

Q&A for Chairman Macfarlane on Cracks Found in Belgian Nuclear Plant Reactor Vessel
For the August 14, 2012, National Press Club Media Roundtable

Q: How is the NRC responding to the discovery of cracks in a Belgian nuclear plant's reactor pressure vessel (RPV) and the news that as many as 10 US plants have RPV's manufactured by the same vendor?

A: We are doing two things:

1. We are sending one of our top engineering experts on reactor vessel materials to Brussels to meet Thursday (August 16, 2012) with regulators from Belgium and other countries with plants that used the same vendor. This is a fact-finding mission to learn more about the inspection at the Doel-3 reactor and its findings. I want to stress that the information we have at this stage is preliminary and incomplete – we don't yet know the full nature and extent of the problem, if any. We should know more when our expert reports back on Monday.
2. We are attempting to verify which US plants have pressure vessels from the same vendor. Our databases contain information that can be sorted several different ways, i.e. down to component piece. So, we are asking the 10 most likely owners to verify for us whether their pressure vessels were manufactured by the Dutch company that made the vessel for Doel-3.

Q: Will you order the US plants to shut down for inspections?

A: It's too early to make any decision on what to do. We do not yet know the full nature and extent of the Belgian reactor's condition. We want to know more about the tests that were performed and any additional inspections that the Belgian regulators may be planning. At this time, there is no information that would warrant further action on our part.

Background information

- During a scheduled ultrasound exam of Belgium's Doel-3 reactor, the owner identified anomalies or "indications" in the vessel base metal. We understand the scheduled examination used a new technique and identified anomalies in unexpected areas; therefore, the request by Belgium for assistance in characterizing the significance.
- It is premature to call these indications "cracks." They are best characterized as "ultrasonic indications" or "flaw indications." The subtle difference is that they are reflections of sound energy during an ultrasonic examination while a crack is just what it sounds like. The analogy in medical imagery is when an x-ray shows a mass, a follow up technique is applied to see whether the mass is benign, malignant, or something else altogether.
- The Belgian reactor was not shut down because of this problem; the potential indications were discovered during a planned inspection during a refueling and maintenance outage.
- Dominion Nuclear confirmed to Platts that their four Virginia reactors (North Anna 1&2, Surry 1&2) have RPVs from the Dutch vendor.
- The expert going to Brussels is **Robert Hardies**, senior technical advisor for materials science in the Division of Engineering, Office of Nuclear Reactor Regulation (NRR).