UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BLVD.
KING OF PRUSSIA, PA 19406-2713

May 31, 2016

Stephen B. Comley, Sr., Founder – We The People
A National Whistleblower Organization
PO Box 646
Rowley, MA 01969

Dear Mr. Comley:

I am responding to your email to Rich Barkley of my staff dated April 27, 2016 (ML16119A094)[1]. In that email, you raised several questions regarding problems identified with baffle bolting at Indian Point Unit 2, among other facilities. Since that time, baffle bolt failures have also been identified at Salem Unit 1.

Baffle bolt degradation and failures were first identified in foreign reactors as early as 1988. A copy of Information Notice 98-11 which discusses this observation can be obtained at the following web address: http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1998/in98011.html. Problems with baffle bolt degradation have also been identified in the US at DC Cook, H.B. Robinson, Point Beach and Prairie Island, among others, in recent years, but to a more limited extent than detected recently at Indian Point 2 and Salem Unit 1. While Seabrook could also experience such baffle bolt degradation, this problem has typically been observed in plants that have more time in service since the irradiation-assisted stress-corrosion cracking (IASCC) observed is a function of several factors, including the total amount of exposure to neutron radiation over time and number of plant thermal cycles. Also, Seabrook's baffle flow arrangement (i.e., water flow through the baffle region is upward) makes it less susceptible to this problem than baffle "downflow" plants like Indian Point and Salem. Other information on this subject can be found on the April 27, 2016, posting, "An Outage Twist: Degraded bolts at New York Nuclear Plant Warrant Attention," posted on the NRC blog at: https://public-blog.nrc-gateway.gov/2016/04/27/an-outage-twist-degraded-bolts-at-new-york-nuclear-plant-warrant-attention/.

Pressurized Water Reactors (PWRs) like Indian Point, Salem, and Seabrook typically examine baffle bolting using visual techniques in conjunction with their examination of reactor vessel internal core support structures completed every 10 years. These exams are completed in accordance with the American Society for Mechanical Engineering Boiler and Pressure Vessel Code. Owners of PWRs also periodically perform examinations of baffle bolts using ultrasonic testing methods when their facilities are in the period of extended operation to meet NRC requirements imposed as part of the NRC's issuance of a renewed operating license.

When the owners of Indian Point Unit 2 and Salem Unit 1 observed visual indications of bolting problems during recent refueling outages, the onsite NRC resident inspectors were made aware of the problem and followed the issue closely. Inspectors trained in materials science issues

[1] Designation in parentheses refers to an Agency-wide Documents Access and Management System (ADAMS) accession number. Documents referenced in this letter are publicly-available using the accession number in ADAMS.

from the NRC Region I Office and NRC headquarters staff were also brought in to closely evaluate and independently assess the adequacy of the licensees' bolt replacement activities, analyses for past and future operations, and the applicability of this information to similar plants. These activities are ongoing; our inspection results will be provided in publicly available inspection reports. Reports made to the NRC regarding the Salem and Indian Point baffle bolt problems at the Indian Point Unit 2 and Salem Unit 1 plants are available from our website at: http://www.nrc.gov/reading-rm/doc-collections/event-status/.

To date, we are unaware of any of the baffle bolting problems observed being attributed to counterfeit or substandard parts being used. In the case of Indian Point and Salem, we will not have more information on the material properties of the irradiated bolts until they can be tested in a special laboratory setting due to the very high radiation fields present. Gathering and evaluating operating experience information from additional PWRs that perform baffle bolt inspections using both visual and ultrasonic testing techniques and test additional bolting materials is an ongoing continuous process for the NRC and the nuclear industry.

As additional information becomes available in this matter, the NRC will publish our findings in publicly available inspection reports. I trust we have been fully responsive to your concerns.

Sincerely,

/RA/

Fred L. Bower, III, Chief
Division of Reactor Projects Branch 3

SST- 2016-0458

from the NRC Region I Office and NRC headquarters staff were also brought in to closely evaluate and independently assess the adequacy of the licensees' bolt replacement activities, analyses for past and future operations, and the applicability of this information to similar plants. These activities are ongoing; our inspection results will be provided in publicly available inspection reports. Reports made to the NRC regarding the Salem and Indian Point baffle bolt problems at the Indian Point Unit 2 and Salem Unit 1 plants are available from our website at: http://www.nrc.gov/reading-rm/doc-collections/event-status/.

To date, we are unaware of any of the baffle bolting problems observed being attributed to counterfeit or substandard parts being used. In the case of Indian Point and Salem, we will not have more information on the material properties of the irradiated bolts until they can be tested in a special laboratory setting due to the very high radiation fields present. Gathering and evaluating operating experience information from additional PWRs that perform baffle bolt inspections using both visual and ultrasonic testing techniques and test additional bolting materials is an ongoing continuous process for the NRC and the nuclear industry.

As additional information becomes available in this matter, the NRC will publish our findings in publicly available inspection reports. I trust we have been fully responsive to your concerns.

Sincerely,

/RA/

Fred L. Bower, III, Chief
Division of Reactor Projects Branch 3

DISTRIBUTION (via email)
DLew, RA (R1ORAMAIL Res)
MFlanders, DRA (R1ORAMAIL Res)
MScott, DRP **(**R1DRPMAIL Res**)**
DPelton, DRP (R1DRPMAIL Res)
RLorson, DRS (R1DRSMAIL Res)
FBower, DRP
RBarkley, DRP
MDraxton, DRP
PFinney, DRP, SRI
AZiedonis, DRP, RI
RVadella, DRP
COtt, DRP, AA
JBowen, RI, OEDO
RidsNrrPMSalem Res
RidsNrrDorlLpl1-2 Res

DOC. NAME: G:\DRP\BRANCH3\ACTION ITEMS\2016\2016-SST-0458 - S COMLEY EMAIL TO RBARKLEY_04-27-2016\COMLEY LETTER - MAY 2016_FINAL.DOCX

ADAMS Accession No. ML16153A122

☑ SUNSI Review		☑ **Non-Sensitive** ☐ Sensitive		☑ **Publicly Available** ☐ Non-Publicly Available	
OFFICE	RI/DRP	RI/DRS	RI/DRP	NRR/DE	RI/DRP
NAME	RBarkley	MGray	GDentel	JMcHale	FBower
DATE	5/19/16	5/ 25 /16	5/ 26 /16	5/ /16	5/ /16

OFFICIAL RECORD COPY