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May 19, 2016

The Honorable Stephen G. Burns
Chairman
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Burns:

Greenpeace is writing to you on a matter of potential safety significance for several operating U.S. nuclear power plants.

Following the detection of an anomaly in the Flamanville EPR reactor pressure vessel, the French nuclear company Areva informed the Autorité de Sûreté Nucléaire (ASN) that analysis of production records for its Le Creusot forge identified irregularities in around 400 components produced at the facility since 1965.[1] Fifty of these components appear to be in service in French nuclear power plants. However, at this time neither Areva nor ASN have published the whereabouts of the other 350 questionable components manufactured at Le Creusot. The ASN has instructed Areva to send the list of parts concerned as rapidly as possible, along with its assessment of the consequences for safety of the facilities. However, ASN's demand seems to apply only to French nuclear power plants.

These quality assurance problems in France should not surprise the U.S. Nuclear Regulatory Commission (NRC). The NRC had previously inspected the Le Creusot forge in August of 2009 in preparation for EPR construction that has never materialized. In what was a limited scope inspection, the NRC found that Le Creusot Forge was in violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 21, Reporting of Defects and Noncompliance. Although there are no Areva EPRs currently under construction in the US, the problems identified at Le Creusot forge could impact as many as 20 nuclear reactors in the US.

According to NRC documents and Areva's presentations, Le Creusot forge produced the reactor pressure vessels for Xcel Energy's Prairie Island nuclear plant. Additionally, Areva has provided several other components to US nuclear reactors that may be affected by the QA problems at the french forge. These components include reactor vessel closure heads, steam generators and pressurizers. According to Areva's presentations and press releases, reactor vessel heads were provided to:

Dominion's North Anna & Surry nuclear power plants,
Exelon's Three Mile Island nuclear power plant,
Entergy's Arkansas Nuclear One nuclear power plant,

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[1] http://www.french-nuclear-safety.fr/Information/News-releases/Irregularities-concerning-components-manufactured-in-its-Creusot-Forge-plant

Florida Power & Light's Turkey Point & St. Lucie nuclear power plants,
PSE&G's Salem nuclear power plant,
Indiana Michigan Power Co's DC Cook

Areva has also provided replacement steam generators to:

Xcel's Prairie Island nuclear power plant.
Union Electric Co.'s Calloway nuclear power plant,
Entergy's Arkansas Nuclear One nuclear power plant
Florida Power & Light's St. Lucie nuclear power plant
PSE&G's Salem nuclear power plant and
Exelon's Three Mile Island nuclear power plant

And replacement pressurizers to:

Florida Power & Light's St. Lucie nuclear power plant and
Dominion's Millstone nuclear power plant.

The disclosures from France raise the prospect that components manufactured at Areva's Le Creusot forge exceed the regulatory limit for carbon content as was the case with the Flamanville pressure vessel. However, these potentially flawed components provided by Areva are in operating US nuclear power plants not some partially constructed nuclear plant in France. How does the NRC intend to determine and verify the quality of these components and whether or not the vessels and reactor heads meet ASME codes?

I've been told by NRC staff that the U.S. Nuclear Regulatory Commission has received information from the French authorities regarding this potential safety problem. However, there is no information on this subject in NRC's ADAMS. Are there any other U.S. nuclear reactors that have components provided by Areva & Le Creusot forge? Does the NRC have any information on the quality of these components provided by AREVA, that perhaps resides in NRC's non-public version of ADAMS?

Given the seriousness of this issue and the potential implications for nuclear safety I look forward to a response to these questions and concerns at your earliest convenience.

Sincerely,

Jim Riccio
Senior Nuclear Analyst
Greenpeace

cc: The Honorable Kristine L. Svinicki, Commissioner
The Honorable William C. Ostendorff, Commissioner
The Honorable Jeffery M. Baran, Commissioner

CHAIRMAN Resource

From:	Jim Riccio <jim.riccio@greenpeace.org>
Sent:	Thursday, May 19, 2016 10:46 AM
To:	CHAIRMAN Resource; CMRSVINICKI Resource; CMROSTENDORFF Resource; CMRBARAN Resource
Subject:	[External_Sender] US nuclear plants & QA problems at Areva's Le Creusot forge
Attachments:	GP to NRC Burns re Le Creusot forge.pdf

Dear Chairman Burns & Commissioners,

Greenpeace's letter concerning quality assurance problems at Areva's Le Creusot forge and the potential safety implications for U.S. nuclear reactors is attached.

Thank you for your time & consideration,

Jim Riccio
Greenpeace