

WVNSCO May 2003 E-Mails Related to Possibly Flooding Vitrification facility Pit

From: Tom Kocialski [Tom.Kocialski@wvnsco.com]  
Sent: Thursday, May 08, 2003 2:14 PM  
To: Dan Carl; Fred Hanford Damerow  
Cc: Daniel Westcott; Jim Paul; Karen Malone; Tom Kocialski  
Subject: RE: Vit Flushing Question(s)

\*\* Low Priority \*\*

Thanks, gents, I got what I paid for!

For what it's worth, we did "spray down" accessible portions of cell walls and vessel exteriors with water. No water spraying of the floors was conducted nor was specific tooling developed to do so. We did (unintentionally) do a little minor flooding of the pit floor with water. We are apparently assuming that a significant portion of the remaining inventory is on the pit floor, under the vessels and adjacent to nooks and crannies of support structures.

I will summarize your combined recollections as follows, with your permission:

Acid flooding of the pit floor was not planned. Concerns over attacking the integrity or functions of the support structures, as well as concerns over processing the volume of acid used, motivated against that option.

Dan Westcott:

Since acid flooding was apparently not planned, is it now necessary to include it in the retrospective based on the concerns above? Recall our discussion that if we were to say "flood the pit with acid, no matter what the consequences, and don't worry about producing a repository-acceptable waste canister," this option might have been considered.

Tom

>>> "Damerow, Frederick" <fwdamero@bechtel.com> 05/08/03 12:08PM >>>  
Both of your recollections are more complete than mine. Trying to guess back at my thinking I would have had concerns about flooding of the pit with nitric acid, from the perspective of attacking the support structures as well as managing the liquid. Using oxalic would have been problematic from a waste qual perspective. I would not have expected flooding with water to have any effect. So that would have left spray systems. I know we wanted to get at vessel exteriors and I wanted us to try to direct spray underneath vessels as well. The goal would have been dislodge and flow toward the sump.

Fred.

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

From: Petkus, Lawrence  
Sent: Wednesday, May 07, 2003 1:08 PM  
To: Carl, Daniel; Damerow, Frederick  
Subject: RE: Vit Flushing Question(s)

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Dan, Fred,

There was a lot of concern about the carbon steel hold down nuts(ie remote nuts) and support components. We talked of a dilute acid spray down, but decided that it had too many problems. Water was good enough for wash down, unless, as you say, there was an indication of a problem. In general we selected a spray over the flooding options because of the water management, which took time.

Dave Dombrowski was looking into a crawler camera

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

From: Carl, Daniel  
Sent: Wednesday, May 07, 2003 12:54 PM  
To: Damerow, Frederick; Petkus, Lawrence  
Subject: FW: Vit Flushing Question(s)

Fred, Larry,

What is your recollection? Mine is that we never considered flooding the floor, but did plan to spray down the vessel exteriors and the pit walls. The fluid was to be directed into the N-sump where it could be transferred either to the CFMT or to 8D-4. Water would be used initially, with the possibility of using dilute acid. Acid would be used if early results, probably based on visual observation, indicated the need for more aggressive fluid.

There was some concern that the coating on the melter structure may not totally protect the structure from acid. Also, there was no good design to do the spray down, although someone (maybe Dave Dombroski) was looking into a crawler.

Dan

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

From: Tom Kocialski [mailto:[Tom.Kocialski@wvnsco.com](mailto:Tom.Kocialski@wvnsco.com)]  
Sent: Wednesday, May 07, 2003 9:01 AM  
To: Carl, Daniel  
Subject: Vit Flushing Question(s)

Dan & Larry:

Dr. Bob Perdue from Westinghouse STC (you remember him, I believe) is helping Dan Westcott with an "economic practicality" analysis for further cleanout of the vit facility.

As part of the analysis, a retrospective "what else could we have done while the melter was operating" evaluation will be prepared. For

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example, we could have run 10 cold chem batches through the CFMT, MFHT and melter to achieve some percentage inventory reduction.

One of the questions is "Could we have done an acid wash (i.e. by flooding) of the pit floor to move a significant amount of the activity into the north sump and subsequently into the CFMT for additional melter feed and source term reduction?"

Since this was not part of the flushing evolutions, there were probably good reasons at the time not to do so (not necessary, no benefit, too much risk to the ongoing processes, etc.). If that's the case, then this alternative would not be included in the retrospective analysis.

So the question(s) for Dan and Larry is "Did we evaluate an acid flooding of the pit floor, and if so, what were the reasons for not pursuing it?"

And the question for me is "Can I get a free reply to this question from Dan and / or Larry?"

Tom K  
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