

May 17, 2005

The Honorable Pete V. Domenici, Chairman  
Committee on Energy and Natural Resources  
United States Senate  
Washington, D.C. 20510

Dear Mr. Chairman:

Enclosed are responses to the post-hearing questions that were submitted by Members of the Committee from the April 26, 2005, hearing on the Department of Energy's Nuclear Power 2010 Initiative.

If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

*/RA/*

William N. Outlaw, Acting Director  
Office of Congressional Affairs

Enclosure: As stated

cc: The Honorable Jeff Bingaman

May 17, 2005

The Honorable Pete V. Domenici, Chairman  
Committee on Energy and Natural Resources  
United States Senate  
Washington, D.C. 20510

Dear Mr. Chairman:

Enclosed are responses to the post-hearing questions that were submitted by Members of the Committee from the April 26, 2005, hearing on the Department of Energy's Nuclear Power 2010 Initiative.

If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

*/RA/*

William N. Outlaw, Acting Director  
Office of Congressional Affairs

Enclosure: As stated

cc: The Honorable Jeff Bingaman

DISTRIBUTION: See next page

Response Accession No.: **ML051290034**

\* Office-level input to GT20050314

OFFICE	OEDO:STCA	NRR:OD*	NSIR:OD*	OGC*	EDO	OCA	OCM
NAME	TJKim	RBorchardt	MWeber	LChandler	LReyes	WOutlaw	
DATE	5/ /05	5/ 4 /05	5/ 4 /05	5/ 4 / 05	5/9/ 05	5/ 17 /05	5/ 17 /05

Official Record Copy

**QUESTIONS FROM CHAIRMAN DOMENICI:**

Over the last four years there has been a surge in interest in nuclear energy. The NP2010 program is intended to demonstrate the new licensing processes so that more companies will be willing to step forward with early site permit applications and combined construction and operating licenses.

I note that between 1979 and 1989, the NRC issued 48 low-power operating licenses to power reactors; an average of nearly 5 licenses per year.

1. How many power reactor combined construction and operating licenses do you estimate your agency could issue in a 10 year period from 2009 to 2019 using the new and improved licensing process?

**ANSWER:**

A combined construction and operating license (COL) application, which references a certified design and an early site permit, will take the NRC approximately 27 - 30 months, including mandatory hearings, to review and issue the license to the applicant. To ensure the agency is properly positioned to manage the new reactor licensing workload, we have been and will continue to work closely with industry representatives to understand the scheduling plans for prospective COL applications. This information is essential to NRC's budgeting process and we will seek additional resources to ensure that the NRC is able to process COL applications on a reliable and predictable schedule.

Enclosure

As was the case with the initial applications for license renewal, we anticipate that there will be opportunities to learn from the licensing of the initial COL applications for new reactors. To date, the license for 32 reactors have been renewed within the established 22 month review schedule without a hearing, 30 months if a hearing is involved.

Currently, we have an additional 9 license renewal applications under review, and licensees have informed us of their plans for submitting 23 license renewal applications between now and 2012. To ensure a the license renewal process remained on track and on budget, we also established a cap on the number of applications that would be under review at any given time. By working closely with NRC licensees on plans for future license renewal applications, we are able to request and receive the resources necessary to maintain a predictable and reliable review process. This approach has proven to be successful in managing the license renewal workload. While we can not predict how many COL applications will be submitted in the 10 year period between 2009 and 2019, we are confident that following the proven approach we adopted to manage the license renewal workload will allow us to successfully manage the COL workload. As we did with license renewal, after completing the review of the initial COL applications the NRC will revise the COL procedures and guidance, such as the standard review plan, and make necessary adjustments to ensure efficiency and effectiveness in NRC actions. In conjunction with proper planning, requesting and receiving the necessary resources from Congress will enable NRC to process COL applications on a reliable and predictable schedule.

2. Do you have the resources necessary to do the job, the technical skill set, personnel and facilities?

**ANSWER:**

The NRC staff has been able to oversee the continued safe operation of the currently operating nuclear power plants, while still reviewing three early site permits and one to two design certification applications. However, if Early Site Permits, Design Certifications, and Combined License Applications are submitted to the NRC on the schedule that is currently envisioned by the industry, the NRC staff would require additional resources to meet the industry's demands.

The NRC has determined that for the project schedule of applications that will be submitted in FY2008 and beyond, the necessary New Reactor technical staff and contractors necessary to review the COL and design certification applications will have to grow significantly from the current FY2006 staffing plans. This additional technical staffing will need to be supported by administrative staff and overhead, which is not currently budgeted. The size of the staff needed to conduct the inspection program to support new reactor licensing and construction continues to be defined as the inspection program is developed. The number and skill of inspectors currently implementing the Reactor Oversight Program (ROP) for operating reactors will not be adequate to also conduct inspections of construction activities.

The NRC does not currently have the facilities (e.g., office space) nor the support infrastructure necessary to accommodate the projected growth in new reactor licensing. NRC is working with the General Services Administration (GSA) to identify available office space in the Rockville, Maryland area. The NRC's Office of Information Services has the skill set it needs, but not the personnel or the infrastructure to support the projected growth. Therefore, additional equipment and staff would be needed.

The NRC is actively addressing these resource issues by requesting an Investment Cost supplement of \$20 million for FY2006, and will likely request a comparable amount for FY2007, to hire and train the necessary technical staff, along with obtaining additional office space and computers. This would allow individuals to be ready to review the expected applications in FY2008 and beyond.

**QUESTIONS FROM SENATOR BINGAMAN:**

1. Chairman Diaz – an important part of the 2010 program concerns not so much the front-end phases cost shared by the DOE, but the back-end issues associated with inspections, tests, analysis and acceptance criteria after a nuclear power plant is built – sometime around 2014 – nine years from now after up to \$2 billion has been expended on the construction of the plant.
  - a) Is the NRC working on the necessary manpower needs to send inspectors out to the field to perform this final inspection before operation when as many as three to five plants may come on line if all goes according to plan?

**ANSWER:**

Yes, as part of our planning for resources necessary to evaluate the number of COL applications that are being envisioned, the NRC staff is also determining the resources that will be necessary to inspect the sites as well as the vendors, nationally and internationally, that may be involved in the construction of a new nuclear reactor. The NRC has requested an Investment Cost of \$20 million for FY2006, and will likely request a comparable amount for FY2007 for New Reactors, and part of this request is projected to be spent on the hiring and training of the inspectors that will carry out these numerous inspections.

- b) What steps has NRC taken with the industry and the public to make sure all expectations are understood for these final inspections?

**ANSWER:**

Over the last two years, the NRC staff published a guidance document and held two public workshops, all of which were aimed at ensuring that the NRC, the industry and the public have a common understanding of the approach and scope of the construction inspection program. In May 2003, the staff published and requested public comment on the draft "Construction Inspection Program Framework Document," which described how the NRC intended to perform inspections for plants to be constructed under 10 CFR Part 52. The first workshop, held on August 27, 2003, was used to obtain feedback from the industry and members of the public on the overall framework. Insights gained

from the workshop discussions and written comments submitted in response to the NRC publication of the draft document were used to inform revisions to the NRC's proposed inspection approach.

In April 2004, the NRC issued NUREG-1789, "10 CFR Part 52 Construction Inspection Program Framework Document," which is now being used to guide the development of inspection manual chapters and inspection procedures to support licensing and construction of new reactors under 10 CFR Part 52. In the NUREG, the NRC identified that one phase of the inspection program will be related to inspections, tests, analyses, and acceptance criteria (ITAAC). On May 4, 2005, the staff hosted the second construction program public workshop to explore the inspection of ITAAC with the industry and the public. The purpose of the workshop was for the NRC to understand the views of various stakeholders on the types of inspection findings that the agency should consider as having an impact on the successful completion of an ITAAC. The NRC will consider the information collected and views expressed during the workshop as the construction inspection manual chapter on ITAAC is developed.

2. Please provide a list of all nuclear power plants whose operation has been delayed by judicial review of a final order of the Commission granting a license to operate a nuclear power plant under section 103 or 104 of the Atomic Energy Act of 1954. For each such plant, please provide the date of the Commission's final order and the total number of days that the order was stayed pending judicial review.

**ANSWER:**

The NRC does not maintain a list of judicial stays as such. But the agency's Office of the General Counsel has examined its litigation records and has performed a computer search. The NRC has identified the following instances where courts have stayed Commission orders authorizing issuance of a nuclear power plant operating license:

a. *State of Ohio v. NRC*, 812 F.2d 288 (6<sup>th</sup> Cir. 1986). In this case, the court of appeals granted a stay of a Commission order authorizing issuance of an operating license for the Perry Nuclear Power Plant, Unit 1. The Commission entered an order authorizing issuance of an operating license on November 7, 1986. The court issued a stay on November 13, 1986, and lifted it on December 23, 1986. The judicial stay lasted forty (40) days.

Previously, in related litigation, the court of appeals had stayed a Commission vote on an operating license for the Perry plant. That stay lasted for thirty-nine (39) days, from September 4, 1986, until October 13, 1986. See *Ohio Citizens for Responsible Energy v. NRC*, 803 F.2d 258 (6<sup>th</sup> Cir. 1986).

b. *Limerick Ecology Action v. NRC*, No. 85-3431 (3d Cir.) (unpublished order). In this case, the court of appeals granted a stay of a Commission order authorizing issuance of an operating license for the Limerick Nuclear Generating Station, Unit 1. The Commission entered an order authorizing issuance of an operating license on August 8, 1985. The court issued the stay on August 15, 1985, and lifted it on August 21, 1985.

The judicial stay lasted six (6) days.

c. *San Luis Obispo Mothers for Peace v. NRC*, No. 84-1410 (D.C. Cir) (unpublished order). In this case, the court of appeals granted a stay of a Commission order approving issuance of an operating license for the Diablo Canyon Nuclear Power Plant, Unit 1. The Commission entered an order authorizing issuance of an operating license on August 10, 1984. The court issued the stay on August 17, 1984, and lifted it on October 31, 1984. The judicial stay lasted seventy-five (75) days.

d. *Izaak Walton League of America v. Schlesinger*, 337 F.Supp. 287 (D.D.C. 1971). In this pre-NRC case, a federal district court issued a preliminary injunction restraining the Atomic Energy Commission “from issuing an interim operating license authorization” for the Quad Cities Nuclear Power Station. *Id.* at 289. At the time of that injunction the Commission had not yet approved issuance of an operating license to Quad Cities. The NRC’s currently available litigation records do not indicate when the preliminary injunction was lifted, but we note that Quad Cities received its operating license in 1972.

To the best of the NRC’s knowledge, there are no other examples of judicial stays of Commission orders authorizing issuance of a nuclear power plant operating license.

**QUESTIONS FROM SENATOR CORZINE:**

As you know, the most salient debate regarding nuclear power in my state of New Jersey concerns the Oyster Creek Nuclear Power Plant, the oldest operational commercial nuclear power plant in the U.S. This plant went into operation in 1969, and its 40 year license expires in 2009.

My constituents at the Jersey Shore have had long-term concerns about the operational safety of the plant. While the plant's new owners have made strides to improve operational performance, concerns in the region still linger with regard to the plant's siting and the impact of aging on the plant.

In the early 1960s, when planning for the facility began, the population of Ocean County was 108,000. Today, the year-round population of Ocean County is 550,000, and the summertime population nears 1 million. Much of this development has taken place very near the power plant. This leaves my constituents with a whole series of concerns, not the least of which is whether the region's highways—whose capacity have not been significantly expanded since the 1970s—are capable of quickly evacuating the region.

I know this is a sensitive issue, as the plant's application is currently pending before the NRC, but the fundamental issue in this debate is that many of my constituents are skeptical about the NRC's ability to conduct a thorough and independent assessment of whether the plant is capable of operating safely for another 20 years.

Chairman Diaz, what steps do you believe the NRC can take to enhance its credibility in New Jersey? Can you assure my constituents in Ocean County that the NRC will commit itself to a fair and public process as it considers the renewal of Oyster Creek's license?

**ANSWER:**

While the licensee for Oyster Creek has stated its intent to apply for license renewal, it has not yet submitted such an application. The licensee's current target date for submitting its license renewal application is July 2005.

The NRC is committed to continuing its current practice of ensuring openness in our license renewal process. As with any licensing activity, the public will have an opportunity to participate in NRC's decision-making process with regard to license renewal. The NRC encourages public participation in the NRC's license renewal process. Shortly after an application is received, the NRC issues a notice of the receipt of the application and its availability to the public.

The NRC holds a public meeting near the nuclear power plant to give the public information about the license renewal process. Additionally, public meetings are held by the NRC during the safety and environmental reviews of the renewal application which include a number of meetings in the vicinity of the plant. For Oyster Creek, the NRC has also met already with State and local officials to discuss the license renewal process. NRC evaluations, findings, and recommendations are published when completed. In addition, the NRC provides the public with an opportunity to request a formal adjudicatory hearing on license renewal applications.

In addition, the Advisory Committee on Reactor Safeguards (ACRS) conducts independent reviews of license renewal applications and staff safety evaluation reports, before making recommendations to the Commission. The ACRS, established by Congress in 1957 to provide analysis of safety standards and facility license applications, is a body of experts representing many technical perspectives that is independent of the staff and reports directly to the Commission. ACRS meetings are open to the public and interested parties can request an opportunity to address the ACRS.

Federal regulations require that comprehensive emergency plans be prepared to assure that actions can and will be taken to notify and protect the public in the vicinity of a nuclear facility in the event of a radiological emergency. Commercial nuclear power plants and offsite response authorities are required to regularly conduct exercises to demonstrate their ability to implement their emergency plans. The most recent full-scale emergency exercise for Oyster Creek was conducted in September 2003. The NRC has overall responsibility for nuclear safety, while FEMA takes the lead in reviewing and assessing offsite planning and response and in assisting State and local governments.

All nuclear power plants were required to perform an evacuation time estimate (ETE) for the area surrounding the plant during the development of the plant's emergency plans. The emergency plans are used during the emergency phase of an event response by the licensee, local, State, and Federal emergency management agencies. The licensee for Oyster Creek revised the ETE and documented this revision in a report in February 2003. The ETE is factored into the protective measures that the State implements. Additionally, ETEs are used to identify potential traffic impediments and allow for development of traffic management plans and the efficient use of traffic control personnel during an evacuation.