

January 9, 2008

MEMORANDUM TO: Frederick Burrows, Sr., Electrical Engineer (Retired)

Melanie Galloway, Acting Deputy Division Director
Division of Engineering
Office of Nuclear Regulatory Regulation

Christopher Tripp, Senior Nuclear Process Engineer (Criticality)
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards

FROM: Luis A. Reyes **/RA/**
Executive Director for Operations

SUBJECT: DIFFERING PROFESSIONAL OPINION APPEAL INVOLVING
MANAGEMENT POLICY ON LICENSING NEW FUEL CYCLE
FACILITIES (DPO-2006-005)

The purpose of this memorandum is to inform you of my considerations and conclusions regarding the appeal you submitted on November 15, 2006, on the subject Differing Professional Opinion (DPO). Based on an extensive review of associated documents, I determined that I support the conclusions made by the DPO Ad-hoc Review Panel in their final report and the decision issued by the Director of the Office of Nuclear Material Safety and Safeguards (NMSS).

Background:

The Nuclear Regulatory Commission (NRC) issued the Safety Evaluation Report (SER) for the United States Enrichment Corporation (USEC) American Centrifuge Plant (ACP) on September 11, 2006. Mandatory hearings occurred on March 13, 2007, and a license was issued on April 13, 2007.

During the licensing review of the ACP, you (Frederick Burrows, Melanie Galloway, Christopher Tripp and Roman Shaffer) identified that the facility design and Integrated Safety Analysis (ISA) based on the facility design have not been completed to a sufficient level to conclude that all the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70 have been met. You agreed with the statements in the SER to the effect that the licensee has met the requirements to the extent possible for available level of design, but believe that this level of design is not sufficient to meet regulatory requirements for issuing a license.

You pursued the issues associated with the incomplete design and ISA during the on-site vertical slice reviews, and through several requests for additional information, meetings, and telephone calls. The issues remained unresolved at the end of the review. In subsequent meetings, NMSS management and the staff from the Office of the General Counsel (OGC) stated that a complete facility design and ISA were not required because the licensing review

was programmatic in nature. You stated that this was inconsistent with your understanding of the requirements of 10 CFR Part 70, and requested NMSS management and OGC provide you their position on what is required for licensing a new fuel cycle facility.

NMSS management then developed a Division of Fuel Cycle Safety and Safeguards (FCSS) policy memorandum dated August 4, 2006 (ML062160073). You believe that the policy contained in the memorandum, upon which both the licensing reviews of the Louisiana Enrichment Services (LES) and USEC facilities was to have been based, is inconsistent with the requirements of 10 CFR Part 70 and with the guidance in the "Standard Review Plan [SRP] for the Review of a License Application for a Fuel Cycle Facility" (NUREG-1520). The policy memo quotes certain portions of 10 CFR Part 70, but does not consider the applicable portions of the regulation, and as a result draws an erroneous regulatory conclusion. You stated that the omitted portion of 10 CFR Part 70, discussed in the memorandum dated September 13, 2006, include the following:

1. 10 CFR 70.66 (a), which describes provisions in Part 70 that must be met before issuance of a license;
2. 10 CFR 70.61 (b) - (e), which relates to the completeness of the ISA; and
3. 10 CFR 70.65 (b) (4), which requires that the ISA Summary must contain information that demonstrates compliance with the performance requirements of 10 CFR 70.61.

In a September 13, 2006, memorandum (ML062560233), you provided disagreeing comments on the policy to NMSS management and have discussed the issue with them. In response, you said that your management stated that your only option was to file a DPO.

On November 15, 2006, you submitted DPO-2006-005 wherein you stated that the staff should only issue a license to a new facility when it has been clearly demonstrated that the requirements of 10 CFR Part 70 have been met. Since you believe that your management's policy for licensing the USEC and LES facilities is not consistent with the requirements of 10 CFR Part 70, your position is that either a policy needs to be developed that is consistent with Part 70 (e.g. through openly communicated guidance based on well-thought out and rational interpretation of the regulations), or Part 70 needs to be changed to be consistent with management's policy. Similarly, you stated that a policy needs to be developed that is consistent with NUREG-1520 (e.g. through openly communicated guidance based on well-thought out and rational interpretation of the regulations), or NUREG-1520 needs to be changed (e.g., through Interim Staff Guidance) to be consistent with management's policy. The specific concerns you discussed in your DPO submittal included:

1. Completeness of Design: You stated that USEC ACP had submitted an incomplete design and that NMSS management's verbal direction was that the applicant's commitments to industry standards and the inspections required by 10 CFR 70.23 (k) to verify conformance to those commitments were used to determine the ultimate adequacy in lieu of sufficient design detail. You disagreed with management's position. Additionally, you stated that NMSS management implied that NUREG-1520 supports a licensing review that focuses on programmatic provisions in lieu of design detail, which you believe was an inaccurate position.

2. Completeness of ISA: You concluded that based on the regulations listed in 10 CFR Part 70, the applicant must have performed a complete ISA summary and that the staff must find that this meets 10 CFR Subpart H before a license can be granted. This is so the staff can determine the adequacy of the failure modes and preventative and mitigative equipment and operator actions. You listed several criteria that, if satisfied, you consider the ISA is complete. In this regard, you consider the August 4, 2006, policy memo unclear and contradictory where the memo states twice that an ISA Summary does not have to be absolutely complete; the August 4, 2006, policy memo is inconsistent with NUREG-1520 in that the memo states that an absolutely complete identification of all Item Required for Safety (IROFS) is not necessary; the August 4, 2006, policy memo is inconsistent in its references to 10 CFR Part 70 licensing reviews being programmatic in nature; the August 4, 2006, policy memo does not address the technical issue that having a sufficiently complete facility design is a logical prerequisite to having a complete ISA so that the staff can make an adequate determination; and the August 4, 2006, policy memo did not consider all applicable portions of 10 CFR Part 70, and, therefore draws an erroneous regulatory conclusion.

In accordance with Management Directive 10.159, "The NRC Differing Professional Opinions Program," a DPO Ad-Hoc Review Panel (the Panel) was established to perform an independent review of your concerns. The Panel met with you to ensure the Panel understood your concerns. The Panel's review focused on two fundamental questions, is the programmatic review described in the August 4, 2006, policy memo consistent with: (1) the requirements of Part 70; and (2) the review guidance contained in the SRP and NUREG-1520? In addition, although not raised as a specific concern to be considered by the Panel, the Panel evaluated how the approach in the August 4, 2006, policy memo could affect the inspection program and FCSS staff after the facility has been licensed and prior to operation. The Panel's review included an extensive review of Part 70, Subpart H requirements and the rulemaking history of the revisions to Part 70 to determine the scope and intent of Part 70. A complete listing of the Panel's views on specific concerns in the DPO is listed as an appendix in the Panel's final report dated March 30, 2007.

In their final report, the Panel concluded that a programmatic review, as described in the August 4, 2006, memorandum is consistent with the requirements of Part 70. The Panel also concluded that, for the reviewed portions, NUREG-1520 (the SRP) could be interpreted to allow a programmatic review although that conclusion is not readily reached by relying solely upon the language in the SRP. The Panel has concluded that it would be of benefit for the staff to modify the SRP to be clear that a programmatic review is acceptable, and establish this as the sole standard in the SRP for both new and existing facilities, as opposed to only applicable to new facilities as the staff had indicated it planned to do in its filing the USEC ACP Hearing Board.

In a memo dated July 24, 2007, the new NMSS Office Director, Michael Weber, agreed with the Panel's conclusions that a programmatic review, as described in the August 4, 2006, memorandum was consistent with the requirements of Part 70. In addition, the NMSS Office Director agreed with the Panel that the SRP can be interpreted to allow a programmatic review when considered along with the rule itself and the Statement of Considerations for the rule. The NMSS Director assigned FCSS staff tasks, based on the Panel's recommendations regarding revising as necessary and appropriate licensing guidance and operational readiness review inspection guidance and develop a communication plan for stakeholders on the scope and bases for the changes.

On August 29, 2007, you filed an appeal to the NMSS Office Director's final conclusion because you believed the following:

- Completeness of ISA: The Panel report and the final DPO decision did not address the two broad issues regarding completeness of facility design and completeness of the ISA. The Panel and the final DPO decision did not address that each accident sequence and each IROFS needed to be identified as required by the rule. The Panel addressed the level of detail that needs to be provided to the NRC. You were more interested in the completeness of the design and ISA. To be responsive to your concerns, you recommended that the standard for completeness of design and the standard for completeness of the ISA be defined, and the regulatory bases for these standards of completeness described.
- Content of SRP Change: You did not agree with the NMSS Director's Task 1 documented in the July 24, 2007, DPO closure memo which suggest a revision to the SRP be done in accordance with the August 4, 2006, Management position on Licensing Fuel Cycle Facilities. You interpreted that the SRP will include an alternative that allows significantly less breadth and depth in the ISAs than what is currently in the guidance (i.e. committing to industry standards rather than demonstrating technical adequacy through an appropriate level of design completion). You were also concerned that the revised SRP would allow a functional level description as part of a programmatic review, the terms which have not been defined. Programmatic appears to be inconsistent with the accepted industry definition, which is widely understood to mean commitments, processes, programs, and standards. You would prefer that the terminology used in the August 4, 2006, memo the Panel report and the Director's final decision be defined so that there is clarity.
- Adequacy of Inspection Recommendation: You considered Task 2 described in the July 24, 2007, DPO closure memo was a positive step. Task 2 recommended reviewing and updating inspection guidance for conducting the operational readiness review as required by 10 CFR 70.32 that confirms with reasonable assurance, that uranium enrichment facilities have been constructed in accordance with requirements of the license. You felt that experienced technical license review staff needs to be involved in the development and training for inspection staff. Therefore, you recommended that how these changes to the inspection program will be implemented be described.
- Content of Communication Plan: Task 3 of the DPO closure memo was to develop a communication plan to communicate these changes to the appropriate stakeholders. You considered this a positive step, however, you recommended that more detail be provided on what is to be communicated and how.
- Commitment to Resources: You wanted a clear commitment from management to provide the resources needed to accomplish the recommendations. You stated the time-frame to complete the recommendations seems ambitious and it was not clear whether the Agency budget would support the recommendations.

- Additional Issue: In the closure memo, the NMSS Office Director stated that our, “observation that [we] do not have a safety basis for American Centrifuge Facility or the Louisiana Energy Services facility.” You wanted to make it clear that they did not use the phrase “safety basis” during your June 11th meeting with the Office Director of NMSS to consider your comments on the Panel report. You clarified that you did not have any identified safety concerns (you also noted that they cannot make a conclusion on safety since the facility design is not completed).

EXECUTIVE DIRECTOR FOR OPERATIONS REVIEW AND DECISION:

When I received your appeal, I initiated an extensive review of the available information related to DPO-2006-005. I reviewed many documents including, but not limited to, the DPO you originally submitted, the March 30, 2007, Ad-Hoc Review Panel Final Report, the Office Director’s decision regarding your DPO, and your appeal of the Office Director’s decision. To understand the issues fully, I met with members of the DPO Panel on November 27, 2007, and I met with you (Melanie Galloway and Christopher Tripp) on November 30, 2007. My review was limited to the technical issues you raised.

First, I would like to commend you on a package that was well-researched, and insightful. However, based on all the available information I have reviewed, I support the conclusions made by the Panel in their final report. The bases for my decision are as follows:

- The intent of the rule change was to create a performance based rule to allow flexibility and lessen the burden on affected internal and external stakeholders by providing the necessary design and ISA information commensurate with the risk of the facility. This conclusion is supported by the Statements of Consideration for the final revisions to Part 70 and during the staff’s explanation on their position to the Commission in a meeting on June 20, 2000.
- The granting of the LES license was based on a facility that had already been constructed. USEC ACP is a facility that has yet to be constructed. Therefore, it is expected that more detailed information was available to conduct the LES review, which explains the contrast in the level of detail of information regarding completeness of design and completeness of the ISA Summary for the USEC ACP facility.
- It is conceivable and also expected that technical reviewers would accompany inspectors on an operational readiness review to ensure that the facility had been constructed in accordance to commitments in the license before facility operation.
- The Atomic Safety Licensing Board Panel (ASLBP) reviewed the exhibits and testimonies and thoughtfully considered your DPO while making this determination necessary to grant the USEC ACP license. Additionally, the Commission, the final arbiter in the decision when called upon, was cognizant of and considered your DPO during ASLBP deliberations and did not interject or object to the ASLBP’s ruling on the matter.

Based on these considerations, I have concluded that the actions taken by the staff in response to your DPO were adequate.

Nevertheless, your DPO did bring to light improvements that could be made to the SRP and the inspection program, which are documented in the Panel's March 30, 2007, final report and the NMSS Office Director's July 24, 2007, tasking memo. I believe that the following improvements and clarifications to July 24, 2007, NMSS Office Director's tasking memo are warranted to ensure consistency during reviews of future materials facilities applications:

- Review and revise, as necessary and appropriate, the NRC's licensing guidance (e.g. NUREG-1520) to incorporate guidance on the information needed for the licensing of fuel facilities in accordance with 10 CFR Part 70 as reflected in the July 24, 2007, NMSS Office Director's tasking memo. This review should not be constrained to the August 4, 2006, policy memo as a basis for the revised guidance.
- Review and revise, as necessary and appropriate, inspection guidance for conducting the operational readiness review required in 10 CFR 70.32 (k) as described in the July 24, 2007, NMSS Office Director's tasking memo. Ensure that the guidance reflects the requirement that technical reviewers participate with inspectors on operational readiness reviews prior to facility operation.
- Develop a process or mechanism to ensure that all installed IROFS are reflected in the ISA summary.

I want to thank you for bringing your concerns to my attention. Your DPO was well thought out and researched. As you know, our agency relies on its staff members to raise concerns regarding decisions so that they can be properly considered. Your perseverance in raising these concerns demonstrates your dedication to safety that is the foundation of the agency's excellent staff, and I applaud your efforts in this regard. I take concerns such as the ones you raised very seriously, and hope that my interactions with you have shown my complete and thorough review of your concerns in making my decision.

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EDO r/f

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