



REQUEST REPLY BY 2/14/06

COMEXM-06-0003

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

January 30, 2006

COMMISSIONER

I approve in part. See attached comments.

MEMORANDUM TO: Chairman Diaz
Commissioner Merrifield
Commissioner Jaczko
Commissioner Lyons

Nils J. Diaz
Nils J. Diaz 04/18/06

FROM: Edward McGaffigan, Jr.

Edward McGaffigan, Jr.

SUBJECT: REGULATION OF REPROCESSING FACILITIES

There are indications that the Department of Energy will announce some sort of initiative regarding potential development of domestic proliferation - resistant reprocessing technologies for deployment at some indeterminate time in the future. We need to prepare for our licensing role, if this occurs.

The Commission has not thought seriously about licensing of a reprocessing facility since the Commission terminated the Generic Environmental Impact Statement on the Use of Mixed Oxide Fuel in Light Water Reactors (GESMO) proceeding on December 23, 1977.

This termination resulted from President Carter's April 7, 1977, decision to defer indefinitely the commercial reprocessing and recycling of plutonium produced in U.S. nuclear power plants.

This termination had also been presaged by President Ford's October 28, 1976, statement on nuclear policy in which he stated: "I have concluded that the reprocessing and recycling of plutonium should not proceed unless there is sound reason to conclude that the world community can effectively overcome the associated risks of proliferation. . . The United States should no longer regard reprocessing of used nuclear fuel to produce plutonium as a necessary and inevitable step."

President Reagan in an October 8, 1981, nuclear energy policy statement lifted the indefinite ban which previous administrations had placed on commercial reprocessing activities in the United States. President Reagan went on to state that he would pursue elimination of "regulatory impediments to commercial interest in this technology, while ensuring adequate safeguards." He also stressed the importance of the private sector taking the lead in developing commercial reprocessing services.

To my knowledge no private sector entity ever stepped forward to express an interest in licensing a reprocessing facility and the Commission took no action to reduce regulatory impediments to reprocessing in response to President Reagan's call.

Almost a quarter century later we now have serious governmental interest in development of proliferation-resistant reprocessing technologies. However, no private sector entity has expressed an interest in taking the lead in deploying such technologies, if successfully developed. So it is not clear at this time whether a potential applicant for an NRC license would come from the private sector or the public sector (e.g., the Department of Energy (DOE) or a new government - chartered corporation like the Tennessee Valley Authority).

Chairman Diaz's comments on COMEXM-06-0003

Consistent with my vote on SECY-06-0066, the staff should initiate interactions with DOE, evaluate the funding for this project as part of the FY2008 budget process, begin considering the specialized expertise that is needed, and work with DOE to have the NRC support for this effort covered under a reimbursable agreement. ✓

The staff should provide a conceptual plan of a licensing process for a reprocessing facility (and possibly associated co-located facilities). However, due to the uncertainty of DOE's schedule for this project, and recognizing that funding for these activities in FY07 will result in other activities within the President's budget to be deferred or cancelled, the staff should evaluate the funding for this project as part of the FY2008 budget process. I agree with Commissioners Merrifield and Lyon that the NRC resource commitments should be tied to DOE's program decisions. ✓

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NUCLEAR REGULATORY COMMISSION
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*I agree in part. See
attached comments!*

COMMISSIONER

MEMORANDUM TO: Chairman Diaz
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Commissioner Jaczko
Commissioner Lyons

FROM: Edward McGaffigan, Jr.

Edward McGaffigan, Jr. 4/4/06

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The Atomic Energy Commission licensed the West Valley reprocessing facility under 10 CFR Part 50 and the newly formed Nuclear Regulatory Commission was conducting the Barnwell reprocessing facility licensing proceeding under Part 50 until its termination. Part 50 was designed for licensing of commercial light water reactors, not reprocessing facilities. While I have not examined these licensing proceedings, I can only imagine that large numbers of exemptions were needed.

As regulators our job is not to judge the policy merits of pursuing a domestic reprocessing capability. Our job is to provide a fair and workable regulatory framework under which such a facility could be licensed while achieving reasonable assurance of adequate protection of public health and safety and the common defense of security.

I propose that we direct the staff to provide a conceptual design of a licensing process for a reprocessing facility (and possibly associated co-located facilities) by the end of 2006. I believe that the design should include features of the recently revised Part 70 (such as submission of an integrated safety assessment) and Part 52 (a one step construction authorization and operating license (COL) hearing process, a design certification process and an early site permit process). I think that it is particularly important to flesh out a design certification process early on because it will be at the design stage where potentially thorny issues, such as safeguards (facilitating IAEA safeguards activities), security (for a Category I facility), ease of decommissioning, handling of waste streams (presumably at a co-located vitrification facility with ultimate disposal in a geologic repository), handling of the reusable fuel stream (presumably at co-located fuel fabrication and possibly reactor facilities) and safety issues peculiar to the design, can best be addressed. The licensing process will also have to deal with requirements for decommissioning funding assurance, operational funding assurance, financial protection under the Price-Anderson Act, and undoubtedly numerous other matters which will arise.

I see this initial conceptual design of a licensing process as an inter-office undertaking, with perhaps NMSS in the lead, but NRR, NSIR, RES and OGC all having significant roles. The NRC historian in SECY can help the staff understand the previous 1970's licensing proceedings conducted by the AEC and NRC at West Valley and Barnwell. The Advisory Committees on Reactor Safeguards and Nuclear Waste could also help in defining the issues most important to licensing, inspecting, and ultimate decommissioning of reprocessing facilities (and related fuel-cycle facilities). As I stated in my vote on ACNW's 2006 priorities, our national experience in operating large-scale reprocessing facilities without extraordinary back-end decommissioning costs is unblemished by success (at Hanford, Savannah River, and West Valley). The British face similar problems at their retired facilities, as undoubtedly do other nations. We and our successors on the Commission need to ensure that any future reprocessing facilities are regulated from cradle to grave to preclude such outcomes for future generations of Americans. I personally believe that we can do so by setting the right safety and security requirements and holding the licensee to those requirements throughout the life of the facility. By doing this we can also respond to President Reagan's almost quarter-century old call to eliminate unnecessary regulatory impediments to private sector interest in this technology. But we also may discover that only the public sector could assume the risks involved in this enterprise.

Obviously, in developing the conceptual framework the staff should involve stakeholders, both the public and DOE, as extensively as possible, including workshops and making drafts available for comment on our website. This will be the first step in a years-long process that will need to be paced to a realistic date for receipt of a design certification, early site permit or COL application. I plan to seek resources for the effort in the mid-year reprogramming which should be before the Commission in March.

My goal is to spur a public discussion of this matter among the Commissioners, and then through the staff with DOE, other government Agencies and the public.


SECY please track.

cc: L. Reyes, EDO
K. Cyr, OGC
A. Vietti-Cook, SECY

Comments from Commissioner Merrifield on COMEXM-06-0003:

My more detailed comments on proposed NRC actions regarding the DOE initiative associated with a spent fuel recycling program are contained in my vote sheet for SECY-06-0066. Without prejudging any licensing decision, I am supportive of the concept of reprocessing and the concept of a nuclear fuel recycling program. However, given all the uncertainty in the DOE program, I am not supportive to committing large NRC resources in this area until the program is better defined. DOE can initiate the total program under its own authority. If it is the will of Congress for NRC to regulate this activity, there is time for the NRC to develop appropriate, reasoned regulations and regulatory guidance in a timely manner. I would support the staff developing a simplified, generic conceptual licensing process where the specific schedule is directly tied to major DOE program decisions. ✓

I recognize that DOE is responding to directions from the Congress on a program that has been designated a priority by the President. DOE has been given a very aggressive schedule to select a site and begin construction. While the NRC is an independent regulatory agency we will nonetheless do our part to review a program identified as a national priority. But this program has considerable uncertainty concerning both the site selection and specific technology to be implemented in multiple major facilities to be constructed on the site. The first activities will, in all likelihood, be done under DOE authority. Therefore, NRC does not need to rush into developing regulatory guidance. NRC needs to closely follow DOE's activities, but definitely not lead or dictate DOE's decisions by prematurely developing new regulatory requirements or lead the public discussions on a matter not yet determined by DOE. At the appropriate time, NRC will need to develop and implement regulations and associated guidance. □


4/4/06

**Commissioner Jaczko's Comments on COMEXM-06-0003
Regulation of Reprocessing Facilities**

I approve Commissioner McGaffigan's memorandum to have the staff propose a conceptual design for a licensing process to address the Commission's responsibilities to regulate the facilities associated with the President's proposed reprocessing initiative, Global Nuclear Energy Partnership (GNEP). I appreciate Commissioner McGaffigan's efforts to address this important issue. ✓

Although the GNEP initiative is preliminary at this point, developing at least a conceptual framework for the regulation of the components of this initiative will ensure the Commission continues to play a vital role in regulating the nation's commercial nuclear infrastructure.



Gregory B. Jaczko

3/10/06
Date



ALBUQUERQUE FIELD OFFICE: 2114106
UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

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*Approved in part,
see attached comment
J. J. [Signature] 4/7/06*

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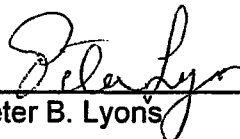
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Commissioner Lyons Comment on COMEXM-06-0003
Regulation of Reprocessing Facilities

As I indicated in vote sheet for SECY-06-0066, I am supportive of the concept of staff developing a regulatory framework for possible reprocessing facilities. However given the major uncertainties in the DOE plans and similar uncertainties in degree of Congressional support, I do not believe we should commit a large NRC resource in this area until our role if any has been well defined in licensing or in having regulatory authority over any DOE facility used to demonstrate the advanced recycling technology. I agree with Commissioner McGaffigan that staff to extent possible should involve stakeholders, both the public and DOE, in developing the conceptual framework.



Peter B. Lyons

4/7/06

Date