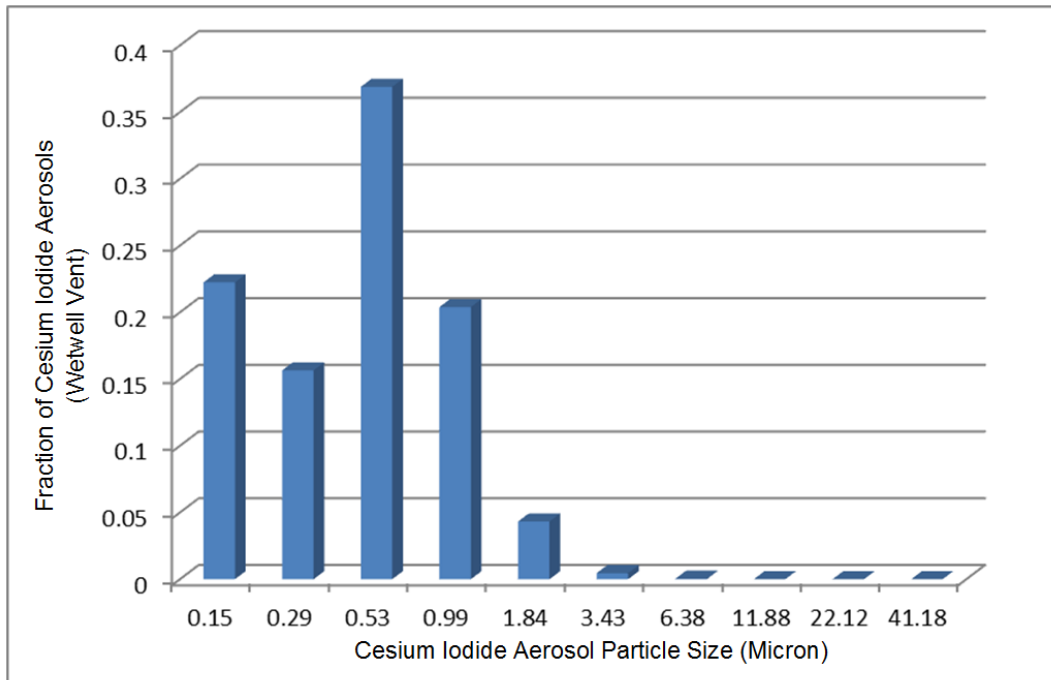
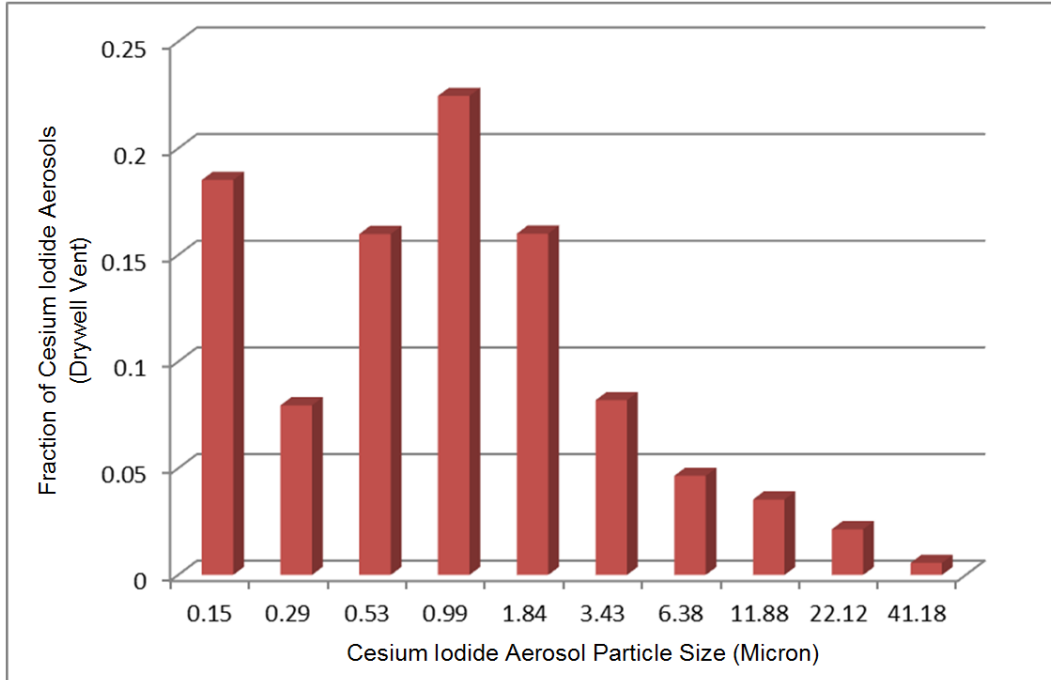
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NAME	TMcGinty	AMohseni	JUhle
DATE	9/22/14	9/22/14	10/2/14

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Mass Fraction Distribution Chart



ENCLOSURE