

POLICY ISSUE
(Negative Consent)

May 24, 2002

SECY-02-0090

FOR: The Commissioners

FROM: William D. Travers /RA/
Executive Director for Operations

SUBJECT: PROPOSED REGULATORY FRAMEWORK AND COST ESTIMATES
FOR U.S. NUCLEAR REGULATORY COMMISSION REGULATION OF
NUCLEAR SAFETY AT U.S. DEPARTMENT OF ENERGY'S NON-
DEFENSE SCIENCE LABORATORIES

PURPOSE:

To inform the Commission of the staff's planned action to transmit its proposed approach for regulating the U.S. Department of Energy's (DOE's) 10 non-defense science laboratories, along with the staff's estimate of NRC resources required for such regulation, to DOE and the U.S. General Accounting Office (GAO), for consideration in the preparation of their reports to Congress on external regulation of DOE.

BACKGROUND:

In the October 30, 2001, Conference Report accompanying H.R. 2311, the fiscal year (FY) 2002 appropriations bill for energy and water development, the conferees directed DOE to prepare an implementation plan for the transition to external regulation of DOE's non-defense science laboratories. These had been identified in an earlier version of H.R. 2311 as 10 non-

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weapons laboratories. Five of these are multi-purpose laboratories: Argonne National Laboratory; Brookhaven National Laboratory (BNL); Lawrence Berkeley National Laboratory (LBNL); Oak Ridge National Laboratory (ORNL); and Pacific Northwest National Laboratory. The other five are single-purpose laboratories: Ames Laboratory; Fermi National Accelerator Laboratory; Princeton Plasma Physics Laboratory; Stanford Linear Accelerator Center; and Thomas Jefferson National Accelerator Facility.

The Conference report states:

For the purpose of preparing this plan, the Department should assume that [NRC] would take over regulatory responsibility for nuclear safety at the Department's non-defense science laboratories, and the Occupational Safety and Health Administration (OSHA) would take over regulatory responsibility for worker safety at these laboratories. The conferees expect the Department to coordinate with NRC and OSHA, and to build upon the previous external regulation pilot programs, in developing this plan....The implementation plan should address all details necessary to implement external regulation, including an estimate of the additional resources needed by NRC and OSHA, corresponding reductions in funding and staffing at the department, specific facilities or classes of facilities for which external regulation cannot be implemented in a timely manner, necessary changes to existing management and operating contracts, and changes in statutory language necessary to effect the transition to external regulation. [Conf. Rpt. 107-258, at 109-110 (October 30, 2001)]

In addition, the June 26, 2001, report of the House Committee on Appropriations on the earlier version of H.R. 2311 indicated that... "the Committee expects that NRC will, on the effective date for external regulation, assume regulatory responsibility for regulating nuclear safety at accelerators in the named DOE science laboratories. The responsibility for regulating accelerators located on Federal facilities is not to be delegated to the NRC Agreement States." [H. Rpt. 107-112 at 166 (June 26, 2001)]

DOE has requested NRC assistance in preparing the plan, which is due to Congress by May 31, 2002. The GAO is preparing a similar analysis which is due to Congress at about the same time. The NRC staff is currently assisting both the DOE and GAO efforts.

DISCUSSION:

NRC staff has developed a proposed approach for NRC regulation of the DOE science laboratories, Attachment 1, as well as resource estimates for regulating the facilities (Attachment 1 and 2). In NUREG-1708, "External Regulation of Department of Energy Nuclear Facilities," the NRC Task Force on External Regulation of DOE Nuclear Facilities presented its views on major issues related to external regulation of the DOE nuclear facilities and made recommendations for the resolution of some of these issues. This report was transmitted to

Congress in the summer of 1999. The staff's proposed approach includes the recommendations made by the Task Force, which are explained in NUREG-1708, with the following exceptions:

- NRC only seeks legislation for regulating accelerators. (See Attachment 1, page 1.)
- NRC licenses the laboratories because of their similarities to commercial facilities. (See Attachment 1, page 2.)

The current resource estimate is based partially on the resource estimates found in NUREG-1708, but is augmented based on recent NRC staff site visits to five of the laboratories. The staff plans additional site visits to BNL and ORNL during the summer of 2002, to further amplify its regulatory approach and cost estimates for regulating the larger DOE laboratories. If approved by the Commission, the staff will provide the attached regulatory approach and associated resource estimates to DOE and GAO, for inclusion in their reports to Congress.

SUMMARY OF RESOURCE ESTIMATES:

The staff has estimated the resources needed to transfer the regulation of nuclear safety, radiological safety, and safeguards-related regulatory and oversight responsibilities of the ten DOE laboratories to NRC. The staff estimates a 2-year transition period beginning in FY 2003, given the assumptions and conditions as outlined in Attachments 1 and 2. The staff considered two cases related to accelerators and accelerator-produced radioactive material: 1) NRC would not have regulatory authority over accelerators or accelerator-produced radioactive material; or 2) it would have such authority. To cover these alternatives, the staff estimated costs of regulation without accelerators and incremental costs of covering accelerators. The estimates are summarized below:

RESOURCE ESTIMATE WITHOUT ACCELERATORS

	FY 2003	FY 2004	FY 2005
Dollars in millions	6.8	6.4	4.5
FTE	42	41	22

INCREMENTAL RESOURCE ESTIMATE FOR ACCELERATORS

	FY 2003	FY 2004	FY 2005
Dollars in millions	1.4	1.0	0.3
FTE	7	6	2

CONCLUSION:

The staff continues to believe that most of the technical, policy, and regulatory issues involved in NRC oversight of DOE nuclear facilities, as presented in NUREG-1708, could be handled adequately within the existing NRC regulatory structure. Contingent on adequate funding,

staffing, and a clear delineation of the authority NRC will exercise over the facilities, NRC can effectively regulate DOE nuclear and radiological safety.

RESOURCES:

The resources for this effort are not presently budgeted.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer has also reviewed this paper and concurs.

RECOMMENDATION:

Unless otherwise directed by the Commission within 10 days, the staff plans to forward the proposed regulatory framework and resource estimates presented in Attachments 1 and 2 to DOE and GAO. Action will not be taken until the SRM is received. We consider this action to be within the delegated authority of the Executive Director for Operations.

/RA/

William D. Travers
Executive Director
for Operations

Attachments:

1. "Proposed Approach for NRC Regulation of DOE Science Laboratories"
2. "Broad-Based Resource and Cost Estimates for NRC External Regulation of DOE Science Laboratories"

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2. "Broad-Based Resource and Cost Estimates for NRC External Regulation of DOE Science Laboratories"

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OFC	INMS*		SPIB*		FCSS*		FCSS*		INMS*		DWM*	
NAME	PRathbun:dw		MLeach		ELeeds		RPierson		DCool ¹		LCamper ¹	
DATE	4/ 25 /02		4/25 /02		5/ 10 /02		5/10/02		4/ 26/02		4/29 /02	
OFC	OGC*		NRR*		NRR*		CFO*		NMSS*		Tech Ed.*	
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¹ Original concurrence page misplaced.

PROPOSED APPROACH FOR U.S. NUCLEAR REGULATORY COMMISSION REGULATION OF U.S. DEPARTMENT OF ENERGY SCIENCE LABORATORIES

1. INTRODUCTION

In NUREG-1708, "External Regulation of Department of Energy Nuclear Facilities," the U.S. Nuclear Regulatory Commission (NRC) Task Force on External Regulation of U.S. Department of Energy (DOE) Nuclear Facilities presented its views on major issues related to external regulation of the DOE nuclear facilities and made recommendations for the resolution of some of these issues. This report was transmitted to Congress in the summer of 1999. With a few exceptions, staff's proposed approach includes the recommendations made by the Task Force, which are explained in NUREG-1708.

2. AREAS TO BE INCLUDED UNDER NRC JURISDICTION

The scope of NRC regulation today is defined by the Atomic Energy Act of 1954, as amended (AEA)- - to focus on the protection of public health and safety and the environment and the common defense and security with respect to the use of special nuclear material, source material, byproduct material, and construction and operation of production and utilization facilities. NRC's approach to regulatory responsibility for DOE's non-defense science laboratories is shown below.

- **Regulation of Radiological Safety**
This is NRC's primary mission. NRC will assume exclusive regulatory responsibility for radiological safety at DOE's non-defense science laboratories.
- **Regulation of Accelerators**
If NRC becomes the external regulator of DOE nuclear and radiological safety, NRC will seek legislation granting NRC regulatory responsibility for regulating accelerators, radioactive material produced by accelerators, and associated electronic sources of ionizing radiation at the DOE science laboratories.¹
- **Regulatory Authority over Safeguards**
NRC will regulate safeguards at DOE facilities just as NRC regulates them at other facilities.
- **Worker Radiological Safety**
The current memorandum of understanding between NRC and the Occupational Safety and Health Administration will be extended to include the DOE sites that

¹ In NUREG-1708, the task force recommended that NRC should regulate accelerators and naturally occurring or accelerator-produced radioactive material (NARM) at DOE facilities. At present, the staff only recommends that NRC seek legislation granting NRC regulatory responsibility for regulating accelerators, radioactive material produced by accelerators, and associated electronic sources of ionizing radiation because the Commission's consideration of regulation of naturally occurring radioactive material is at a preliminary stage, and no decision regarding a legislative proposal has been made.

are subject to external regulation by NRC, as was done for the licensing of the TMI-2 independent spent fuel storage installation (ISFSI).

- **Environmental Protection**

NRC will request the U.S. Environmental Protection Agency to rescind the National Emissions Standards for Hazardous Air Pollutants requirements for DOE facilities, as it has for other NRC-regulated facilities.

3. METHODS OF REGULATION

The staff will pursue licensing for the 10 facilities. The Lawrence Berkeley National Laboratory pilot project demonstrated that licensing is the appropriate mechanism for sites that are similar to sites possessed by current NRC materials licensees. This approach would be efficient and cost-effective because, except for the need to develop regulatory requirements for accelerators, current regulations and procedures could be used for licensing these sites. In addition, requirements for accelerators could be developed efficiently, using existing State guidance as well as guidance from DOE and the European Community as a model. Also, NRC will encourage development of a consistent license for similar types of laboratories.

In NUREG-1708, the staff recommended a site-specific approach to the regulatory method to be chosen for a given facility. The facilities envisioned in NUREG-1708 encompassed a wide range of DOE facilities. In the case of the DOE science laboratories, the facilities are similar enough to NRC licensed materials facilities that the NRC staff recommends that licensing be the chosen regulatory method for all 10 facilities.

Before licensing a DOE facility, NRC will employ a variety of regulatory techniques, such as interviews, observation of activities, examination of hardware, review of records, independent sampling and measurement of radiological parameters, and independent design calculations, to independently ascertain the adequacy of facility design, construction, and safety, and the operational performance of the facility and its staff. NRC will apply the same licensing, inspection, and enforcement mechanisms to DOE radiological facilities as now apply to existing NRC Federal Government licensees. DOE retains regulatory authority until transferred to NRC which will occur when a license has been issued or date certain specified by Congress.

4. LICENSEE

For the purpose of the assessment of resources, NRC assumes that the Management and Operating (M&O) contractor at each DOE facility will be the licensee.

5. FUNDING

Based on the assumption that the M&O contractor will be the licensee, if legislation providing NRC with regulatory authority over DOE facilities is enacted, NRC will request funding through direct appropriations and recover the costs through 10 CFR Part 170 and 10 CFR Part 171 fees assessed to the DOE facility applicants/licensees, the same as NRC does with other applicants and licensees.

The resource estimates provided in this paper reflect the budget increase for additional resources needed by NRC to regulate the specified DOE laboratories. However, these estimates do not represent the fees that would be assessed to the licensee/DOE contractor with responsibility for operations at the DOE laboratories. The laboratories would be assessed Part 170 fees to recover the costs of pre-application activities and licensing and inspection activities.

In addition, once a DOE laboratory is licensed, the licensee also would be subject to annual (Part 171) fees.

6. CONFLICT OF INTEREST

NRC has generally treated tasks performed for NRC by DOE laboratories as being subject to organizational conflict of interest (COI) restrictions. The NRC omnibus bill sent to the 107th Congress in June 2001 contains an amendment, to section 170A of the Atomic Energy Act. The proposed amendment would address the prohibition on NRC entering into an arrangement with any person who has a COI unless, after consideration of all relevant information, the Commission finds that it is unlikely that a COI would exist or the conflict has been avoided by including appropriate conditions in the arrangement- - or that it is in the best interests of the United States to enter into the arrangement, and appropriate conditions to mitigating the conflict are included in the arrangement. (Where work that is vital to an NRC program can only be satisfactorily performed by a contractor that has an organizational COI, the NRC Executive Director for Operations has granted a waiver permitting the work to be performed by the contractor experiencing the COI.) The legislative proposal contained in the NRC omnibus bill would clarify the effect of section 170A on NRC arrangements with DOE.

7. PRICE-ANDERSON INDEMNIFICATION

Although DOE's indemnification of all contractors is mandatory, NRC's mandatory indemnification only applies to production and utilization facilities that it licenses, pursuant to the AEA. NRC normally does not exercise its discretionary authority to indemnify other types of licensees unless the potential liability from licensed activities could exceed commercially available insurance amounts. Furthermore, NRC's indemnification is limited to \$500 million, whereas DOE's indemnification limit is approximately \$9 billion. DOE is not required to indemnify contractors whose activities are subject to NRC financial protection requirements or agreements for indemnification. Under the existing Price Anderson Act, if NRC were given authority to license DOE facilities, DOE mandatory indemnification would appear to continue, except for those contractors whose activities are subject to NRC requirements for financial protection and indemnity agreements. But this is not entirely certain, and clarifying legislation would be useful. Currently, the facilities subject to these requirements are primarily production and utilization facilities licensed under 10 CFR Part 50, (e.g., research and test reactors).

8. NATIONAL ENVIRONMENTAL POLICY ACT - ENVIRONMENTAL IMPACT STATEMENT

The National Environmental Policy Act requires an environmental impact statement (EIS) for every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment. If DOE proposes legislation authorizing external regulation of its science laboratories, it will have to perform an environmental analysis to determine whether an EIS is needed to support the proposal. The NRC will also need to perform environmental analyses to support its licensing of DOE facilities. At a minimum, NRC would need to conduct environmental assessments, but it is possible that an EIS would be appropriate for consideration of the licensing of the DOE laboratories. To avoid duplication of effort, the staff would plan to make use of DOE's environmental analyses to the maximum extent possible through such devices as tiering, incorporation by reference, and adoption. Staff believes that the legislation providing for NRC regulation of these DOE facilities should spell out the type and scope of environmental analyses Congress expects NRC to conduct, including a provision that NRC will not need to prepare an EIS for the licensing of existing facilities.

9. DECOMMISSIONING

For several reasons, DOE may prefer to delay decommissioning of a particular facility. NRC's regulations state that if a facility cannot operate and has not operated for more than 2 years, and where residual radioactivity is present that would preclude the facility from being released for general use, the licensee is required to begin decommissioning and complete it within 24 months, or to present a plan for decommissioning within 12 months. Because DOE is the holder of AEA material for which there is no other holder, staff will propose rulemaking to exempt DOE from NRC decommissioning requirements, for such material and other material and facilities where there are unusual circumstances.

10. RULEMAKING AND REGULATORY ACTIONS

NRC will implement its current risk-informed approach to regulation if it assumes regulatory jurisdiction over DOE facilities. If, as noted in Item 2 above, NRC receives additional authority to regulate accelerators, consideration will be given to developing a new regulation.

11. PUBLIC PARTICIPATION AND COMMUNICATION

NRC intends to use its current approach to public participation, including efforts to improve communication with major stakeholders, in dealing with the licensing and inspection activities at the regulated DOE laboratories. NRC's public process is well-established. Licensing meetings are open to public observation. Selected inspection and enforcement meetings are also open. Development of rules and guidance includes obtaining and resolving public comments. Licensing proceedings may include hearings, with participation from intervenors. Members of the public may petition NRC for rulemaking and enforcement action.

**BROAD-BASED RESOURCE AND COST ESTIMATES FOR
U.S. NUCLEAR REGULATORY COMMISSION EXTERNAL REGULATION OF
U.S. DEPARTMENT OF ENERGY SCIENCE LABORATORIES**

1. INTRODUCTION

This attachment provides the estimated costs for U.S. Nuclear Regulatory Commission (NRC) regulation of radiological safety at U.S. Department of Energy (DOE) laboratories named in section 308 of H.R. 2311, as reported in House Report 107-112. Though the language is not contained in the bill reported by the committee of conference, the conference committee report (No. 107-258) directed DOE to prepare an implementation plan for transition to external regulation at DOE's non-defense science laboratories, which appears to be a reference to the same 10 laboratories listed earlier in H.R. 2311.

The DOE facilities that are the subject of the external regulation implementation plan being prepared by DOE are quite similar to NRC's existing broad-scope licensees. Based on the similarities, NRC believes a phased approach is not required for the 10 facilities. Were NRC regulatory jurisdiction to be broadened to other types of DOE facilities, a phased approach would be adopted. The 10 DOE facilities that would transition to NRC regulation have been divided into three categories, based on relative size, complexity, and risk, as follows:

The findings of NUREG-1708 provide the framework on which the following resource estimates were derived.

a. Facilities that would require a 10 CFR Part 30 broad-scope license, where the special nuclear material (SNM) amount and form do not require a 10 CFR Part 70 license

- Ames Laboratory (Iowa) (Ames)
- Lawrence Berkeley National Laboratory (LBNL)
- Fermi National Accelerator Laboratory (Fermi)
- Thomas Jefferson National Accelerator facilities (TJ)
- Princeton Plasma Physics Laboratory (PPPL)
- Stanford Linear Accelerator/Synchrotron Laboratory (SLAC)

b. Facilities that would require a Part 30 broad-scope license and a Part 70 SNM license:

- Argonne National Laboratory - East (ANL-E)
- Brookhaven National Laboratory (BNL*)
- Pacific Northwest National Laboratory (PNNL)

[*Note: BNL would also require a 10 CFR Part 72 independent spent fuel storage facility license.]

c. Facilities that would require a Part 30 broad-scope license, a Part 70 SNM license, and a 10 CFR Part 50 test reactor license:

- Oak Ridge National Laboratory (ORNL)

The approach assumes a multi-disciplinary NRC review approach based on the guidance for the specific type of license. The concept includes the following:

- Visit sites.
- Review license applications.
- Issue actual licenses.
- Use consistent licenses, when applicable, to maximize efficiency and effectiveness.

The approach assumes early site visits and facility assessments, with reviews of safety analysis reports (SARs), technical safety requirements, etc. The NRC staff would license the facilities within 2 years. One exception may be ORNL because of the site's complexity. Rulemakings and guidance development would also occur, within this same 2-year period, for accelerators; special isotopes/SNM (e.g., neptunium); and potentially a separate Part of 10 CFR for DOE facilities. In order to meet initial staffing requirements, NRC would use experienced staff and supplement with new hires. Resources associated with regulating accelerators are provided as an incremental cost, at DOE's request.

2. ESTIMATES OF RESOURCES

The estimates assume NRC regulation of all DOE science laboratory facilities. The estimates are generally based on experience in licensing similar facilities. Also, the Pilot studies for this earlier assessment were considered. Facilities were assumed to be in generally safe condition and in compliance with DOE Orders and regulations. In addition the estimates are based on recent staff assessments of several facilities and on meetings with DOE, and were done using the following assumptions:

- The full-time equivalent (FTE) estimates are in terms of direct effort and the dollar amounts are similarly direct costs. Per NRC current experience, for additional and indirect effort, staff added to estimates (i.e., produce- loaded estimates): 10 percent for allegations, investigations, and enforcement activities - - and another 6 percent for Agency support efforts/reviews etc.
- These estimates assume there will be no hearings.
- Some uncertainties exist regarding number, type, risk, and operational status of individual facilities, and DOE's intent regarding future operations of some of these facilities. Fewer operating facilities could reduce NRC steady-state regulatory costs. DOE will not begin major decommissioning activities under NRC license until after the operating license is issued in FY 2004. Staff assumed the equivalent of five complex decommissioning projects would begin NRC review in FY 2005. The resource estimates are based on staff experience with similar decommissioning projects.
- The estimates also assume that DOE is responsible for conducting any necessary National Environmental Policy Act environmental impact statement activities.
- The potential Part 70 licensees will submit an Integrated-Safety Analysis Summary no sooner than 2 years after publishing DOE-specific rulemaking.

- The estimates for the Part 30 broad-scope licensing were based on staff experience with existing facilities such as universities; the estimates for the Part 70 licenses were based on existing fuel facilities. The estimates for the Part 50 license for the ORNL reactor were based on existing research and test reactor regulatory experience, and the estimates for the accelerator facilities were based on large irradiator facilities.

Tables 1 and 2 summarize the resource estimates. The costs were broken down into the following items, using the construct that all facilities would hold a Part 30 broad-scope license and then receive other licenses as necessary.

Item 1. Facilities that would only require a Part 30 broad-scope license

Transition

These facilities are Ames, LBNL, Fermi, TJ, PPPL, and SLAC. The staff estimates that the average review and licensing effort for these facilities would be about 0.4 FTE per site. Therefore, to license the six sites considered in this category, 1.2 FTE direct per year for the 2 years are the estimated resource needs, and \$30 thousand for travel each year. This estimate is based on the facilities being licensed as Type-A broad-scope licensees. The incremental cost to add accelerators is estimated to average 0.2 FTE per site. This totals 0.6 FTE per year. The incremental cost is based on the expectation that the radiation control programs required of broad-scope licensees will address most radiation safety licensing aspects of the other radiation sources.

Post-Transition

For routine licensing and inspection of these facilities, the staff estimates that 0.2 FTE per year for each of these six sites would be required. The incremental cost to add accelerators is estimated to be 0.1 FTE per year per site.

Item 2. Facilities that would require a Part 30 broad-scope license and a Part 70 license or Part 72 independent spent fuel storage license.

Transition

These facilities are ANL-E, BNL, and PNNL. The staff estimates that review and Part 70 licensing for each facility would require about an additional 2.1 FTEs above the 0.4 FTE needed for the Part 30 licensing. This would total about 2.5 FTEs per site for the three sites considered in this category, or about 3.75 FTEs per year over the 2 years, and \$50 thousand for travel. BNL would also require a Part 72 license. The staff estimates this would take about 1.25 FTEs and \$100,000 each year for licensing the BNL spent fuel pool. The incremental cost to add accelerators, other radiation-producing machines, and accelerator-produced radioactive material (ARM) is estimated to be a total of 0.2 FTE per site, or 0.3 FTE per year.

Post-Transition

For routine licensing and inspection, the staff estimates that about 0.5 FTE direct each year, per site, is needed to cover the Part 30 and 70 licenses, and the staff estimates that about 0.1 FTE each year would be needed to cover the Part 72 license. The total

cost would be 1.6 FTEs and \$20,000 for travel. The incremental cost to add accelerators is estimated to be 0.1 FTE per year per site, or 0.3 FTE.

Item 3. Facilities that would require a Part 30 broad-scope license, a Part 70 license, and a Part 50 test reactor license

Transition

Only one facility falls in this group, ORNL. The staff estimates that it would require 15 FTEs and \$700,000 to license this facility in FY 2003, and 15 FTEs and \$500,000 in FY 2004.

For the Parts 30 and 70 licenses, this resource estimate includes a resident inspector at the site, a full-time project manager, and other licensing, inspection, and contracted personnel.

For the Part 50 test reactor license, the resource estimate includes 2 FTEs per year and \$100,000 per year for 2 years including project management, inspection, operator licensing, and contracted support personnel.

Post-Transition

For routine licensing and inspection, the staff estimates that about 5 FTEs and \$100,000 would be required.

For the Parts 30 and 70 licenses, this resource estimate includes a resident inspector and a full-time project manager.

For the Part 50 test reactor license, the resource estimate includes 0.55 FTE and \$20,000 each year.

Item 4. Program Development.

Transition

The staff estimates that 1.0 FTE and \$200,000 will be required in FY 2003, to develop a Standard Review Plan for DOE facilities and to establish an expanded Memorandum of Understanding (MOU), with the Occupational Safety and Health Administration MOU, for cooperation in regulating nuclear, radiological, and chemical safety; worker safety; and to work with the U.S. Environmental Protection Agency to rescind the National Emissions Standards for Hazardous Air Pollutants requirements for DOE-regulated facilities.

Post-Transition

No additional effort beyond that required for license maintenance is anticipated on this item.

Item 5. Support to legislative process

Transition

The staff estimates that 1 FTE per year over the 2- year transition period will be required to support the legislative process.

Post-Transition

No additional effort beyond that required for license maintenance is anticipated on this item.

Item 6. Rulemaking

Transition

The conduct of rulemaking to support licensing and external regulation, including rulemaking on other fissionable isotopes (e.g., neptunium) should be handled via amendments to existing regulation, and would require 1.0 FTE and \$50,000 per year for each of the 2 years. The incremental costs associated with rulemaking for accelerators would require 2.0 FTEs and \$150,000 per year for each of the 2 years.

Post-Transition

The staff estimates \$100,000 and 0.5 FTE for support to staffing and training during Post Transition Activities. The incremental cost for accelerators is 0.4 FTE and \$60,000.

Item 7. Staffing and Training for New Responsibilities.

Transition

This item is to acquire, train, qualify, and position staff from NRC and other sources to support the licensing/certification and inspection activities for the additional facilities and expanded responsibilities. The staff estimates this will require 1.0 FTE and \$100,000 in FY 2003 and FY 2004. The incremental costs associated with accelerators, other radiation-producing machines, and ARM are 1.6 FTEs and \$240,000 in FY 2003, and 0.4 FTE and \$60,000 in FY 2004.

Post-Transition

No additional routine effort beyond that required for license maintenance is anticipated on this item.

Item 8. Program Management and Communication

Transition

The staff estimates 1.5 FTEs and \$10,000 per year, for FY 2003 and FY 2004, to coordinate activities, conduct workshops, and provide status to internal and external stakeholders. The workshops are designed to familiarize the laboratories with NRC's

regulatory philosophy and to receive stakeholder input. The incremental cost to add accelerators is estimated to be 0.5 FTE per year in FY 2003 and FY 2004.

Post-Transition

No additional effort is anticipated on this item.

Item 9. Conduct NRC Regulation of Decommissioning Activities.

Transition

The staff estimates the following direct costs to evaluate the laboratories' decommissioning programs and status: 1 FTE and \$200,000 each year for FYs 2003 and 2004. This assumes no major decommissioning activities until after NRC licensing is complete.

Steady-State

Assume NRC regulation of five major decommissioning activities; use 5 FTEs per year and \$1 million a year for licensing, plus 1 FTE per year for inspection activities. This estimate will be reviewed after further experience is gained.

Item 10. Allegations, Investigations, and Enforcement

Based on current experience, add to estimates (i.e., produce loaded estimates) 16 percent for allegations, investigations, and enforcement activities.

Item 11. Overhead

Allow 6 FTEs during the transition years for supervisory and administrative support and 3 FTEs during post- transition activities.

Item 12. Legal Support

Staff estimates 1 FTE will be needed for legal support during the transition and 0.5 FTE during post-transition activities.

Item 13. Agency-Wide Support

Staff estimates 3 FTEs and \$440,000 in FY 2003; 3 FTEs and \$385,000 in FY 2004 during the transition; and 2 FTEs and \$385,000 in FY 2005, during the post- transition will be needed for Agency-wide support, including administrative and logistical support, space, security, supplies, materials, equipment, telecommunications, office automation, and network development. The incremental cost to add accelerators is

0.5 FTE and \$125,000 in FY 2003; 0.4 FTE and \$70,000 in FY 2004, during transition;
and 0 FTE and \$20,000 in FY 2005, during steady- state.

TABLE 1: RESOURCE ESTIMATE WITHOUT ACCELERATORS

ITEM NUMBER	RESOURCES BY YEAR WITHOUT ACCELERATORS					
	FY 2003 Transition		FY 2004 Transition		FY 2005 Steady State	
	FTE	\$x1000	FTE	\$x1000	FTE	\$x1000
1. Six Pt 30 facilities	1.2	30	1.2	30	1.2	20
2. Three Pt 70 facilities, including one Pt 72 facility	5.0	150	5.0	150	1.6	20
3. ORNL	15	700	15	500	5	100
4. Program development & OSHA MOU	1.0	200	0	0	0	0
5. Legislative support	1.0	0	1.0	0	0	0
6. Rulemaking	1.0	50	1.0	50	0	0
7. Staffing & training	1.0	100	1.0	100	0.5	100
8. Program management & communications	1.5	10	1.5	10	0	0
9. Decommissioning	1.0	200	1.0	200	6.0	1000
10. Allegations	4.4	0	4.3	0	2.3	0
11. Overhead	6.0	0	6.0	0	3.0	0
12. Legal support	1.0	0	1.0	0	0.5	0
13. Agency-wide support	3.0	440	3.0	385	2.0	385
TOTAL FTE & SUPPORT \$	42.1	1880	41.0	1425	22.1	1625
TOTAL \$x1000*	6809		6424		4452	

*Includes salaries and benefits

TABLE 2: INCREMENTAL RESOURCE ESTIMATE FOR ACCELERATORS

ITEM NUMBER	INCREMENTAL RESOURCES BY YEAR WITH ACCELERATORS					
	FY 2003 Transition		FY 2004 Transition		FY 2005 Steady State	
	FTE	\$x1000	FTE	\$x1000	FTE	\$x1000
1. Six Pt 30 facilities	0.6	0	0.6	0	0.6	0
2. Three Pt 70 facilities including one Pt 72 facility	0.3	0	0.3	0	0.3	0
3. ORNL	0	0	0	0	0	0
4. Program development & OSHA MOU	0	0	0	0	0	0
5. Legislative support	0	0	0	0	0	0
6. Rulemaking	3.0	150	3.0	150	0	0
7. Staffing & training	1.6	240	0.4	60	0.4	60
8. Program management & communications	0.5	0	0.5	0	0	0
9. Decommissioning	0	0	0	0	0	0
10. Allegations	0.8	0	0.6	0	0.2	0
11. Overhead	0	0	0	0	0	0
12. Legal support	0	0	0	0	0	0
13. Agency-wide support	0.5	125	0.4	70	0	20
TOTAL FTE & SUPPORT \$	7.3	515	5.8	280	1.5	80
TOTAL \$x1000*	1369		989		273	

* Includes salaries and benefits