

M-10

NRC INTERNATIONAL TRAVEL TRIP REPORT

Date: October 22, 2012
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Subject: FANC Meeting in Brussels, BELGIUM Regarding the Indications Found in the Doel Unit 3 Reactor Pressure Vessel

Dates of Travel: October 14, 2012 – October 17, 2012 (Meeting date = October 16, 2012)

Countries/Organizations Visited: BELGIUM/ Federal Agency for Nuclear Control (FANC)

Subjects Discussed: The purpose of this trip was to support FANC's request for NRC participation¹ on three technical expert working groups in support of Belgian nuclear safety authority's assessment of the indications recently detected in the beltline shell region of the Doel Unit 3 reactor pressure vessel (RPV). Similar indications were also found at Tihange Unit 2. This objectives of these working group meetings were:

- Share information and experience between nuclear safety authorities on regulatory approaches and actions in relation with the Doel 3 issue.
- Taking into account the lessons learned from the Doel 3 issue, discuss actions to be considered in other countries.
- Provide technical advice to Belgian nuclear safety authorities (FANC, Bel V, AIB Vinçotte) on specific topics / questions related to the Doel 3 & Tihange 2 RPV issue. However, the actual evaluation of potential continued operation of the Doel 3 and Tihange 2 reactors remains the responsibility of the Belgian nuclear safety authorities.

The meeting consisted of three expert working groups composed of expert members proposed by foreign nuclear safety authorities or related organizations (NRC, IAEA, NEA, JRC Petten, etc.) that were willing to participate in this issue. The three expert working groups were as follows:

- Expert Working Group 1 - Non-destructive Examination Techniques, NRC Participant = Carol Nove (RES/DE/CIB)

¹ Relevant ADAMS Accession Nos.: FANC Request for NRC support (ML1224A335), NRR request for RES assistance (ML1224A258), and RES response to NRR request for assistance (ML1224A108).

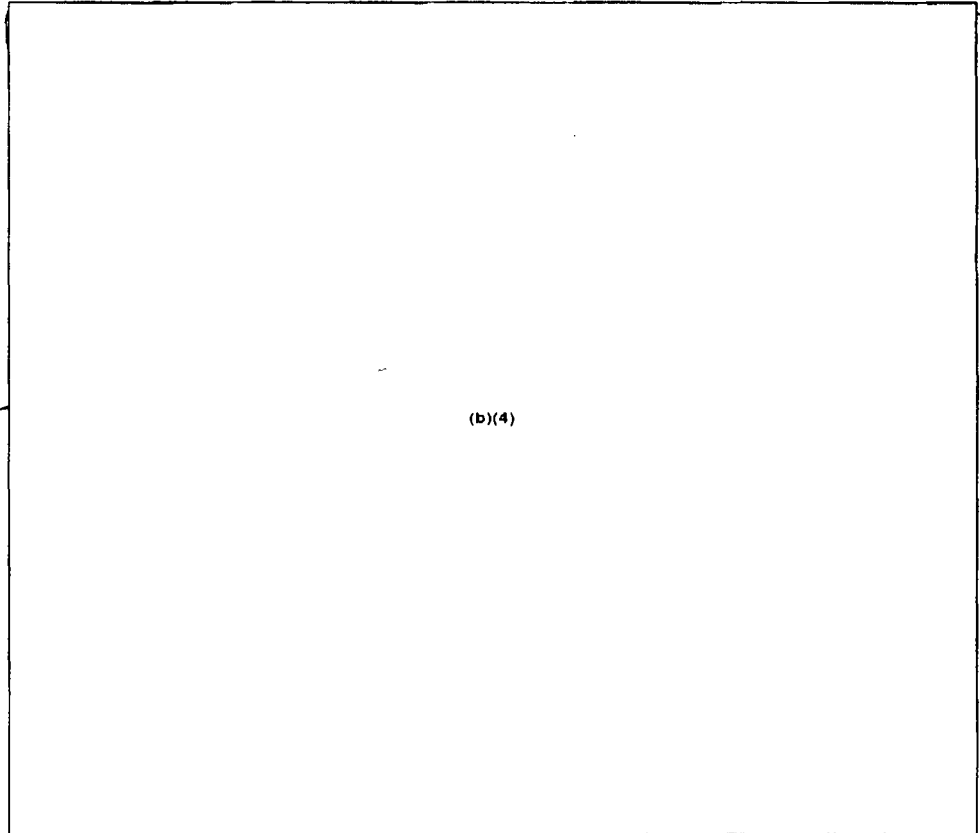
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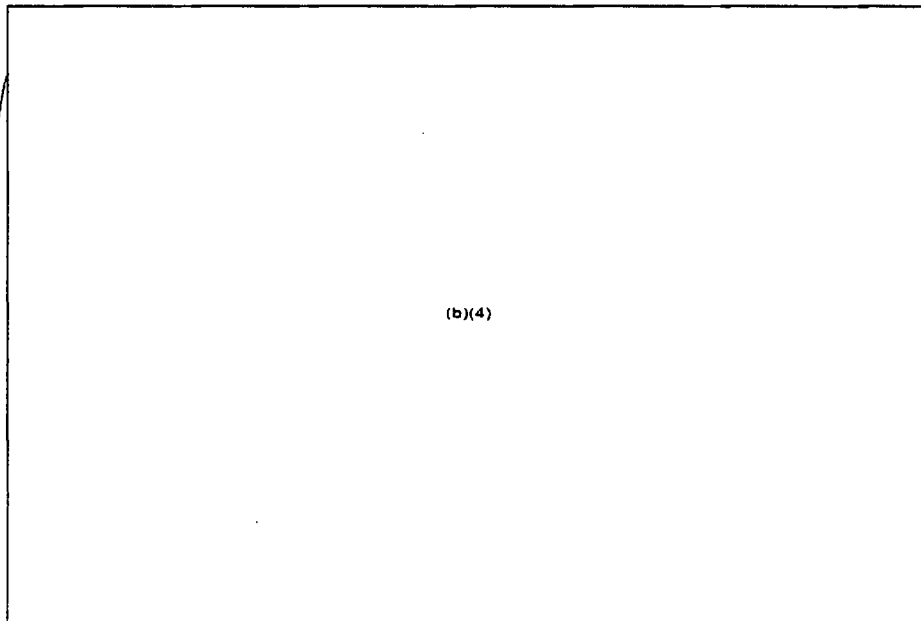
- Expert Working Group 2 - Metallurgical Origin / Root Causes of the Flaw Indications, NRC Participant = Jeff Poehler (NRR/DE/EVIB)
- Expert Working Group 3 - Structural Mechanics and Fracture Mechanics – Approach for Justification, NRC Participant = Gary Stevens (RES/DE/CIB)

In addition, Bob Hardies (NRR/DE) acted as an NRC Liaison to all three working groups.

The chairman and technical secretary for each working group were provided by Belgian nuclear safety authorities.

This portion of this trip report summarizes the Working Group 3 (WG3) portion of the meetings, in which Gary Stevens was the NRC participant.





Desired Outcome: FANC's desired outcome for the WG3 meeting was to provide support to the Belgian nuclear safety authorities for defining essential questions that the Belgian licensee must address to satisfy safe continued operation of the Doel 3 plant.

For the NRC, the desired outcome of attendance at the WG3 meeting was to obtain information such that the NRC can determine the importance of the flaws detected at Doel 3 and Tihange 2 that can be used to assess the importance of this issue on the U.S. fleet of reactors.

Results Achieved: The following results were achieved from NRC attendance at the WG3 meeting:

- NRC gained the perspective on how the Belgian nuclear regulator is managing the Doel 3 issue for their plants.
- The NRC gained details of the Doel 3 issue, including technical assessments performed to assess adequacy of the indications detected in the Doel 3 RPV. The reports summarizing these technical assessments are available, but are not included in this trip report. (b)(5)

(b)(5)

- The NRC gained insight on what actions other countries have taken, or are considering, in response to the Doel 3 findings and the results of those actions

(b)(4)

(b)(4)

- The NRC became familiar and gained a working relationship with other international members of WG3.

Summary of Trip: Gary Stevens (RES/DE/CIB) visited the FANC Office in Downtown Brussels on Tuesday, October 16th, 2012 to attend the WG3 meeting.

WG3 participants and attendees are shown in **Attachment 1**.

The meeting agenda is included as **Attachment 2**.

The WG3 Chairman, Guy Roussel (BEL V), began the meeting by defining the meeting objectives (see **Attachment 3**), followed by introductory remarks (see **Attachment 4**).

The introductory remarks were followed by two presentations on national regulatory views on structural integrity:

- Sweden: Björn Brickstad (see **Attachment 5**)
- UK : John Highton (see **Attachment 6**)

The remainder of the morning session of the meeting was devoted to presentations on views provided prior to the meeting by several WG3 members on topics identified prior to the meeting by the Chairman. The topics are identified in **Attachment 12**. The following presentations were made:

- C. Anta Redondo (Spain, see **Attachment 7**)
- S. Crombez (France, see **Attachment 8**)
- K. Hasegawa (Japan, see **Attachment 9**)
- L. Lindhorst (Netherlands, see **Attachment 10**)
- I. Simonovski (European commission, see **Attachment 11**)

After lunch, the meeting was concluded with an open discussion of the topics provided by the Chairman ahead of the meeting (see **Attachment 12**).

Additional Information: None.

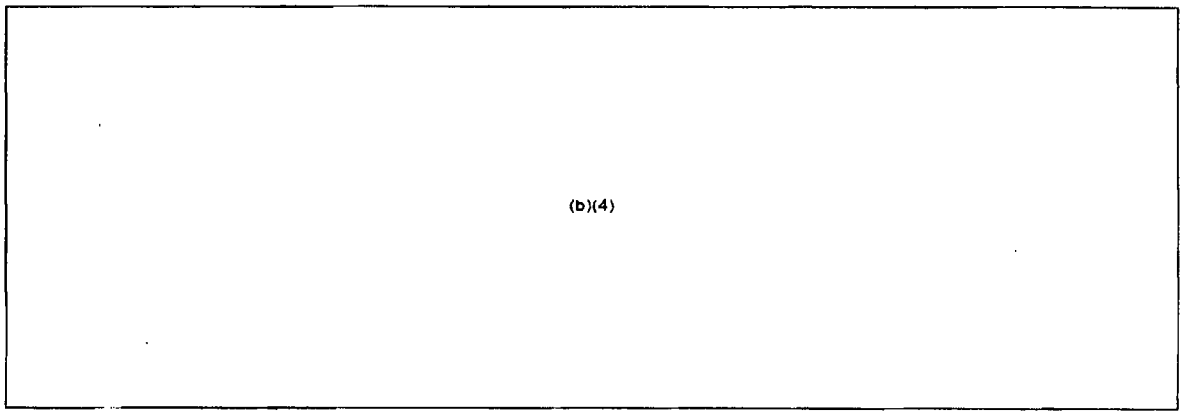
Pending Actions/Planned Next Steps for NRC: FANC has requested that the NRC support another meeting of WG3 in late November or early December. RES and NRR will discuss this request subsequent to debrief meetings with NRR and RES management.

The following summarizes the key actions from this meeting:

- NRC (Gary Stevens) to provide recent ASME Section XI Interpretation/Code Action on flaw proximity rules to WG3 Chairman
 - STATUS: COMPLETE (10/18/2012).
- NRC to attend another meeting of WG3 in late November or early December
 - STATUS: TBD.

Points for Commission Consideration/Interest: None.

Attachments: The following attachments are included with this trip report:



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