

October 19, 2006

MEMORANDUM TO: Jack R. Strosnider, Jr., Director
Office of Nuclear Material Safety
and Safeguards

FROM: Christopher S. Tripp
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SUBJECT: ISSUES RELATED TO THE REVIEW POLICY AND PROCESS FOR
THE AMERICAN CENTRIFUGE PLANT

Background

Over the course of the licensing review of the United States Enrichment Corporation (USEC) American Centrifuge Plant (ACP), as assigned technical reviewers we have raised questions regarding the appropriateness of accepting a license application for review without the application containing a description for a sufficiently complete facility design, and a sufficiently complete Integrated Safety Analysis (ISA) Summary, to support regulatory conclusions. We subsequently voiced concerns about the appropriateness of issuing an operating license for the ACP prior to the facility design and the ISA being completed. Similar concerns were raised during the licensing review of the Louisiana Energy Services (LES) National Enrichment Facility.

In response to our concerns, Robert Pierson, our division director, wrote a memo dated August 4, 2006, pertaining to the level of information needed for Part 70 licensing and providing his position statement on the regulatory structure under which the LES facility was licensed and the ACP review was being performed. Although we did not agree with that position (voiced in our memo dated September 13, 2006), using the directions provided by the August 4 memo, we were able to complete our sections for the ACP Safety Evaluation Report (SER) which has now been issued.

We believe the issuance of a Part 70 operating license to the LES and ACP facilities without sufficiently complete facility designs and sufficiently complete ISAs is contrary to the existing 10 CFR 70 regulations. We also believe this represents a very significant shift in NRC licensing policy with potential safety issues associated with the staff's inability to complete a review of the proposed facilities' design details and supporting safety analyses and calculations prior to issuance of operating licenses. Based on our beliefs, we will be filing a differing professional opinion (DPO) to express our concerns pertaining to these specific licensing issues.

Additionally, and outside the DPO process, we are informing you of our concerns pertaining to related issues as discussed below and would value your response on these additional issues.

Discussion

1. The August 4, 2006, memo states that the staff's licensing review needs to focus on the applicant's programmatic commitments in lieu of a sufficiently complete facility design. The memo then states that following the completion of the SER and issuance of the license, qualified staff will have multiple opportunities to confirm that the ACP facility design and items relied on for safety (IROFS) have been implemented in accordance with the license application.

According to the memo, one of those opportunities will occur during the operational readiness review (ORR) performed pursuant to 10 CFR 70.32(k), which requires the staff to verify that the facility has been constructed in accordance with the requirements of the license. The memo further states that the ORR will be done in stages as the construction of the ACP progresses and as the design approaches completion, and that the draft NRC Inspection Manual Chapter that will be used for the ACP ORR is expected to identify procedures that will be used to verify that the programmatic commitments made as part of the licensing review have been properly implemented.

During discussions pertaining to the ORR for the ACP, it was stressed by division management and the staff from the Office of General Council (OGC) that the final design could not be reviewed during the ORR. It was made clear, both in these discussions and the SER text that references the ORR, that the ORR was a verification inspection and not a review of the design details. The staff's review must be completed before the operating license can be issued. So, one is left with several questions:

- A. If not during the ORR or the licensing review, when will a sufficiently complete design be reviewed?
- B. Can NRC license a facility without ever reviewing a sufficiently complete design?
- C. Is the ORR really a review of a sufficiently complete design performed by qualified license reviewers disguised as an inspection¹?

¹Similar discussions about the purpose of the ORR were held during the LES review. A September 26, 2006 memo from Doug Collins in Region II, pertaining to the LES ORR, makes it clear that the purpose of the ORR includes detailed design reviews. This memo states:

"As part of its effort to verify that a uranium enrichment facility has been constructed as required, the NRC must determine that the final design of the safety significant structural features, equipment and components comply with the license and the regulations."
"...we ask that you submit your schedule for the completion of the detailed design packages ...This will enable us to have the appropriate technical resources available for a timely review of the designs..."

2. As another opportunity for the qualified reviewers to confirm that the ACP facility design and IROFS have been implemented in accordance with the license application, the August 4 memo states that as the design is completed, changes to the ACP will be evaluated by USEC in accordance with 10 CFR 70.72. USEC will submit license amendment requests for those changes that exceed the 10 CFR 70.72 criteria. We have the following observations/questions pertaining to this use of 10 CFR 70.72:
 - A. How can the 10 CFR 70.72 change process be meaningfully followed if a complete design serving as a baseline has never been reviewed and approved by the staff? How can the “equivalent replacement” determination be made if all IROFs are not fully defined?
 - B. Although the opportunity for qualified license reviewers to review design changes can provide them with added assurance about the adequacy of the facility’s design, it is not timely since the 10 CFR 70.72 change control process does not begin until after the operating license is issued.
3. In the staff’s SER for the ACP, only the criticality safety, electrical, and instrumentation and control sections stress the fact that the facility design and ISA are incomplete. To satisfy the Atomic Safety and Licensing Board (ASLB), the staff was requested to identify deviations from the “Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility,” NUREG-1520. The above SER sections use crafted words that say an alternative approach to that described in NUREG-1520 was used. In the SER, we also discuss the use of the ORR and 10 CFR 70.72 along with commitments to industry standards in lieu of sufficiently complete design information for reaching conclusions that there is reasonable assurance that the regulatory requirements are met. These statements were based on the position statement provided via the August 4 memo and are not fully discussed elsewhere in the SER, or in the “Findings of Facts” provided to the ASLB on October 11, 2006.

We believe all stakeholders, including the ASLB, should be fully informed that the staff review was conducted following the August 4 position in lieu of NUREG-1520. We also believe that the stakeholders and the ASLB should be informed of our objections to the division position to enable us to testify openly, if required. Our objections are contained in the memo dated September 13, 2006, and will also be discussed in a forthcoming DPO.

4. The August 4, 2006, memo was developed and signed by our division management with no apparent review by their upper management (although OGC is quoted as having no legal objection), and without obtaining the perspective of staff who have been applying the regulations and SRP review guidance in their ISA reviews. This approach is contrary to openness, good internal communications, and empowerment. We believe that such an important issue also necessitates high-level management review and agreement.

5. There has been some subsequent discussions pertaining to changing NUREG-1520 or developing Interim Staff Guidance (ISG) to encompass the new staff position contained in the August 4 memo. In reality, the new policy represents a two-step licensing process (issuance of a construction approval and an operating license used in the past for nuclear power plants and currently being used for the Mixed Oxide Facility) that is wrapped up in a one-step licensing review supported by an ORR. If a two-step licensing process is truly desired, NRC needs to evaluate whether 10 CFR 70 should be formally revised to “legitimize” that approach. Revising NUREG-1520 or developing an ISG represent a “band-aid” approach to solving this significant licensing issue.
6. The August 4 memo states that a licensing approach using programmatic commitments was used for the LES facility which underwent extensive litigation during the hearing procedures. The memo implies that the ASLB was completely aware of this “new” licensing approach and, based on this fact, it is now acceptable to use this licensing approach for the USEC ACP. We believe this conclusion may not be completely valid since the staff, to the extent of our knowledge, did not completely and openly inform the ASLB of this shift in regulatory licensing requirements. Moreover, there has been no detailed comparison of the relative state of design between the two facilities; if the USEC design is less developed, then any conclusions made for the licensing of USEC may not be valid.

Another important difference is that LES was based on an existing facility. Based on our discussions with technical staff involved in the LES review, this did have a significant impact on the licensing effort. This was considered relevant enough that significant resources were expended to send staff to the Netherlands for facility tours.

7. The environment for technical reviewers in our division is not conducive to the staff raising concerns. Our upper division management has not shown a willingness to consider our concerns pertaining to the licensing approach used for the LES and USEC ACP facilities. Management has made it clear that their expectation is for staff to “think outside the box,” meaning that reviewers should not follow the Standard Review Plan if doing so would impact the licensing schedule. Those who follow the guidance in NUREG-1520 have been publicly called “technicians.” (Conversely, more senior “Engineers” are supposed to “think outside the box” in finding things acceptable that do not meet the rule or established Agency guidance.) We believe that NUREG-1520 was developed to ensure consistency in our reviews and should be utilized as guidance by all reviewers regardless of their grade level. While NUREG-1520 must be applied with discretion and judgement, disregarding it will result in our reviews being inconsistent and unpredictable, which will not meet our stakeholders’ expectations.

Conclusion

We are seeking your response on the issues discussed above, and thank you in advance for your consideration of these important topics.

cc:

Melanie Galloway/TSB
Joseph Giitter/SPTS

Robert Pierson/FCSS
Margaret Federline/NMSS

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