



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 7, 2003

MEMORANDUM TO: Alexander P. Murray, Senior Chemical Process Engineer
Division of Fuel Cycle Safety and Safeguards

FROM: Martin J. Virgilio, Director 
Office of Nuclear Material Safety and Safeguards

SUBJECT: FINAL DECISION: DIFFERING PROFESSIONAL VIEW ON CHEMICAL
CONSEQUENCES AT THE PROPOSED MIXED OXIDE (MOX) FUEL
FABRICATION FACILITY (NMSS-DPV-2003-01)

In a document dated February 24, 2003, you filed a Differing Professional View (DPV), which discusses chemical consequences from potential chemical events at the proposed Mixed Oxide (MOX) fuel fabrication facility.

You described the prevailing management/staff position as being that potentially applicable sections of the regulations in Part 70, specifically, 10 CFR 70.64, do not apply, and thus such chemical events are not regulated by the NRC. You stated that this is too simple an interpretation, and that it contradicts the regulations, prior NRC precedence [sic], Standard Review Plans (SRPs), and the "General Duty" clause of the Atomic Energy Act. You said you are concerned that safety issues may not be adequately addressed at the proposed facility. In addition, you believe the burden of proof has not been placed on the applicant.

You stated that there may be operator actions required following a chemical release from the proposed MOX facility that would result in (1) the workers not being able to perform these safety actions due to chemical exposure, or (2) an increased dose to the workers as a result of a chemical release. You contend that the NRC regulates these events under the "facility conditions which affect the safety of licensed material" provision in 10 CFR 70.64(a)(5) as well as "Facility hazards that could affect the safety of licensed materials and thus present an increased radiological risk" provision in Section 70.62(c)(1)(iii).

You requested that (1) the management/staff decision accepting the applicant's position on these chemical events be reversed; (2) the applicant submit a safety strategy for addressing these events; and (3) NMSS establish consistent guidance for addressing the potential consequences from chemical events and facility conditions affecting the safety of licensed radioactive material.

By memorandum dated March 3, 2003, I established an ad hoc panel to review the DPV in accordance with Management Directive 10.159. The panel members were: Kathy Halvey Gibson, Office of Nuclear Reactor Regulation, Chairperson, Donald Stout, Office of Nuclear Material Safety and Safeguards (NMSS), and Walter Schwink, NMSS.

6

The review panel issued its findings and recommendations in a memorandum to the Director, NMSS, dated May 9, 2003. A copy of the report is attached.

The review panel found merit in the views expressed in the DPV. As more fully set forth in Attachment 1, the review panel made the following recommendations:

1. Item CS-5 should be reopened or a new open item be established to request that the applicant provide additional information to resolve conflicting information provided in the Revised Construction Application Request (RCAR) and documented in the meeting minutes. The applicant should understand that hazardous chemicals which would affect the safety of licensed material and thus present an increased radiological risk are regulated by the NRC, even when the dose is below the 10 CFR 70.61 performance criteria. The applicant should document the preliminary analyses and data in the RCAR to clearly support its conclusions that no safety controls outside the control room are needed for identified hazardous chemicals that would affect the safety of licensed material and thus present an increased radiological risk (including the chemicals and the resulting doses), and confirm that this category of chemical hazards will be analyzed as part of the Independent Safety Analysis (ISA) as indicated in the RCAR and required by 10 CFR 70.62(c)(1)(iii). This documentation should be reflected in the Safety Evaluation Report.
2. NMSS should consider developing guidance for inclusion in the SRP that addresses processing a construction application that does not include the ISA.
3. Actions should be taken to ensure that the applicant and relevant NRC staff understand the "facility conditions which affect the safety of licensed material" provision in 10 CFR 70.64(a)(5) as well as "Facility hazards that could affect the safety of licensed materials and thus present an increased radiological risk" provision in Section 70.62(c)(1)(iii).
4. NMSS management should determine why Item CS-5 was closed during the public meeting when the technical reviewer continued to have questions about the issue.

I have reviewed the DPV and the findings and recommendations of the review panel, and I agree with Panel Recommendations 3 and 4. With regard to Recommendation 1, since this DPV deals with matters closely related to matters in DPV-NMSS-2002-03, "Modeling Chemical Consequence Effects for Determining Safety Requirements at the Proposed Mixed oxide (MOX) Fuel Fabrication Facility," I am deferring a decision and action on this recommendation until I have had an opportunity to evaluate and consider the implications of the possible interrelationships between the recommendations of the other DPV panel and this recommendation. With regard to Recommendation 2, although I recognize that processing a construction application that does not include the ISA could benefit from guidance, I decline to adopt and implement Recommendation 2 at this time because the resources required to develop an SRP would be substantial and, since no other such facility application is expected to be submitted for the foreseeable future, little or no benefit would be derived from its development. Should an occasion arise in the future in which a construction application is to be processed that does not include the ISA, then appropriate staff training would be conducted.

This memorandum documents my final decision. I have requested that the Director, Division of Fuel Cycle Safety and Safeguards (FCSS) take certain actions in response to Recommendations 3 and 4. You are being provided separately with a copy of my memorandum to the Director, FCSS, regarding those actions.

I want to thank you for your participation in the Differing Professional View process. An open and thorough debate about how we carry out our regulatory programs is essential to keeping these programs effective.

Attachment: DPV Panel Report dated May 9, 2003

cc: R. Pierson, FCSS

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Attachment: DPV Panel Report dated May 9, 2003

cc: R. Pierson, FCSS

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