

M-17

11/15

RES Management Briefing

*Indications in the Doel 3 (Belgium) Reactor
Pressure Vessel*

Gary L. Stevens

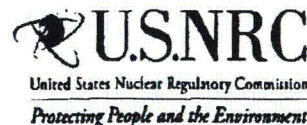
Sr. Materials Engineer

Carol Nove

Materials Engineer

RES/DE/CIB

October 25, 2012



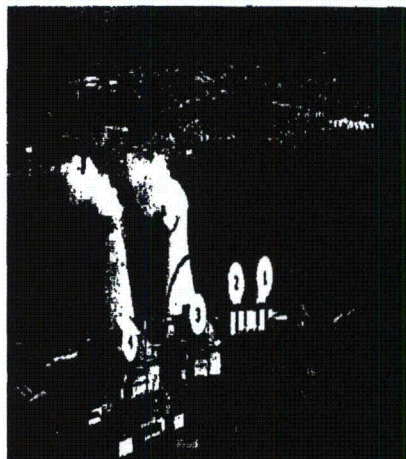
Background



United States Nuclear Regulatory Commission

Protecting People and the Environment

- Doel 3 is a 1,006 MWe, 3-loop, Framatome-supplied PWR in the Port of Antwerp near the Dutch-Belgian border
 - Began operation in 1982
 - Designed to ASME Code, Section III, 1974 Addenda
 - Reactor pressure vessel (RPV) shell is made of forged rings
 - The raw material was supplied by Krupp
 - The forgings were manufactured by Rotterdamsche Droogdok Maatschappij (RDM) in 1974-1975
 - RPV was installed in 1978



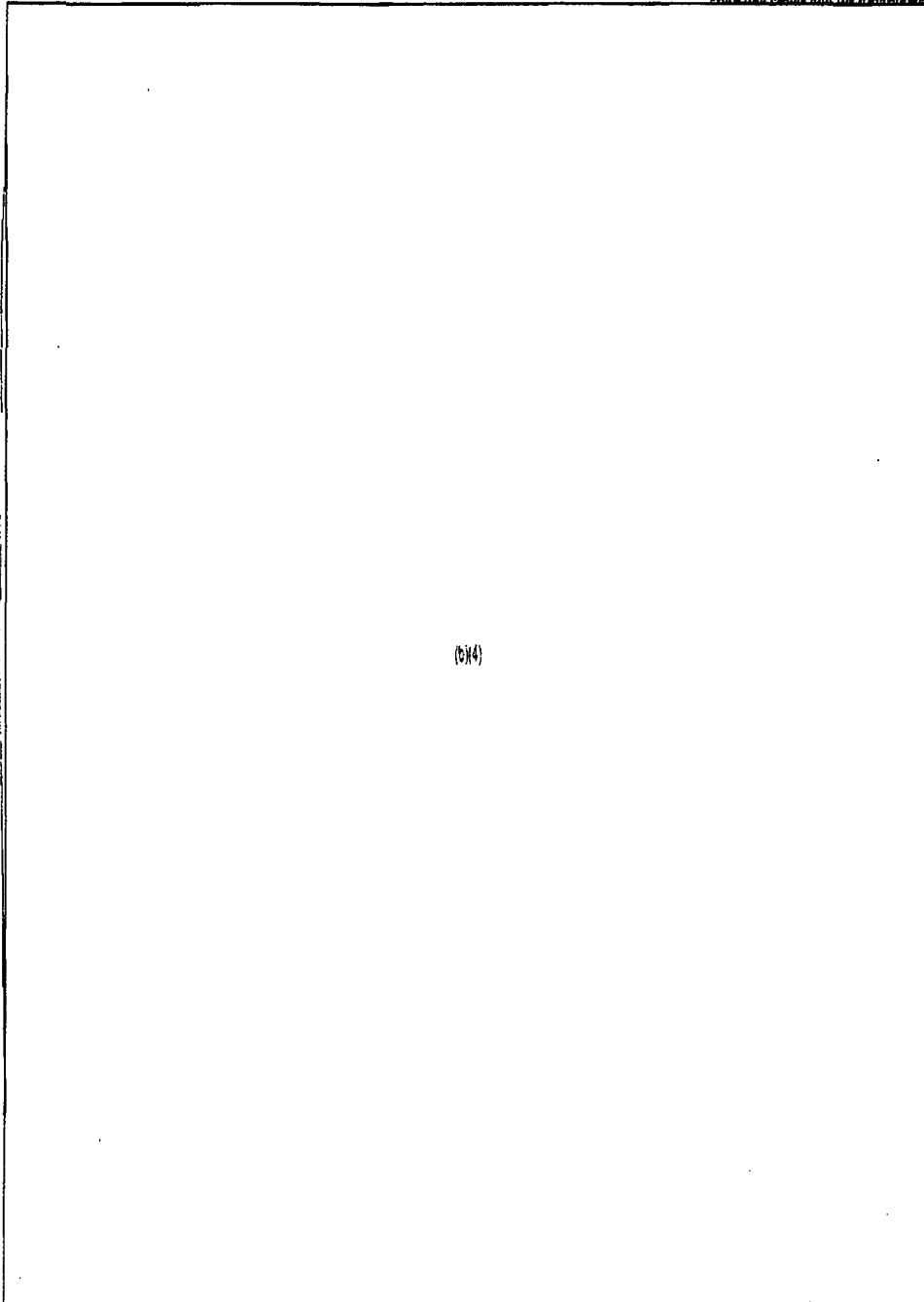
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2012 Inspection Results



United States Nuclear Regulatory Commission

Protecting People and the Environment



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2012 Inspection Results (cont'd)



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2012 Inspection Results (cont'd)

USNRC

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2012 Inspection Results (cont'd)

UIC NDC

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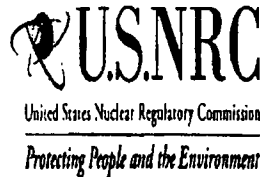
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2012 Inspection Results (cont'd)



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Belgian Request for NRC Support

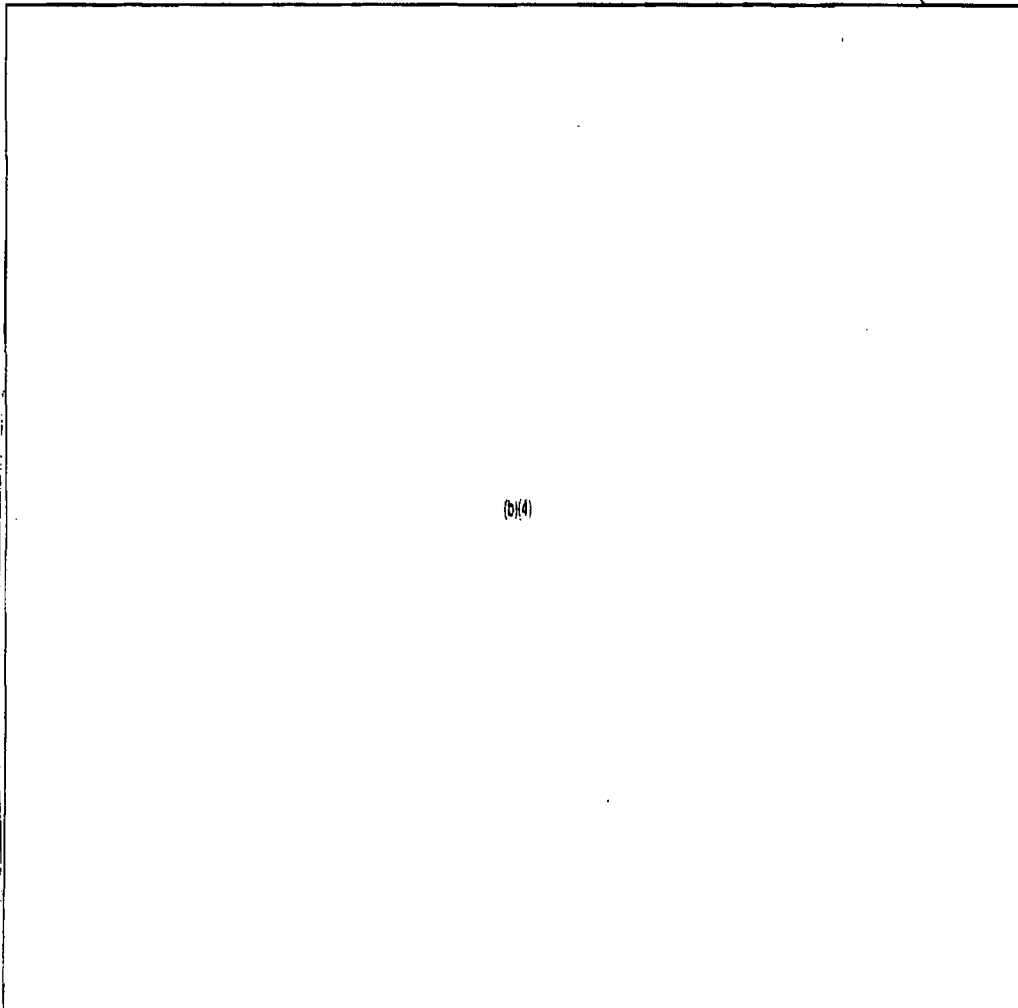


- On 8/28/2012, the Federal Agency for Nuclear Control (FANC) requested NRC support (ML1224A335)
- NRR requested RES support (ML1224A258)
- RES agreed to support NRR request (ML1224A108)
- NRC support to FANC
 - International Expert Review Team
 - Mark Kirk, RES/DE/CIB – meetings to occur later in 2012
 - NRC participation on three technical expert working groups
 - Working Group #1: NDE (Carol Nove, RES/DE/CIB)
 - Working Group #2: Metallurgy (Jeff Poehler, NRR/DE/EVIB)
 - Working Group #3: Fracture Mechanics (Gary Stevens, RES/DE/CIB)
 - NRC liaison to all 3 Working Groups: Bob Hardies, NRR/DE
 - Working Group meetings were held on 10/15/12, 10/22/12, and 10/29/12

Working Group #1 Meeting



- Overview of findings in the reactor shells of Doel 3 and Tihange 2
- Presentations by WG members on recent experience:



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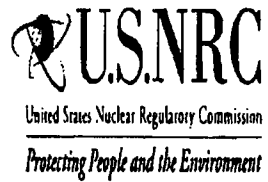
Working Group #1 Meeting – Civa Simulation



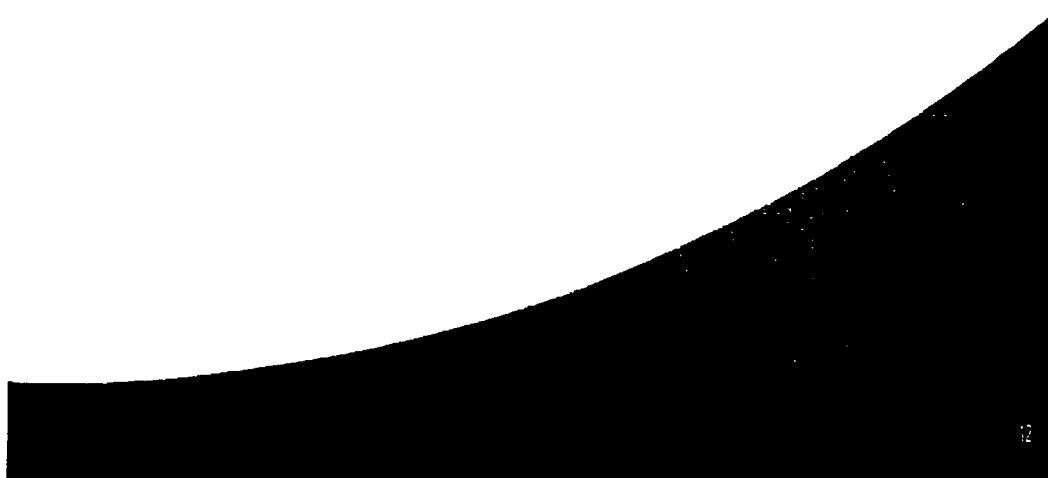
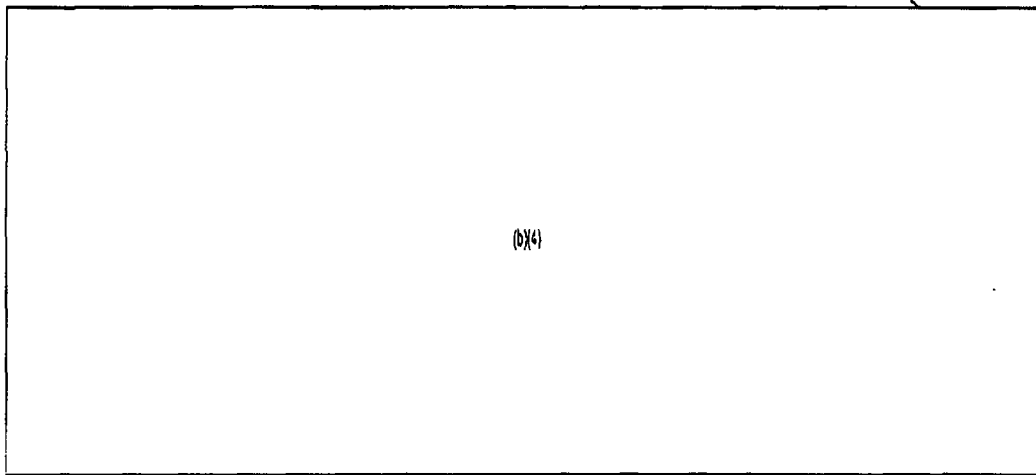
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Working Group #2 Meeting



- Jeff Poehler (NRR/DE/EVIB) attended



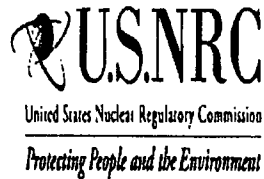
Working Group #3 Meeting



- Gary Stevens (RES/DE/CIB) attended
- Gary to provide....

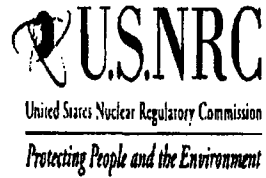


Industry Actions

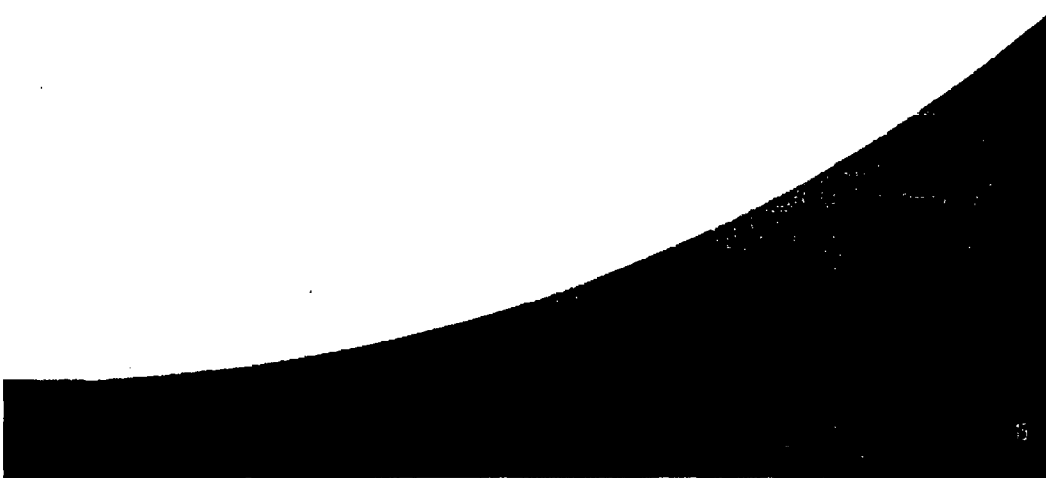


- On 10/10/12, EPRI held a debrief call with NRC with regards to their activities associated with Doel 3
- EPRI coordinated a visit of 6 U.S. representatives to Belgium on 9/19/12
 - The meeting was requested by WANO and Electrabel
- EPRI summarized the meeting
 - It was apparent from their summary that NRC has more information than EPRI
- EPRI has no current plans to return to Belgium
 - They will continue correspondence on NDE issues, primarily to understand the ramifications for U.S. plants

Industry Actions (cont'd)



- EPRI/industry has not identified any actions for U.S. plants yet
 - They will continue to monitor and review results and then make informed decisions when the timing is right



Results of NRR/RES Debrief



- Later.....



Next Steps



- Later.....

