

## **NRR-PMDAPEm Resource**

---

**From:** Paul Gunter <paul@beyondnuclear.org>  
**Sent:** Monday, March 06, 2017 3:02 PM  
**To:** Banic, Merrilee  
**Cc:** Alan Muller; Burton/ Nancy; calta/ paxus; Day/Elena; Faye and Jerry Rosenthal; george crocker; Gray / Erica; Kraft/ Dave; Portzline/ Scott; Price / Scott; Tim Judson; Kamps/ Kevin; Gunter/Linda  
**Subject:** [External\_Sender] One additional document in supplement to the 2.206 petition  
**Attachments:** creusot\_us\_areva\_02032017\_rsp\_rai.pdf

Merrilee,

I am additionally providing a copy of AREVA's February 3, 2017 supplemental response to the NRC Request for Additional Information for Creusot components in US reactors.

We will be referencing this AREVA response at the Petition Review Board meeting.

Paul

--

Paul Gunter, Director  
Reactor Oversight Project  
Beyond Nuclear  
6930 Carroll Avenue Suite 400  
Takoma Park, MD 20912  
Tel. 301 270 2209  
[www.beyondnuclear.org](http://www.beyondnuclear.org)

**Hearing Identifier:** NRR\_PMDA  
**Email Number:** 3388

**Mail Envelope Properties** (CALTCGd=6BC6STZZDieq1XXgUtvf2aHM-fSmpW=yLWb-TsgwpA)

**Subject:** [External\_Sender] One additional document in supplement to the 2.206 petition  
**Sent Date:** 3/6/2017 3:02:16 PM  
**Received Date:** 3/6/2017 3:02:52 PM  
**From:** Paul Gunter

**Created By:** paul@beyondnuclear.org

**Recipients:**

"Alan Muller" <amuller@dca.net>  
Tracking Status: None  
"Burton/ Nancy" <NancyBurtonCT@aol.com>  
Tracking Status: None  
"calta/ paxus" <paxus.calta@gmail.com>  
Tracking Status: None  
"Day/Elena" <elena.day@gmail.com>  
Tracking Status: None  
"Faye and Jerry Rosenthal" <zipsbiz@gmail.com>  
Tracking Status: None  
"george crocker" <gwillc@nawo.org>  
Tracking Status: None  
"Gray / Erica" <veggielady@yahoo.com>  
Tracking Status: None  
"Kraft/ Dave" <neis@neis.org>  
Tracking Status: None  
"Portzline/ Scott" <sdportzline1@verizon.net>  
Tracking Status: None  
"Price / Scott" <sprice@apvonline.org>  
Tracking Status: None  
"Tim Judson" <timj@nirs.org>  
Tracking Status: None  
"Kamps/ Kevin" <kevin@beyondnuclear.org>  
Tracking Status: None  
"Gunter/Linda" <linda@beyondnuclear.org>  
Tracking Status: None  
"Banic, Merrilee" <Merrilee.Banic@nrc.gov>  
Tracking Status: None

**Post Office:** mail.gmail.com

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	483	3/6/2017 3:02:52 PM
creusot_us_areva_02032017_rsp_rai.pdf		86988

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**

**Recipients Received:**



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, Barro Isote).

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

YGD  
NRD

If you have any questions, please contact Victor Montalbano by telephone at (434) 832-3368 or by email at [Victor.Montalbano@areva.com](mailto:Victor.Montalbano@areva.com). You may also contact me by telephone at (434) 832-3945, or by e-mail at [Gary.Peters@areva.com](mailto: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
<b>Steam Generators</b>				
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
<b>Reactor Vessel Heads</b>				
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
<b>Pressurizers</b>				
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)
<b>Reactor Vessels</b>				
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.