From: Couture, Gerard F.
To: John Hayes;
Subject: RE: draft RAI on pipe cutting
Date: Monday, May 11, 2009 6:27:47 PM

Jack,

Please refer to page 4 of the characterization plan.

The sentence in the Characterization Plan just before the one that you quoted in your email states: "....estimation methods may be employed.....provided the methods do not result in the potential for uncontrolled release of any potential hold up or represent the potential for any other unanalyzed condition." The report also describes how there is no potential credible criticality scenario.

This should already have answered the question.

Sections 5 and 6 of this same document describe the radiological precautions and the industrial safety precautions in detail. (Potential dose during cutting operations, air monitoring, TLD's, electronic dosimeters, RWP's, etc.)

I do not know what additional information we could be expected to provide before getting into the building to perform the surveys. Any further clarifications would be so detailed that we need the "as found" configuration information provided by the surveys to ensure they are correct. Our Criticality safety program is very robust and there is no feasible/credible/potential means to assemble the ANS-8.1 SUB-CRITICAL based value of Uranium Oxide for 5% Enriched Uranium. This is referenced in the technical basis document we have already docketed. For 5% enrichment the 1640 Gram U-235 value corresponds to approx 37.2 kg of Uranium Oxide. So, yes, if we approached the 37.2 kg UO2 value in a defined area, we would stop, actually implement one of our existing control schemes from a previously reviewed and issued NCSA, or we would write a new NCSA before proceeding. In no case would we allow a situation to exist where a criticality would be credible. That would be allowing a situation to be entered which would be outside of our submitted technical basis.

Any control we establish would be defense in depth and can include things like;

- Ensuring that the immediate area is free of accumulation points with volume larger than a max safe volume prior to cutting a pipe. (as the pipes are already small bore safe diameter)
- Ensuring that pipe caps/covers are available and used in the event of

discovery of a significant accumulation of material in a cut pipe to avoid spills (primarily to limit contamination)

- Ensuring that the surrounding area is free of pools of water.

However, these may or may not be needed and may or may not be the right controls. Please allow the safety professionals in the field to determine the appropriate control scheme as required and authorized by our license mandated Nuclear Criticality Safety program. That is specifically why the statement is included per Criticality Safety Engineer direction.

We can talk more tomorrow on this if you would like.

Gerry

From: John Hayes [mailto:John.Hayes@nrc.gov]
Sent: Monday, May 11, 2009 6:41 AM
To: Couture, Gerard F.
Subject: RE: draft RAI on pipe cutting

Gerry,

I guess the previous transmittal was ambiguous. Ooops!

Jack

Hematite Exemption Request - NCS RAI

1. In the December 8, 2008 submittal, "Characterization Plan for Estimating the Amount of U-235 as Residual Contamination within the Process Buildings," the licensee states that "...additional U-235 mass estimation methods may be employed under the direction of a Criticality Safety Engineer...this may include cutting piping..." Please provide more specific details regarding the use of these additional methods with respect to criticality controls. If there is a potential for material to spill out of a pipe as a result of cutting, is there a threshold where additional controls would be required?

10 CFR 70.22(a)(7) states that the license application must contain a description of the equipment and facilities which will be used by the applicant to protect health and minimize danger to life or property and 70.22 (a)(8) states that the license application must contain proposed procedures to protect health and minimize danger to life or property.

From: Couture, Gerard F. [mailto:CouturGF@westinghouse.com]
Sent: Monday, May 11, 2009 6:25 AM
To: John Hayes
Subject: RE: draft RAI on pipe cutting

Attachment did not come through.....

From: John Hayes [mailto:John.Hayes@nrc.gov]
Sent: Monday, May 11, 2009 5:56 AM
To: Couture, Gerard F.
Subject: draft RAI on pipe cutting

Gerry,

Included with this email is a draft Request for Additional Information (RAI) associated with your proposed pipe cutting in the process buildings. If the RAI is clear as to what information the staff is requesting please indicate via email or a telephone call. However, if there is ambiguity regarding the staff's request or if the information is already contained in submittals you have made on the Hematite docket which the staff may have overlooked, then also indicate via an email or a call. If necessary, we will schedule a call.

Thanks,

Jack