RAS 13326

NRC STAFF EXHIBIT 14

DOCKETED
USNRC

March 27, 2007 (11:30am)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Docket No. 70-7004-ML

From: "Miner, Pete" <MinerP@usec.com>
To: Stan Echols <FSE@nrc.gov>
Date: 02/13/2007 1:12:48 PM
Subject: RE: Re: Hearing Question HTS-7

Stan,

Here is our input on the question relating to why it is not 2x for tails generation for the 4 building scenario:

Attached is the extended table for the 4 building scenario (table C3.19 Estimated Volume of Annual Depleted Uranium Generated) similar to the estimate provided in the ACP license application for the 2 building scenario. This has not been submitted previously, rather it is our internal calculation for the tails generation provided in the ER for the 4 building scenario.

The short answer to the question, as you suspected, is that the number of machines in production occurs incrementally over a period of time. Therefore, the amount of material actually estimated to be generated is 512.7 MT, which is somewhat less than double because of this phased deployment.

Pete

>>> Matthew Blevins 02/12/2007 1:43 PM >>>

We should ask USEC.

>>> Timothy Johnson 2/12/2007 1:11 PM >>>

For a 3.5 million SWU plant, USEC indicated that it would generate 265,300 MT DUF6, the FEIS has 512,730 MT DUF6. The ASLB is asking why there is a difference, that is, not just a multiple of 2. I don't know the answer to the Board's question. I suspect it has to do with the timing of beginning and ending operations. If you don't know, then we should request a response from USEC.

U.S. NUCLEAR REGULATORY COMMISSION
In the Matter of USEC, Inc.
Docket No. 70-7004-ML Official Exhibit No. Staff 14
OFFERED by: Applicant/Licensee Intervenor
NRC Staff Other
IDENTIFIED on 3/27/07 Witness/Panel
Action Taken: ADMITTED REJECTED WITHDRAWN
Reporter/Clerk

TEMPLATE= SECY-027

SECY-02

>>> Matthew Blevins 02/12/2007 10:22 AM >>>

What's the rationale for why a 7 million SWU plant doesn't generate twice as much tails as a 3.5 million SWU plant? What does the LA say they will generate for a 3.5 million SWU plant?

As I said the numbers we used were taken from USEC documents.

G1 Answer:

The difference is due to the fact that we're using different documents.

The SER was published 4-6 months after the FEIS during which USEC provided updated cost information. (speicfic references to FEIS numbers

are below).

Is that what you're looking for? If not please be more specific.

>>> Timothy Johnson 2/12/2007 9:38 AM >>>

Note that there is also a difference in the total DU generated. That is,

the total amount isn't just a multiple of 2. Do you know the basis for the difference in the total DU generated???

>>> Matthew Blevins 02/10/2007 10:57 AM >>>

Table C3.19 of Rev 6 of DFP (publicly available, see AET-05-0076 dated 10/21/05) gives total cost of tails disposition of $866 million (for a 3.5 million SWU plant) so that equals 1.8 billion for 7 million SWU

plant. Same number also came from LA (see AET -05-0040 dated 6/22/05) in
Section 10.10.3 on page 10-18.

>>> Matthew Blevins 2/9/2007 8:10 PM >>>
The 512,730 metric tons came from USEC ER and is for a 7 million SWU plant. Pages 2-34 and 2-35 also states that it would cost $1.8 billion.
That number also includes a 10% contingency factor, and I think it came
from AET-05-0082, dated 10/25/05, an incremental decommissioning funding
document. That document itself is proprietary but I seem to recall the number being available elsewhere, I'll ask Arun at ICF if he remembers the exact reference.

>>> Timothy Johnson 02/09/07 4:41 PM >>>
See the ASLB Order, p. 29. The FEIS reference is pages 2-34 and 2-35.

>>> Matthew Blevins 02/09/2007 4:08 PM >>>
I believe it came from the ER, Rev 6, in Appendix C. I can get you the exact page number shortly. Is there a specific place in the FEIS you were looking at, b/c I don't think we discuss DU disposal costs in Chapter 7 (we say there will be no incremental cost b/c ACP is replacing
Paducah). We might have discussed in more detail in Appendix G, let me check there and with ICF.

>>> Timothy Johnson 02/09/07 3:47 PM >>>

In the HTS-7, G.1, the Board asked for a reconcilation to DU

disposition

costs in the SER and EIS. It appears that the EIS was published before

all the DU disposition costs were sorted out between us and USEC. Can

you provide me with the basis for the EIS DU disposition costs???

CC: "Scott, Dennis" <Scottd@usec.com>, <dsilverman@morganlewis.com>, <martin.o'neill@morganlewis.com>

Mail Envelope Properties (45D1FF91.B93 : 9 : 7059)

Subject: RE: Re: Hearing Question HTS-7
Creation Date 02/13/2007 1:12:23 PM
From: "Miner, Pete" <MinerP@usec.com>

Created By: MinerP@usec.com

Recipients
nrc.gov
OWGWPO02.HQGWDO01
FSE (Stan Echols)

morganlewis.com
martin.o'neill CC
dsilverman CC

usec.com
Scottd CC (Dennis Scott)

Post Office	**Route**
OWGWPO02.HQGWDO01	nrc.gov
	morganlewis.com
	usec.com

Files	**Size**	**Date & Time**
MESSAGE	3922	02/13/2007 1:12:23 PM
TEXT.htm	14634	
CP PB1234 ER Calc Tables R8 Record 60621 Tails Gen.pdf		8808
Mime.822	34413	

Options

Expiration Date:	None
Priority:	Standard
ReplyRequested:	No
Return Notification:	None
Concealed Subject:	No
Security:	Standard

Junk Mail Handling Evaluation Results
Message is eligible for Junk Mail handling
This message was not classified as Junk Mail

Junk Mail settings when this message was delivered

Junk Mail handling disabled by User
Junk Mail handling disabled by Administrator
Junk List is not enabled
Junk Mail using personal address books is not enabled
Block List is not enabled

C3.19 Estimated Volume of Annual Depleted Uranium Generated for 7.0 MSWU Plant

Calendar Year	[Q] # Machines		[R] DUF6 Generated [1,000 MT]	[S] DUF6 Accumulated [1,000 MT]	[T] DU Generated [1,000 MT]	[U] Tails Disposal Cost [$M, 2006]	[V] # Tails Cylinders
2006	200		0.0	0.0	0.0	$0.00	0
2007	120	*	0.1	0.1	0.1	$0.31	8
2008	2700		2.2	2.3	1.5	$6.97	179
2009	7300		6.0	8.4	4.1	$18.84	483
2010	11520		9.5	17.9	6.4	$29.73	763
2011	15360		12.7	30.6	8.6	$39.63	1,017
2012	19200		15.9	46.4	10.7	$49.54	1,272
2013	23040		19.0	65.5	12.9	$59.45	1,526
2014-2036	23040		418.7	484.2	283.1	$1,307.95	33,568
2037-2040	11520		28.5	512.7	19.3	$89.18	2,289
Total			512.7		346.7	**$1,601.60**	41,105

* - based upon Lead Cascade potential phased deployment that can produce material & number of machines considered

Assumptions: Operational (plant / license) life = 30 years; (from PB1/2 life 2006 - 2036 + PB3/4 life 2040)

Tails Output during Operation (@ 3,500 MTSWU/yr) = 2,395 lbs. UF_6/hr

Tails Output during Operation (@ 7,000 MTSWU/yr) = 4,790 lbs. UF_6/hr

Operation = 24 hr/day; 365 days/yr

Weight Conversion Factor = 0.45359 Kg/lb; Tails Material Conversion Factor = 0.30668 Kg/lb UF_6; Tails Purity = 0.67612 gU/g

U disposal cost = $4.62/Kg U

R=Q/11520*2395*24*365*number of years; T=R*0.67612; U=T*4.62

V=R*1000000/0.45359/27500

~41,105 Tails cylinders generated; 27,500 # UF_6 fill weight = 2000 generated parent cylinders (@ EOL)