



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 15, 2018

Electronic Mail To: Tom C. Roberts
c/o Arielle Eiser, Associate Director of Government Relations and
Advocacy
National Society of Professional Engineers
aeiser@nspe.org

SUBJECT: CONCERNS REGARDING WESTINGHOUSE ELECTRIC
CORPORATION AND VIRGIL C. SUMMER NUCLEAR GENERATING
STATION UNITS 2 AND 3 (ALLEGATION NO. NRO-2017-A-0014)

Dear Mr. Roberts:

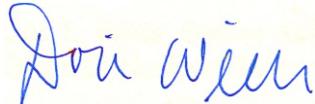
The U.S. Nuclear Regulatory Commission (NRC) has completed its follow up in response to the concerns Mr. Tom C. Roberts of the National Society of Professional Engineers (NSPE) brought to our attention on October 26, 2017, related to Westinghouse Electric Corporation (WEC) and V.C. Summer Nuclear Station Units 2 and 3 (V.C. Summer). Mr. Roberts was concerned about the alleged use of unqualified and unlicensed individuals to design aspects of two nuclear reactors at the V.C. Summer site as well as whether the use of unlicensed engineers led to the demise of the V.C. Summer project. The enclosure to this letter restates Mr. Roberts' concerns. In your email dated November 9, 2017, you confirmed that these were the concerns to which Mr. Roberts and NSPE requested a response from the NRC. The enclosure describes the NRC's review and conclusions with regard to each issue.

Normally, the NRC does not discuss specific allegation-related information publically and only shares our conclusions with the alerger and those within the agency with a need-to-know. This policy helps to assure both the alerger who reported the safety concern to the NRC, as well as anyone who may observe our actions and consider using the process in the future, that we take their privacy and our alerger identity protection policy very seriously. That said, in rare cases, we believe dissemination of allegation-related information to a broader audience can be beneficial. In consultation with the Office Director and the Agency Allegation Advisor who have program oversight responsibilities, and after discussing this action with you, we have agreed that a public response discussing the results of our review would be beneficial. As the enclosure states in more detail, the NRC staff did not identify any indication that unqualified individuals from WEC or its contractors performed work related to the AP1000 design, that violations of NRC requirements related to Registered Professional Engineer (RPE) approval took place, or that WEC failed to comply with NRC notification requirements.

Thank you for informing us of Mr. Roberts' concerns. Allegations are an important source of information in support of the NRC's safety mission. We take our safety responsibilities to the public very seriously, and will continue to do so within the bounds of our lawful authority. We feel that our actions in this matter have been responsive and plan no further action. If, however, new information is provided that suggests that our conclusions should be altered, we will reevaluate that information to determine if additional review is indicated.

Should you or Mr. Roberts have any additional questions, or if we can be of further assistance to you, please contact me at 301-287-9423 or Ms. Sara Bernal-Taylor at 301-287-9296, or email us at HQ_Allegations@nrc.gov.

Sincerely,

A handwritten signature in blue ink that reads "Dori Willis". The signature is fluid and cursive, with "Dori" on top and "Willis" below it.

Dori L. Willis, Senior Allegation Coordinator
Headquarters Allegation Team
Office of Enforcement

Enclosure: As stated

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VIRGIL C. SUMMER NUCLEAR GENERATING STATION UNITS 2 AND 3
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G:\Headquarters OAC Team\NRO Files\NRO-2017-14 (NP) - Westinghouse Unqualified Designers\Closure Letter NRO 17-14.Docx

OFC	AS:HQAT	QVIB2:DCIP:NRO	C:QVIB2:DCIP:NRO	OGC	RII
NAME	SBernal-Taylor	PPrescott	KKavanagh	LBaer	JHeisserer
DATE	01/12/18	01/12/18	01/25/18	02/05/18 (NLO)	01/12/18
OFC	DD:DCIP:NRO	SROAC:HQAT			
NAME	PKrohn	DWillis			
DATE	02/05/18	02/15/18			

OFFICIAL RECORD COPY

STATEMENT OF CONCERNS

ALLEGATION NO. NRO-2017-A-0014

CONCERN 1:

According to multiple sources, including media reports and statements by licensed professional engineers familiar with these events, Westinghouse Electric Corporation (WEC) and other contractors allegedly used unqualified and unlicensed individuals to design aspects of two nuclear reactors at the V.C. Summer site, placing the public's health and safety at risk.

NRC Response:

In order to evaluate the concern, the NRC staff (1) evaluated the pertinent regulations; (2) reviewed the associated Post and Courier news article, the letter from the National Society of Professional Engineers (NSPEs), and the Westinghouse Electric Company LLC's (WEC's) legal opinion on the use of Registered Professional Engineers (RPEs); (3) reviewed specific drawings that the reporter of the news article believed required a RPE's approval; (4) compiled a list of American Society of Mechanical Engineers (ASME) Code requirements specifying RPE review of design reports and design specifications; (5) reviewed Regional and Vendor inspection reports associated with design reports and design specifications; (6) interviewed a sample of inspectors on the practice of ensuring whether a design report or design specification has been approved by a RPE; (7) reviewed excerpts from the State of South Carolina's requirements regarding a utility's use of RPEs; and (8) reviewed NRC guidance in inspection procedures (IPs) to determine if review of RPE documentation approval and personnel qualification are adequately addressed.

Regarding regulatory requirements, Criterion II, "Quality Assurance Program," of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," states in part, "The program shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained." This regulation would apply to engineers involved in the development of the AP1000 nuclear power plant safety-related design activities. The NRC's inspectors routinely assess the training and qualification of engineers.

The staff also reviewed the ASME Code to determine when a RPE's approval is required to be verified by the NRC. The AP1000 Final Safety Analysis Report, Chapter 5.2.1.1, requires compliance with 10 CFR 50.55a, "Codes and standards." In 10 CFR 50.55a(a)(1)(i), all ASME Boiler and Pressure Vessel Code, Section III additions and addenda are incorporated by reference. 10 CFR 50.55a(b)(1) places certain conditions on Section III of the Code, but none of these regulatory conditions are associated with RPEs.

As an example, NRC staff would be required under 10 CFR 50.55a to verify a RPE's approval on an ASME Code Form N5 associated with components manufactured to Code requirements. This form is required to be signed by a RPE and is reviewed by the NRC as part of its inspection

of the Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) related to that Code component.¹

Regional and Vendor inspectors only look for RPE approval when required to do so by applicable ASME Code requirements, but normally do not document it in an inspection report unless an associated issue is identified. The associated Regional and Vendor related inspection procedures do not specifically require the NRC inspector to identify whether a design report or design specification has been approved by a RPE.² However, the NRC staff did identify one integrated inspection report (ADAMS Accession No. ML17226A034³) which documented in the Inspection Scope that the inspectors reviewed the qualification records for the RPEs that developed the squib valve and piping design specifications. There was no further discussion as no qualification records issues were identified.

With regards to the Post and Courier article, the NRC noted that information used to support the author's position in the article did not state that WEC was using unlicensed or unqualified engineers. The documents referenced by the reporter focused on the fact that WEC was not requiring a RPE's approval of certain documents. However, based on its review, the NRC staff concluded that not all documents need a RPE's approval. The specific drawings relied upon for the news article are examples of documents not requiring a RPE's approval to meet NRC's requirements.

In addition, when NRC inspections are performed, it is routine to review the qualifications of individuals performing the work. Also, NRC inspectors often interview personnel in detail on specific work being performed. These interviews ensure personnel are knowledgeable in their tasks. There was no indication from the NRC inspection reports that unqualified individuals from WEC or its contractors were involved in the performance of work related to the AP1000 design.

Based on the NRC staff's review, the NRC staff concluded that (1) there was no evidence of inspection report findings for unqualified personnel preparing design documents, and (2) design reports and design specifications that were required by NRC regulations to have RPE approval did so. Therefore, the NRC staff was unable to substantiate Concern 1.

CONCERN 2:

According to reports, State and Federal officials were not informed that unqualified and unlicensed workers were preparing design documents or conducting complex engineering calculations. These practices allegedly contributed to thousands of design

¹ The ITAAC identified in the combined license are those inspections, tests, analyses, and acceptance criteria necessary and sufficient, when successfully completed by the licensee, to provide reasonable assurance that the facility has been constructed and will operate in conformity with the combined license, the provisions of the Atomic Energy Act, as amended, and the Nuclear Regulatory Commission's rules and regulations.

² The NRC staff is currently evaluating the value of adding a specific step in NRC inspection procedure(s) that ensures a RPE has appropriately approved the document (if required by the applicable ASME Code) when inspectors are reviewing design reports and design specification documents.

³ Public documents can be found on the NRC's Agencywide Documents Management System (ADAMS) at <https://www.nrc.gov/reading-rm/adams.html>.

revisions, construction setbacks, schedule changes, and the ultimate demise of the entire project.

NRC Response:

Concern 2 alleges that WEC failed to inform regulators that unqualified and unlicensed workers prepared design documents and calculations. As discussed in its response to Concern 1, the NRC staff did not identify any indication from NRC inspection reports that unqualified individuals from WEC or its contractors were involved in the performance of work related to the AP1000 design, and did not find evidence to support that violations of NRC requirements related to RPE approval took place. As such, nothing indicates that WEC failed to comply with NRC notification requirements.

Additionally, the NRC's mission is to ensure adequate protection of public health and safety in the civilian use of radioactive materials. The NRC's construction inspection activities are accordingly focused on ensuring compliance with NRC requirements. If those requirements are met, the determination of whether to proceed with construction of a project, and the schedule for doing so, are ultimately business decisions for the licensee. Therefore, to the extent that Concern 2 alleges that schedule delays or the termination of a project inherently reveal violations of NRC requirements, the NRC staff was not able to substantiate Concern 2.