



P21 91110  
Publicly Available

To: Carl Barlinger  
*I sent a copy to*

Westinghouse Engineering Technology  
Nuclear Safety Licensing

*Richardson  
also*

Date: November 8, 1991

*Please treat this*

To: Mr. Charles E. Rossi

*21163  
HE*

Sender: John S. Galembush

Company: USNRC

Bay Location: WEC ECE-412

Location: Rockville, MD.

Extension: 412-374-5036

Extension: \_\_\_\_\_

Return originals: Yes \_\_\_\_\_ No \_\_\_\_\_

Cover sheet + pages = 1 + 1 *as a Part 21*

USE BLACK PEN!

*Also, treat as  
Proprietary*

Comments: Attached for your information and use is a brief summary of our  
discussion of the situation in France whereby certain EdF  
plants have discovered cracking in reactor vessel head adaptors.

*until (W)*

*determines otherwise*

*Ernie*

*Per discussion with Carl, proprietary statement*

*is not necessary (later discussions  
with Westinghouse).*

*Jancy Campbell  
11/91*

Phone number of receiving equipment: 301-492-0260/0261

Nuclear Safety Licensing Telecopy Number

412/374-4011 or WIN 284-4011

Pitney Bowes 8050

~~Proprietary~~

**EdF Reactor Vessel Head Adaptor  
Issue Summary**

- Leaking reactor vessel head penetration discovered at Bugey 3 (Three loop / 900 Mwt) in France during approx. 3000 psi hydrostatic test associated with 10 year ISI.
- Leak at core location H-14 detected via microphones located on both top and bottom heads of the reactor vessel.
- Visual exam indicated presence of longitudinal (axial) cracks in the I.D. of the head adaptor tube.
- Head Adaptors manufactured from Inconel 600 material. Differences do exist between the French and Westinghouse fabrication processes.
- Examination of three other head adaptors at Bugey 3 indicated no cracking.
- Examination of 12 penetrations at each of two additional plants -- Bugey 4 and Fessenheim 1 -- was subsequently performed.
  - o Bugey 4 - One penetration with cracks found.
  - o Fessenheim 1 - One penetration with cracks found.
- At Bugey 3 EdF plans to remove the penetration at location H-14 for hot cell examination / root cause determination. Although the cause has not been determined, EdF suspects that the cracking may potentially be a stress corrosion cracking (SCC) related phenomenon. In addition, indications are that EdF plans a 100% inspection of the head adaptors at Bugey 3.

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To: Carl Berlinger  
(treat as a Part 21)  
and  
Jim Richardson



~~Treat as Proprietary  
until (W) says  
otherwise.~~

Westinghouse Engineering Technology  
Nuclear Safety Licensing

Topics sent to  
Berlinger &  
Richardson

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Per John Galembush on  
11/14/91, the French have  
said this does not need to  
be treated as proprietary

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E Rossi

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