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10 CFR 21.21

June 17, 2015

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

SUBJECT: 30 DAY REPORT REGARDING DEVIATIONS WHILE UTILIZING BENTLEY SOFTWARE
STAAD.PRO ON SUPPLIED CALCULATIONS

This letter provides a 30 day report in accordance with 10 CFR 21.21(d)(3)(ii) pertaining to the identification of deviations associated with delivered calculations which were supplied as basic components to various licensees and is a follow-up to the interim report submitted on May 18, 2015 (ref. ML15147A547). As stated in the interim report, the noted deviations in STAAD.Pro can result in non-conservative evaluations of structural members and can potentially result in the inadequate design of structural components.

URS Energy & Construction (an AECOM Company) is continuing to evaluate this issue and its impact on various calculations that have been supplied to several licensees. At this time, it has not been determined that any basic components fail to comply or contain a defect. Efforts continue with this determination as we work in conjunction with the licensees.

In accordance with the requirements of 10 CFR 21.21(d)(4), AECOM offers the following information:

- (i) Name and address of the individual or individuals informing the Commission.

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General Manager & President – Power
AECOM Energy, Infrastructure & Industrial Construction
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- (ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

The software that was used, STAAD.Pro, is provided by Bentley Systems Incorporated. The present QA validated version of STAAD.Pro, V8i SELECT Series 4 Version 20.07.09.31, and prior

versions have been used on various safety related calculations for nuclear power plants as well as a general analysis and design tool for non-safety related calculations for nuclear and non-nuclear power plants and facilities.

- (iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

AECOM supplied calculations as basic components to Exelon Corporation and DTE Energy.

- (iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

The noted deviations in STAAD.Pro Critical Error Report SPRO5336 and STAAD.Pro Critical Error Report SPRO5682 can create instances that generate incorrect internal forces and moments in a structural member at various locations along the member's length. The result can be non-conservative evaluations of structural members (i.e., can under estimate the stress level in the analyzed members) and can potentially result in the inadequate design of structural components.

- (v) The date on which the information of such defect or failure to comply was obtained.

The discovery date of the deviations was March 17, 2015.

- (vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

AECOM has considered all calculations supplied as a basic components that contained the STAAD.Pro software deviations and determined the maximum number of calculations to be evaluated further for a potential defect to be seventeen (17). Of the seventeen (17) calculations, ten (10) were supplied to Exelon Corporation and seven (7) were supplied to DTE Energy. At this time, it has not been determined that any basic components fail to comply or contain a defect.

- (vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

The STAAD.Pro software vendor, Bentley Systems Incorporated, is actively working to correct the noted deviations in the software. It is anticipated that a modified version of STAAD.Pro will be issued in the third quarter of 2015 by Bentley. Currently, AECOM is working in conjunction with our affected clients for alternate means to assess the calculations containing the identified deviations to determine the impact on the pertinent SSC safety function.

- (viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

The affected clients have been notified and plans have been developed to assess the calculations containing the identified deviations.

(ix) In the case of an early site permit, the entities to whom an early site permit was transferred.

Not applicable.

If you have any questions concerning this information, please contact Steve Mannon, Director of Licensing, at 803-412-5145.

Sincerely,

A handwritten signature in blue ink, appearing to read "Art Lembo". The signature is stylized with a large initial "A" and a cursive "Lembo".

Art Lembo
General Manager & President – Power
AECOM Energy, Infrastructure & Industrial Construction