

EDO Principal Correspondence Control

FROM: DUE: 08/19/04 EDO CONTROL: G20040550
DOC DT: 08/05/04
FINAL REPLY:

Alexander P. Murray, NMSS

TO:

Reyes, EDO

FOR SIGNATURE OF : ** GRN ** CRC NO:

Congel, OE

DESC: ROUTING:

DPO - Review of DPV Concerning Modeling Chemical
Consequence Effects for Determining Safety
Requirements at the Proposed Mixed Oxide (MOX)
Fuel Fabrication Facility

Reyes
Virgilio
Kane
Merschhoff
Norry
Dean
Burns/Cyr
Schoenfeld, OEDO
Strosnider, NMSS

DATE: 08/11/04

ASSIGNED TO: CONTACT:
OE Congel

SPECIAL INSTRUCTIONS OR REMARKS:

EDO to review response prior to dispatch. Add EDO
on for concurrence.

Template: EDO-001

E-RIDS: EDO-01



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

MEMORANDUM
AUGUST 5th, 2004

TO: Luis A. Reyes
Executive Director for Operations

FROM: Alexander P. Murray, Senior Chemical Process Engineer *Alex*
Mixed Oxide Facility Licensing Section
Special Projects Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards (NMSS)

SUBJECT: REQUEST FOR DIFFERING PROFESSIONAL OPINION (DPO)
REVIEW OF "DIFFERING PROFESSIONAL VIEW CONCERNING
MODELING CHEMICAL CONSEQUENCE EFFECTS FOR
DETERMINING SAFETY REQUIREMENTS AT THE PROPOSED
MIXED OXIDE (MOX) FUEL FABRICATION FACILITY," DOCKET
NUMBER: 070-03098
(NMSS-DPV-2002-03)

As noted below, I am requesting that the subject Differing Professional View (DPV) is reviewed as a DPO.

The DPV was submitted on December 19, 2002, with three recommendations. NMSS formed a panel to review the DPV. The DPV Panel essentially agreed with the DPV and made four recommendations in its report (September 30th, 2003). On October 3rd, 2003, the Director of NMSS directed the Office of Fuel Cycle Safety and Safeguards (FCSS) to take specific actions in response to the four DPV Panel recommendations. FCSS responded on January 12th, 2004, indicating no further actions were necessary and implied all actions had been completed.

I provided an analysis of the FCSS response to NMSS and FCSS (memorandum of January 22nd, 2004) and noted the following concerns:

- The information cited in the FCSS memorandum for closure had already been reviewed by the DPV Panel and found not to address the safety issues.
- The DPV Panel's recommendations on guidance do not appear to have been followed, particularly for software quality assurance (QA) and code validation/verification for safety determinations, including site specific use.

I have not received any response to my analysis and my inquiries about the status of this DPV (e.g., memorandum of May 13th, 2004). However, the MOX Newsletter dated March 2004 stated that all recommendations regarding this DPV have been implemented and implies no further action.

I have come to the conclusion that the safety concerns expressed in the DPV have not been adequately addressed in the independent manner and spirit of M.D. 10.159, and that software used to make safety determinations for the proposed facility may not have met NRC requirements for such software, including QA requirements and site-specific verification and validation against actual tracer studies at the site of the proposed facility. From the documentation for the software used by the applicant, this comparison is needed as the software may overestimate dispersion (i.e., underestimate consequences). Therefore, potential accident scenarios at the proposed facility may not have adequate safety strategies and design bases, as required by the regulation. The DPV notes that generic safety issues affecting other facilities may also be present. Therefore, I request that this DPV is reviewed as a Differing Professional Opinion (DPO).

Please note that this DPV was written and processed prior to the recent revision of M.D. 10.159. Also, I have rejected the issues consolidation process proposed previously by NMSS.

The NRC is a public agency and I have requested that all DPV related information (reports, memoranda, E-mails etc.) is released to the public. For this DPV/DPO, please ensure that all of these memoranda and related E-mails are made publically available and available on the MOX licensing docket.

Please contact me if you have any questions.

cc:

Frank Congel
Russ Irish
Ted Quay
Rossana Raspa
Walt Schwink
Dale Yielding