

September 24, 1998

FOR: The Commissioners

FROM: L. Joseph Callan /s/  
Executive Director for Operations

SUBJECT: STATUS REPORT OF THE U.S. NUCLEAR REGULATORY COMMISSION TASK FORCE ON OVERSIGHT OF THE U.S. DEPARTMENT OF ENERGY, IN RESPONSE TO COMSECY-96-053-DSI 2 (REPORT NO. 5)

**PURPOSE:**

The purpose of this paper is to inform the Commission of the status of the work of the U.S. Nuclear Regulatory Commission (NRC) Task Force (hereafter Task Force) formed to identify, in conjunction with the U.S. Department of Energy (DOE), the policy, legal, and regulatory issues needing analysis and resolution before seeking NRC oversight responsibility for DOE nuclear facilities. This report covers the period June 13, 1998, to September 12, 1998.

**SUMMARY:**

This paper provides a status report on the Task Force's work from June 13, 1998, to September 12, 1998. During this period, the Task Force worked primarily on: (a) bringing closure to the outstanding issues remaining for the Lawrence Berkeley National Laboratory (LBNL) report; (b) preparing a draft of the Oak Ridge National Laboratory (ORNL) Radiochemical Engineering and Development Center (REDC) report and providing it to DOE for comment; (c) conducting on-site work at the Savannah River Site (SRS) Receiving Basin for Offsite Fuel (RBOF); and (d) establishing the overall schedule for the Pacific Northwest National Laboratory (PNL) pilot project. The Task Force also conducted extensive analyses to develop the information needed to complete the cost estimate requested by the Defense Nuclear Facilities Safety Board (DNFSB). After the Task Force recently met with the DNFSB, the DNFSB sent a letter to the Commission recognizing the resource-intensive nature of the aforementioned cost analysis request and essentially withdrawing its request.

**BACKGROUND:**

Previous quarterly status reports on the work of the Task Force are found in: SECY-97-206, dated September 12, 1997; SECY-97-301, dated December 29, 1997; SECY-98-080, dated April 14, 1998, and SECY-98-149, dated June 26, 1998.

**DISCUSSION:****A. STATUS OF LBNL PILOT PROJECT**

Negotiations continue with DOE on a number of issues within the LBNL report. Chief among them is the issue of who should be the licensee. The Deputy Secretary of Energy strongly believes that DOE should be the only entity named on the license. DOE is modifying the LBNL report to reflect that position. The NRC Task Force is developing a proposed position on license conditions that would reflect the University of California (UC) as the operator of, but not a licensee for, LBNL, and a proposed position on the nature of DOE's responsibilities, capabilities, and relationships in LBNL activities. At a minimum, if DOE were the licensee, NRC would expect DOE to identify a single individual that would be responsible for and may commit DOE on all regulatory/licensing matters. The option of naming UC as the licensee will continue to be analyzed in the report.

Another major issue within the LBNL report is the potential impact of NRC's decommissioning regulations. Of particular initial concern to DOE was whether it would be required to promptly decommission the Bevatron, at a cost of about \$75 million, and if not, how NRC's financial assurance requirements for decommissioning would be satisfied. That section of the report has been expanded to reflect the inherent flexibility in the rules to allow a reasoned and responsible approach to decommissioning. DOE wants the legislation to clarify DOE's (not the contractor) financial responsibility for decommissioning its facilities and to call for a formal (NRC/DOE) agreement regarding the flexibility of NRC practices vis-a-vis the timeliness aspects of decommissioning. The NRC and DOE Task Force's are on the verge of reaching a consensus on the decommissioning section.

A third major issue concerns the nature of NRC involvement, if any, in the selection of a replacement contractor, should DOE decide to do so. If the DOE contractor were on the license and DOE wanted to change the contractor, the issue of license transfer would be raised. The DOE and NRC Task Forces have not reached a consensus yet on how to address this issue. However, since UC owns the land on which LBNL is located, it is unlikely that DOE would change the contractor there. Therefore, this issue need not be addressed in the LBNL report and will be carried over to the REDC pilot project report.

UC wants a single external regulator for radiological safety at LBNL. This raises the question of whether NRC should seek regulatory jurisdiction over the radiological safety aspects of the LBNL accelerators. The DOE and NRC Task Forces are preparing a section on the advantages and disadvantages of doing this and on whether States should have regulatory responsibility for the accelerators.

During the week of August 17, 1998, the DOE and NRC Task Forces, as well as representatives from several DOE laboratories, met at LBNL, to prepare detailed cost estimates for NRC's regulation of LBNL. That section of the report is still evolving.

The NRC and DOE Task Forces will be meeting on September 23-24, 1998, to prepare a detailed transition plan for regulating LBNL. This is in

anticipation of Congressional direction to submit such a plan to Congress.

#### **A.1. Revisions to Memorandum of Understanding**

In a Staff Requirements Memorandum dated November 13, 1997, on SECY-97-237, "Memorandum of Understanding with the Department of Energy," the Commission directed the staff, in consultation with DOE, to prepare a revised Memorandum of Understanding (MOU), for consideration by the Secretary of Energy and the Commission, on completion of the LBNL pilot project. In Quarterly Status Report No. 4 (SECY-98-149), the staff indicated that it had initiated discussions with DOE on revising the MOU, but that the DOE Task Force was reluctant to pursue the matter without guidance from the DOE Steering Committee. DOE has informed the NRC Task Force that DOE recognizes that some changes to the MOU may be necessary, and proposes to have a meeting of the Task Forces to develop lessons learned thus far, and to propose any changes to the MOU. That meeting will likely occur shortly after the LBNL Report has been completed.

#### **A.2. Proposed Legislation**

Preparation of proposed legislation depends on Commission policy direction on issues that are necessary or desirable to address in a legislative package. As mentioned in the last quarterly status report (SECY-98-149), the staff has been preparing a Notation Vote SECY paper on such issues, but that paper has been put on hold pending closure or an impasse with DOE on several issues. The NRC Task Force anticipates completing that SECY paper within one month of publishing the LBNL report.

#### **B. STATUS OF ORNL-REDC PILOT PROJECT**

An early draft of the ORNL-REDC pilot project report was submitted to DOE in mid-July. A second draft of the report is expected to be completed within the next two-three weeks.

A few outstanding issues still require resolution, including the carryover issues from the LBNL pilot mentioned above. The change-in-contractor issue is relevant to ORNL because the site could change contractors as often as every five years. DOE is concerned that NRC review of the technical capabilities of a contractor would delay or interfere with DOE's choice of contractor to operate the site.

Another issue is that, ORNL does not have criticality alarms installed in each hot-cell building. The facilities are heavily shielded and contain radiation monitors and alarms. Under NRC requirements, these types of facilities ordinarily would require criticality alarms. However, where justified, NRC might not require new alarms on an existing building if other control mechanisms were sufficient. NRC inspectors are reviewing ORNL's monitoring and radiation protection mechanisms to determine their suitability for protecting worker safety. The DOE cost would be high if criticality alarms were required and DOE is concerned that such alarms might not actually enhance worker protection. The section of the report on the DOE cost of external regulation cannot be completed without a decision, by NRC inspectors on the necessity for criticality alarms.

#### **C. STATUS OF THE SRS/RBOF PILOT PROJECT**

All on-site work has been completed at SRS/RBOF, except for a thin "horizontal-slice" review. DOE believes that a "horizontal slice" review is not needed. NRC is continuing negotiations on the subject.

The following activities have taken place at RBOF:

- Site familiarization visit - May 21-21, 1998
- Stakeholder Meeting - June 25, 1998
- Phase I visit - week of July 20, 1998
- Phase II visit - week of August 24, 1998

Representatives from DOE, SRS, the States of Georgia and South Carolina, Occupational Safety and Health Administration, Environmental Protection Agency, and the Citizens Advisory Board -- a local public interest group -- attended at least one of these activities.

NRC staff found that DOE and its contractor (Westinghouse) control risks at RBOF to acceptable levels. The staff reviews focused on dominant safety, safeguards and security risks, engineered and human controls to make risks acceptable, and the availability and reliability of risk controls. The pilot findings to date indicate that, except for safeguards issues, RBOF, as it currently exists, is amenable to NRC regulation under [10 CFR Part 70](#), "Domestic Licensing of Special Nuclear Material." Part 70 was applicable to the fuel when it was fabricated, used, stored, and transported under NRC jurisdiction/license.

The RBOF safeguards issues concerns safeguards for fissile materials, especially that contained in fuel received from foreign countries. One issue concerns what appears to be uncertainty about the elemental and isotopic content of fissile material in fuel received and stored at RBOF. Aside from safeguards concerns, such uncertainty also raises questions concerning nuclear criticality risk, the RBOF bounding accident.

DOE and NRC Pilot Project staffs are continuing to address the safeguards issues at RBOF as part of the ongoing pilot.

#### **D. STATUS OF THE PNNL PILOT PROGRAM**

The NRC and DOE members of the Task Force have continued to hold regular conference calls, to prepare for the PNNL pilot project. The team has established the following schedule:

- Site familiarization visit: November 2-5, 1998
- Stakeholder meetings: November 3-4, 1998
- Phase I: December 7-11, 1998
- Phase II: January 11 - 15, 1999
- Second week of Phase II: February 22, 1999

#### **E. STATUS OF ADDITIONAL PILOT PROJECTS FOR FISCAL YEAR**

At the Congressional hearings on May 20-21, 1998, DOE committed to consider more complex [than fiscal year (FY) 1998] pilot projects for FY 1999. Since then, there has been considerable DOE discussion about identifying the last two pilot projects. DOE is still considering a non-power reactor and an Environmental Management facility. A decision is expected within a few days.

#### **F. DNFSB REQUEST FOR INFORMATION**

Earlier this year, the DNFSB requested the NRC to provide information on the estimated costs of external regulation of the DOE's defense nuclear facilities, as well as an estimate of direct and indirect costs that would be incurred using the gaseous diffusion plants (GDP's) as a reference nuclear facility, if such a plant were subjected to: (a) full commercial licensing; (b) certification as compliant with NRC requirements; and (c) independent assessments with advisories and/or recommendations to DOE. In response, the NRC provided actual costs of transitioning the two GDPs at Paducah, Kentucky, and Portsmouth, Ohio. The major expenses involved in this transition were the costs to bring the two plants into compliance with existing DOE orders, standards, regulations and guidelines.

To respond to the broader question of regulating all defense program facilities, the NRC staff prepared an analysis of the estimated costs of external regulation, using data derived from current NRC licensees or program codes that most closely met the facilities provided by DNFSB, given what was known about the facilities. However, this approach was time consuming, and did not provide the best fit between the available data and the DOE facilities to provide sufficiently accurate cost estimates. A great deal of additional information regarding the nature of the activities, including possession limits for radionuclides at the defense program facilities would be required from DNFSB in order to develop meaningful resource estimates. After DNFSB review of the type of information needed by the NRC, and a meeting between the respective staffs, the DNFSB concluded that further analysis, at this time, was overly labor intensive for both groups.

#### **G. ASSOCIATED MEETINGS**

During the past quarter, the Task Force met with or briefed the following entities on the status of Task Force activities: (a) DOE Energy Research Senior Managers' Forum; (b) the House Appropriations Subcommittee on Energy and Water Development staff; (c) the U.S. Environmental Protection Agency; (d) the multi-agency Federal Technical Standards Workshop; (e) Idaho National Engineering Laboratory Center for Performance Improvement; (f) the Advisory Committee on Nuclear Waste; and (g) DNFSB staff.

#### **COORDINATION:**

The Office of the General Counsel has reviewed this paper and has no legal objection.

L. Joseph Callan  
Executive Director for Operations

#### **CONTACTS:**

John H. Austin, NMSS/ERDF  
(301) 415-7275  
Patricia A. Rathbun, NMSS/ERDF  
(301) 415-7178