



February 3, 2017
NRC:17:008

Mr. Paul Krohn
U.S. Nuclear Regulatory Commission
Deputy Director, Division of Construction Inspection and Operational Programs
Office of New Reactors
11555 Rockville Pike
Rockville, MD 20852

NRC Request for Information on Creusot Forge Forgings in U.S. Components and Carbon Segregation

- Ref. 1: Letter, Mr. Gary Peters (AREVA NP Inc.) to Ms. Kerri Kavanagh (NRC), "NRC Request for Information on AREVA Creusot Forge Forgings in U.S. Components and Carbon Segregation Issues," NRC:16:035, December 15, 2016.
- Ref. 2: Letter, Mr. Gary Peters (AREVA NP Inc.) to Mr. Paul Krohn (NRC), "NRC Request for Information on AREVA Creusot Forge Forgings in U.S. Components and Carbon Segregation Issues," NRC:17:001, January 9, 2017.

In Reference 1, AREVA Inc. (AREVA) provided an Attachment A which listed U.S. nuclear power plants that ordered components fabricated with forgings from Creusot Forge (CF). In Reference 2, AREVA noted that the Attachment A list outlined components that were ordered but the actual number of forgings used may need to be updated by the prime contractor. AREVA has recently received information (Attachment B) from the prime contractor and has incorporated it in revision 1 of Attachment A in this letter. No other revisions to Attachment A are anticipated in the future.

Note that the prime contractor has reviewed and confirmed that all the components they delivered have Certified Material Test Reports (CMTR) with carbon values that met the ASME Code requirement at the time of fabrication.

Also note that some of the components referenced in Attachment A are not yet installed in the plant (ANO 2 Reactor Vessel Head) or are associated with cancelled projects (Atlantic 1 and 2, Bario Islote).

The letter sent to AREVA in Attachment B was provided under a proprietary statement and is considered to be proprietary by the supplier. Permission was given to transmit the letter to the NRC and the NRC is requested to abide by the noted proprietary requirements.

AREVA INC.

3315 Old Forest Road, Lynchburg, VA 24501
Tel.: 434 832 3000 - www.aveva.com

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NRD

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If you have any questions, please contact Victor Montalbano by telephone at (434) 832-3368 or by email at Victor.Montalbano@areva.com. You may also contact me by telephone at (434) 832-3945, or by e-mail at Gary.Peters@areva.com.

Sincerely,

A handwritten signature in cursive script that reads "Gary Peters". The signature is written in black ink and is positioned above the typed name and title.

Gary Peters, Director
Licensing & Regulatory Affairs
AREVA Inc.

cc: J. G. Rowley
Project 728

ATTACHMENT A, REVISION 1
CREUSOT FORGE FORGINGS IN U.S. COMPONENTS

2-Feb-17

Customer	Site	Prime	Fabricator	Forgings
Steam Generators				
FENOC	Beaver Valley 1	WH	ENSA	3 primary heads, 3 tubesheets, 3 conical shells, 3 elliptical heads
Luminant	Comanche Peak 1	WH	ENSA	4 primary heads, 4 tubesheets, 8 lower barrels, 4 conical shells, 8 upper barrels, 4 elliptical heads
Scana	VC Summer	WH	WH	3 primary heads, 6 lower barrels, 6 upper barrels
Southern	Farley 1 & 2	WH	ENSA	6 tubesheets, 12 lower barrels, 6 upper barrels
STP	South Texas 1	WH	WH	4 conical shells
STP	South Texas 2	WH	ENSA	4 tubesheets
TVA	Sequoyah 1	WH	Doosan	4 primary heads, 4 conical shells, 4 lower shells, 8 upper shells, 4 secondary heads
TVA	Watts Bar 1	WH	Doosan	4 primary heads, 4 lower shells, 4 conical shells, 4 elliptical heads

Reactor Vessel Heads

Entergy	ANO 2	WH	Doosan	1 monoblock
Dominion	North Anna 1	INC	St Marcel	1 RVCH closure head flange
Dominion	North Anna 2	INC	St Marcel	1 RVCH closure head flange
Dominion	Surry1	INC	St Marcel	1 RVCH closure head flange
FENOC	Beaver Valley 1	WH	Doosan	1 monoblock

Pressurizers

Dominion	Millstone 2	INC	St. Marcel	Upper and lower shells, upper and lower heads (Note 1)
NextEra	St. Lucie 1	INC	St. Marcel	Upper and lower shells, upper and lower heads (Note 1)

Reactor Vessels

Westinghouse	OPS & OQS (173" RPV)	WH	Creusot Loire	(Note 2)
Xcel Energy	Prairie Island 1 & 2 (132" RPV)	WH	MHI	2 transition rings, 4 core shells, 2 RPV flanges, 2 nozzle shells, 12 nozzles, 2 flanges
Westinghouse	Barrio Islote (Puerto Rico)	WH	Creusot Loire	Components delivered to Puerto Rico but not used. Plant cancelled.

CF = Creusot Forge
 INC = AREVA Inc.
 WH = Toshiba Westinghouse
 MHI = Mitsubishi Heavy Industries
 ENSA = Equipos Nucleares, SA
 Creusot Loire is a previous owner of Creusot Forge

Note 1: CF subcontracted upper and lower heads to be hot formed at Euroform from Industeel ingot. Machined, quenched, tempered and final machined at CF.
 Note 2: OPS and OQS are Atlantic 1 and 2 - offshore nuclear plants that were never delivered or completed. Contract was cancelled.