

A-25  
**Kusnick, Joshua**

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**From:** Csontos, Aladar  
**Sent:** Tuesday, September 11, 2012 2:31 PM  
**To:** West, Stephanie  
**Subject:** FW: RES response to research assistance request NRR-2012-005.doc  
**Attachments:** 2012-08-30 - RES response to research assistance request NRR-2012-005.doc

-----Original Message-----

**From:** Kirk, Mark  
**Sent:** Thursday, August 30, 2012 3:55 PM  
**To:** West, Stephanie  
**Cc:** Dion, Jeanne; Csontos, Aladar; Stevens, Gary; Nove, Carol; Kirk, Mark  
**Subject:** RES response to research assistance request NRR-2012-005.doc

Stephanie -

The attached letter is in reply to the e-mail chain below. Could you please check my formatting and circulate this as a concurrence package?

Please let me know if you need further information.

Thanks,

mark

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**From:** Johnson, Kevin  
**To:** Dion, Jeanne  
**Cc:** Rini, Brett; Csontos, Aladar  
**Sent:** Tue Aug 28 10:52:19 2012  
**Subject:** RE: Research Assistance Request Good Morning!

A new action has been assigned to your Division:

ATMIS: 2012558

**Subject:** Research Assistance Request to assess the implications of the indications discovered in the Doel 3 reactor pressure vessel forgings to domestic reactor pressure vessel forgings NRR-2012-005 (RAR)

Update the FO - 9/18/2012

Please forward Patrick Hilland email to your division AAs to add to ADAMS, that will be considered our incoming for the record.

Thank you.

Kevin

**One Team/One Goal**

Kevin D. Johnson  
Research Information Specialist  
Office of Nuclear Regulatory Research  
RES/PMDA/HCCB  
Email: [Kevin.Johnson@nrc.gov](mailto:Kevin.Johnson@nrc.gov)  
O6AO6a  
Office: 301-251-7665  
Cell: (b)(6)

From: Dion, Jeanne  
Sent: Tuesday, August 28, 2012 8:21 AM  
To: Johnson, Kevin  
Cc: Rini, Brett; Csontos, Aladar  
Subject: FW: Research Assistance Request

Hi Kevin,  
Can you please ticket DE/Al Csontos to formulate an email response regarding NRR's research assistance request by September 18th?  
The email will be from Mike Case to Pat Hiland.

Thanks,  
Jeanne Dion  
Technical Assistant  
U.S. Nuclear Regulatory Commission  
Office of Nuclear Regulatory Research  
Division of Engineering  
[Jeanne.dion@nrc.gov](mailto:Jeanne.dion@nrc.gov)  
301-251-7482

From: Case, Michael  
Sent: Tuesday, August 28, 2012 7:20 AM  
To: Dion, Jeanne  
Cc: Rini, Brett; Sheron, Brian; Uhle, Jennifer; Richards, Stuart; Csontos, Aladar  
Subject: FW: Research Assistance Request

Hi Jeanne. Can you work with the front office and ticket this back to us (CIB) for a response. Since it's a RAR, we can respond at the division level.

From: Hiland, Patrick  
Sent: Monday, August 27, 2012 3:42 PM  
To: Case, Michael  
Cc: Richards, Stuart; Fairbanks, Carolyn; Rosenberg, Stacey; Cheok, Michael; Hardles, Robert; Dorman, Dan; Boger, Bruce; Evans, Michele  
Subject: Research Assistance Request

The Office of Nuclear Reactor Regulation (NRR), Division of Engineering is requesting that the Office of Nuclear Regulatory Research (RES), Division of Engineering provide research assistance to assess the implications of the indications discovered in the Doel 3 reactor pressure vessel forgings to domestic reactor pressure vessel forgings. Specifically, NRR is requesting technical assistance in the areas of nondestructive examination (NDE) and deterministic and probabilistic fracture mechanics

In the area of NDE, NRR request technical expertise to assess the procedures, techniques, equipment, standards, qualifications, inspections, acceptance criteria and other relevant NDE variables used to examine the Doel 3 reactor pressure vessel forgings. This assistance may include contact with the licensee (Doel 3), the Belgian nuclear regulatory authority and possibly contractors. Travel to Belgium may also be necessary.

In the area of fracture mechanics, NRR requests assistance to support the Belgian regulator, FANC. FANC has requested the participation of Dr. Mark Kirk in an expert peer review panel. The peer review panel would assist the regulator in assessing the deterministic and probabilistic fracture mechanics analyses being prepared by the licensee for Doel 3. Telephone, video conference, and in-person meetings in Belgium would likely be necessary for this effort.

Also in the area of fracture mechanics, NRR requests assistance to perform analyses related to the implications of similar indications (to Doel 3) in domestic reactor pressure vessel forgings. This effort is currently less well defined. The industry has proposed performing both deterministic and probabilistic fracture mechanics analyses of generic reactor pressure vessel forgings with indications similar to those discovered in Doel 3. If the industry performs these analyses, RES would perform confirmatory analyses. In the event that industry did not perform analyses of hypothetically flawed vessels, this request would be for RES to perform research to verify the adequacy of current ASME Section III acceptance criteria for laminar flaws in reactor pressure vessel forgings by performing appropriate deterministic or probabilistic fracture mechanics analyses.