HLWYM HEmails

From: Osvaldo Pensado
Sent: Thursday, November 03, 2005 6:50 PM
To: James Winterle; Randall Fedors; 'SStothoff@swri.org'; Keith Compton; Chandrika Manepally; Scott Painter
Cc: Richard Codell; Jin-Ping Gwo; Gordon Wittmeyer; Roberto Pabalan
Subject: RE: SCRs for the seepage-drift degraded scenario

There will be crevices there, occluded regions that could promote localized corrosion. In the TPA we assume a WP failed if penetrated by localized corrosion, independently of the LC sites. Thus, the current model is okay to deal with this situation.

The question is more for Bobby Pabalan ... is the chemistry arising in the rubble similar than the open drift chemistry? We may need to define a new chemistry range for the contact rubble scenario.

-----Original Message-----
From: James Winterle [mailto:jwinterle@cnwra.swri.edu]
Sent: Thursday, November 03, 2005 4:18 PM
To: opensado@cnwra.swri.edu; 'Randall Fedors'; SStothoff@swri.org; 'Keith Compton'; 'Chandrika Manepally'; 'Scott Painter'
Cc: 'Richard Codell'; jxg4@nrc.gov; 'Gordon Wittmeyer'
Subject: RE: SCRs for the seepage-drift degraded scenario

Osvaldo,
Your proposal for accounting for seepage through the rubble sounds reasonable and achievable. I can envision some possiblilities for the factor you propose to be greater than 1, not just a reduction. For now, we could incorporate it into the abstraction, set it equal to 1.0 for the basecase, and await results of more detailed analyses to determine what value or range might be more appropriate. Also, it has been mentioned that rubble in contact with the cannisters would provide contact points for liquid water that might not be flowing -- could there be any effect on corrosion rates if each package in a degraded drift has 100 or more contact points with wet rock?

--Jim

-----Original Message-----
From: Osvaldo Pensado [mailto:opensado@cnwra.swri.edu]
Sent: Thursday, November 03, 2005 11:41 AM
To: Randall Fedors; SStothoff@swri.org; Keith Compton; Chandrika Manepally; Scott Painter
Cc: Richard Codell; jxg4@nrc.gov; James Winterle; Gordon Wittmeyer
Subject: SCRs for the seepage-drift degraded scenario

Please look at the attached SCR. There are action items outlined:

Chandrika: Provide two sets of data for the file drythick.dat for the open drift and degraded drift scenarios
Randy: Define Fmult as a function of percolation rate. What is that function?

All others:
This is my proposal for the drift degradation scenario. It appears that the rubble will cause dispersion of seepage reaching the "drift". The net effect of the rubble appears to be a reduction in the volumetric flow impinging on waste packages. I propose introducing a new parameter to represent this potential decrease. This factor will only be activated if the drift degradation scenario is activated. I know my proposal is not original, but in the end, it represents the final outcome: a reduction in volumetric flow. Besides, this simple model would be easy to implement. The factor could be activated at the initial time of drift degradation computed by MECHFAIL.

Offline analyses could be used to support the selection of a distribution, based on rubble size distribution. Experimental results could backup this distribution too.

If you agree with my proposal, I will add it to the SCR (it is not yet there). Otherwise, propose suggestions.

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Osvaldo Pensado, Ph.D.
Senior Research Scientist, SwRI
6220 Culebra Road. San Antonio TX 78238
(210) 522 6084
Fax: (210) 522 6081
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From: Osvaldo Pensado

Created By: opensado@cnwra.swri.edu

Recipients:
"Richard Codell" <Richard.Codell@nrc.gov>
Tracking Status: None
"Jin-Ping Gwo" <Jin-Ping.Gwo@nrc.gov>
Tracking Status: None
"Gordon Wittmeyer" <gwitt@cnwra.swri.edu>
Tracking Status: None
"Roberto Pabalan" <rpabalan@cnwra.swri.edu>
Tracking Status: None
"James Winterle" <jwinterle@cnwra.swri.edu>
Tracking Status: None
"Randall Fedors" <Randall.Fedors@nrc.gov>
Tracking Status: None
"'SStothoff@swri.org'" <SStothoff@swri.org>
Tracking Status: None
"Keith Compton" <Keith.Compton@nrc.gov>
Tracking Status: None
"Chandrika Manepally" <cmanepally@cnwra.swri.edu>
Tracking Status: None
"Scott Painter" <spainter@cnwra.swri.edu>
Tracking Status: None

Post Office: cnwra.swri.edu

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