From: James Winterle
Sent: Friday, September 15, 2006 10:52 AM
To: Goodluck Ofoegbu; Luis Ibarra; Thomas Wilt
Cc: Scott Painter; Osvaldo Pensado; Hakan Basagaoglu; Fernando Ferrante; Chandrika Manepally; 'Robert Lenhard'; James Mancillas; Roberto Pabalan; Gordon Wittmeyer; Sitakanta Mohanty; James Myers; Ronald Janetzke; Asadul Chowdhury; English Pearcy; Wesley Patrick
Subject: RE: Drip Shield Drawings
Attachments: image001.jpg

Goodluck,
I am certain the collapsed structure would still have a lip. We are talking about the most highly reinforced portion of an 11,000-lb drip shield! Could a lip on the end of a drip shield become detached or dented in a way that exactly funnels water from the crown into a gap between drip shields before that water has a chance to shed down the sloped sides? Sure, it is possible, but surely we are talking about a tiny tiny fraction of all drip shields. Perhaps we should meet again to discuss, but I would first like to hear some informed speculation from our mechanical engineers.
--Jim

-----Original Message-----
From: Goodluck Ofoegbu [mailto:ofoegbu@cnwra.swri.edu]
Sent: Friday, September 15, 2006 9:07 AM
To: jwinterle@cnwra.swri.edu; 'Luis Ibarra'; twilt@cnwra.swri.edu
Cc: 'Scott Painter'; 'Osvaldo Pensado'; 'Hakan Basagaoglu'; 'Fernando Ferrante'; 'Chandrika Manepally'; 'Robert Lenhard'; 'James Mancillas'; 'Roberto Pabalan'; 'Gordon Wittmeyer'; 'Sitakanta Mohanty'; 'James Myers'; 'Ron Janetzke'; 'Asadul Chowdhury'; 'English Pearcy'; 'Wesley Patrick'
Subject: RE: Drip Shield Drawings

This is not my area of expertise either, but I do like us to recall we are talking about the configuration of a collapsed structure. Structural-engineering calculations have indicated how collapse would initiate, but we are now talking about what the end product would look like.

Goodluck Ofoegbu

-----Original Message-----
From: James Winterle [mailto:jwinterle@cnwra.swri.edu]
Sent: Friday, September 15, 2006 8:06 AM
To: 'Luis Ibarra'; twilt@cnwra.swri.edu
Cc: 'Goodluck Ofoegbu'; 'Scott Painter'; 'Osvaldo Pensado'; 'Hakan Basagaoglu'; 'Fernando Ferrante'; 'Chandrika Manepally'; 'Robert Lenhard'; 'James Mancillas'; 'Roberto Pabalan'; 'Gordon Wittmeyer'; 'Sitakanta Mohanty'; 'James Myers'; 'Ron Janetzke'; 'Asadul Chowdhury'; 'English Pearcy'; 'Wesley Patrick'
Subject: RE: Drip Shield Drawings

Luis,

Can you explain? I was referring to a scenario discussed yesterday in which a collapsed drip shield results in an opening between adjacent drip shields. It was proposed that water contacting any location on the top of the drip shield could run down the length of the drip shield and enter these openings. Based on the design shown in these drawings, that process does not appear likely.

I still recognize the possibility of cracks or punctures in the top of the drip shield that could possibly let water in. It seems less likely that substantial dents or cracks could form across the very top of the drip shield since there is an 17-inch-wide band across the top that is reinforced with a web of bulkheads and logitudinal stiffeners. The area prone to dents and cracks would seem to be the steeply pitched sides of the drip shield crown, which would be less likely to let water enter of create local ponding. However, since this is not my area of expertise, it would be good to have the opinion of a mechanical engineer or materials scientist on which portions of the drip shield crown are prone to cracking and denting. If the drip shield is prone to cracking and denting under rock load, then we have another issue, because the drips shiled would not necessarily have to collapse for a crack or puncture to form in the top.

--Jim

-----Original Message-----
From: Luis Ibarra [mailto:libarra@cnwra.swri.edu]
Sent: Thursday, September 14, 2006 5:05 PM
To: jwinterle@cnwra.swri.edu; twilt@cnwra.swri.edu
Cc: 'Goodluck Ofoegbu'; 'Scott Painter'; 'Osvaldo Pensado'; 'Hakan Basagaoglu'; 'Fernando Ferrante'; 'Chandrika Manepally'; 'Robert Lenhard'; 'James Mancillas'; 'Roberto Pabalan'; 'Gordon Wittmeyer'; 'Sitakanta Mohanty'; 'James Myers'; 'Ron Janetzke'; 'Asadul Chowdhury'
Subject: RE: Drip Shield Drawings

Jim,

You are overlooking DS collapse.

Have a good evening.

Luis

-----Original Message-----
From: James Winterle [mailto:jwinterle@cnwra.swri.edu]
Sent: Thursday, September 14, 2006 4:56 PM
To: twilt@cnwra.swri.edu
Cc: Goodluck Ofoegbu; Luis Ibarra; Scott Painter; 'Osvaldo Pensado'; Hakan Basagaoglu; 'Fernando Ferrante'; Chandrika Manepally; Robert Lenhard; 'James Mancillas'; 'Roberto Pabalan'; Gordon Wittmeyer; 'Sitakanta Mohanty'; James Myers; 'Ron Janetzke'; 'Asadul Chowdhury'
Subject: RE: Drip Shield Drawings

Tom,

Thanks. The drawings clearly show raised lips on both ends of the drip shields that would prevent water from running down the crown and into any separation that might form between adjacent drip shields, regardless of what direction the shield is tilted. So, my "hole in the umbrella" analogy becomes a hole with a raised lip around it. Also, If I am reading the drawings correctly, there will be anywhere from 2 inches to 12 inches of overlap between the drip shields, depending on how precisely they are dropped into place. Please let me know if I am overlooking anything in my assessment. I have the drawings printed on my desk if anyone on the cc list wants to stop by and see what I am talking about.

--Jim

-----Original Message-----
From: Thomas Wilt [mailto:twilt@cnwra.swri.edu]
Sent: Wednesday, September 13, 2006 5:34 PM
To: James Winterle
Subject: Drip Shield Drawings

Jim

Here is the file. This report deals with the structural stability of the drip shield, so you may find it interesting.

All dimensions of the drip shield are here.
(On pages 28 and 33 are details of the DS connector)

Enjoy!

Tom

Hearing Identifier: HLW_YuccaMountain_Hold_EX
Email Number: 456

Mail Envelope Properties (093101c6d8d6$8de45430$a5c8a281)

Subject: RE: Drip Shield Drawings
Sent Date: 9/15/2006 10:52:23 AM
Received Date: 9/22/2006 9:27:14 AM
From: James Winterle

Created By: jwinterle@cnwra.swri.edu

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