

## Chronology of Events Surrounding USEC Review and Differing Professional Opinion

- 8/23/2004 USEC submits license application for American Centrifuge Plant. Staff performs acceptance review (mainly administrative).
- 10/25-27/2004 Staff performs on-site vertical slice review in accordance with guidance in NUREG-1520 (Integrated Safety Analysis review). During this review staff identified several areas in nuclear criticality safety in which applicant had not completed its design.
- “Several aspects of the facility design have not been finalized, making it difficult to determine if all accident sequences have been identified or if frequencies are reasonable. In particular, the exact means of controlling the assay to less than 10wt% <sup>235</sup>U and of the product withdrawal process have not been finalized.” [12/9/04 meeting summary (ML043430128)]
- 2/7/05 NRC issues request for additional information, containing two questions (ISA-5 and ISA-6) asking for more information on the design of cascade assay controls and the product withdrawal area.
- 3/9/05 USEC responds to request for additional information.
- 3/05-4/06 Staff continues the review, asks a series of follow-up questions over the following months. Chemical safety reviewer proposed license condition requiring USEC to provide additional information for staff to review prior to the operational readiness review, to address issues in that area. The reviewers identify that only approximately 15% of the instrumentation and control design have been completed.
- 4/2-4/4/06 Nuclear criticality safety reviewer participates in second on-site review for criticality. During that site visit, reviewer learns that the design is still not complete in those areas identified in the original vertical slice review. Up to this point, staff believed USEC would complete the design during the review cycle and have additional information available.
- 4/06 Nuclear criticality safety reviewer prepares a license condition similar to the one in the chemical safety area, to address lack of completed design in the following areas: (1) design of equipment to control cascade assay, (2) means of ensuring that liquid UF<sub>6</sub> cylinders are not moved (method of cooling cylinders), and (3) type, location, and quantity of hydrocarbon oils used for vacuum pumps. Proposed condition is included in SER version supplied to Project Manager.
- 5/25/06 OGC informs staff that proposed conditions requiring submission of additional design information are unacceptable, and staff must complete review now based on information in hand. OGC informs staff that since the licensing review is programmatic, a complete design is not required. Staff states that this is the first time it has heard this position articulated,

and requests OGC to put this position in writing.

- 5/06-7/06 Staff finalizes the USEC SER and continues to ask OGC to provide a written position stating that a complete design is not required.
- 7/20/06 Robert Pierson forwards a draft of the new design policy to C. Tripp and F. Burrows via email, stating that he will provide it to everyone in the Division.
- 8/4/06 Design policy issued as a formal Division memo. Nuclear criticality safety reviewer sends email back thanking R. Pierson for writing the policy but pointing out that he does not fully agree.
- 8/06-9/06 Email is sent out asking for comments on the policy memo. Nuclear criticality safety and instrumentation and control reviewers prepare their comments in a formal memo (dated 9/13/06). Other staff also prepares comments of a similar nature. Division management informs staff that they are not seeking comments on the memo but only comments on its implementation, and that the policy is final. In two separate meetings, management informs C. Tripp and F. Burrows that it will not consider the comments and the only recourse is to file a DPO.
- 9/25/06 A meeting is held to work out the final wording on the USEC SER, which has been changed based on the August 4 policy. Upon review, nuclear criticality safety and instrumentation and control reviewers believe the SER does not clearly state the level of completeness of the design or the use of the August 4 policy.
- 10/19/06 Frederick Burrows and Christopher Tripp decide to remove their concerns with the licensing process from the DPO and issue a separate memo to Jack Strosnider.
- 10/30/06 Meeting with Jack Strosnider to inform him of the design issue and indicate a willingness to resolve the issue without filing a DPO.
- early 11/06 Jack Strosnider indicates that DPO is most viable approach to have concerns addressed at this time.
- 11/15/06 Staff (Frederick Burrows, Melanie Galloway, Roman Shaffer, Christopher Tripp) file the DPO formally. It is accepted on 11/20/06.
- 2/07-4/07 Staff prepares written testimony for USEC mandatory hearing. Nuclear criticality safety and instrumentation and control reviewers disagree with some of the statements in written testimony. OGC agrees to allow four staff members who authored the DPO to provide a separate response to the Hearing board.
- 3/19-21/07 USEC mandatory hearings. Christopher Tripp testifies that he does not have reasonable assurance that all accident sequences and IROFS were

identified in the nuclear criticality safety area. Timothy Johnson testifies that Part 70 does require identification of all accident sequences and IROFS.

3/30/2007	Final DPO panel report issued for comment
4/6/2007	M. Weber comments on DPO panel report
4/13/07	Hearing Board issues its order and the license is issued.
4/16/07	Christopher Tripp writes e-mail identifying material errors in the order.
4/16/07	Margaret Bupp, OGC, responds to C. Tripp's 4/16/07 e-mail.
4/16/2007	Submitters' comments on DPO panel report
4/24/2007	Memo from DPO panel to M. Weber responding to submitters' comments and noted DPO panel report is unchanged
7/24/2007	Final Decision on DPO-2006-005 issued by M. Weber
8/29/2007	Appeal issued by submitters to DPO-2006-005
9/27/2007	Statement of views by M. Weber in response to appeal