

REPORTER'S CERTIFICATE

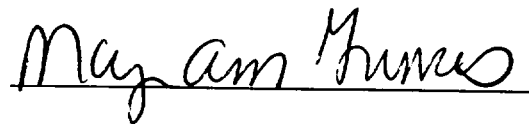
This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

NAME OF PROCEEDING: PUBLIC SCOPING MEETING ON INTENT
TO PREPARE DRAFT SUPPLEMENT TO
GENERIC ENVIRONMENTAL IMPACT
STATEMENT ON DECOMMISSIONING OF
NUCLEAR FACILITIES

CASE NUMBER:

PLACE OF PROCEEDING: Boston, MA

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.



Mary Ann Francis

Official Reporter

Ann Riley & Associates, Ltd.



AGENDA

NRC SCOPING MEETING ON THE GENERIC ENVIRONMENTAL IMPACT STATEMENT (GEIS) ON REACTOR DECOMMISSIONING

7:00 P.M. **Welcome, Objectives, Ground rules, Agenda Overview**

② F.X. Cameron, facilitator

7:10 P.M. **Overview of Why and How the NRC Plans to Develop a Generic
Environmental Impact Statement (GEIS) on Reactor Decommission**

① Dino Scaletti, Office of Nuclear Reactor Regulation, NRC
Audience Questions

7:30 P.M. **Background on the Current Reactor Decommissioning Process**

④ Eva Eckert Hickey, Pacific Northwest National Laboratory
Audience Questions

8:15 P.M. **Discussion of Audience GEIS Scoping Issues**

10:00 P.M. **Adjourn**

③
s/s = site specific

INFORMATION SHEET



The U.S. Nuclear Regulatory Commission's Public Scoping Process on Environmental Issues Pertaining to Decommissioning Nuclear Power Plants

The U.S. Nuclear Regulatory Commission (NRC) is gathering information necessary to prepare a supplement to the *Final Generic Environmental Impact Statement of Nuclear Facilities*, NUREG-0586, for power reactors only. The NRC is interested in public comments on environmental issues and the proposed scope of the staff's environmental review.

Written comments can be submitted by e-mail to DGEIS@NRC.GOV or to the following address postmarked no later than July 15, 2000:

Chief, Rules and Directives Branch
Division of Administrative Services, MS T-6D 59
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

For additional information, contact Dino C. Scaletti, NRC Senior Project Manager, Decommissioning Section, Project Directorate IV & Decommissioning, Division of Licensing Project Management, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, MS 0-11D19 Washington, DC 20555-0001, or at 1-800-368-5642, ext. 1104.

EPA STATEMENT ON SCOPE OF
NUCLEAR POWER PLANT DECOMMISSIONING
SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SEIS)

Under Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency has an independent role in reviewing other federal agencies' compliance with the National Environmental Policy Act (NEPA). In this capacity, the EPA Administrator provides advice to federal agencies as they develop NEPA documents, such as Environmental Impact Statements (EISs), advocates for processes used in creating these documents that afford early and substantive opportunities for public involvement, evaluates the adequacy of the agency's environmental review, and recommends whether projects undergoing environmental review should be modified or mitigated based on projected environmental impact. In cases where the EPA Administrator finds that a proposed action "is unsatisfactory from the standpoint of public health or welfare or environmental quality," the Administrator will refer the matter to the President's Council on Environmental Quality for resolution.

NRC, EPA and a variety of stakeholders agree that the Generic Environmental Impact Statement (GEIS) for Decommissioning that was published in 1988 needs to be revised. We applaud NRC's initiative in supplementing the GEIS. NRC's scoping process provides an opportunity for all interested parties to help define the parameters of the environmental analysis, with emphasis on the purpose of the analysis and the issues and scope of alternatives to be explored. Because EPA plans to provide advice to NRC throughout the Supplemental Environmental Impact Statement (SEIS) process, and we have already provided NRC input on our primary scoping and decommissioning process-related issues, our comments here will be brief, of a background nature, and intended to provide a sense of EPA's recommendations for the SEIS process.

EPA recommends that the scope of the SEIS be broad enough to address the following issues.

- 1) The Supplement should be updated to incorporate new decommissioning technologies developed over the past decade. For technologies that are still evolving and for which complete information is unavailable, e.g., rubbleization, or where application of certain decommissioning techniques may have varying impacts depending on the uniqueness of a particular site, the SEIS should recognize that these impacts will need to be further examined in site-specific environmental analyses or in revisions to the SEIS.
- 2) The SEIS should provide more detail about specific decommissioning activities/techniques in order to accurately assess and fully disclose the associated environmental impacts.
- 3) The SEIS should not generally assume that, because the radiation dose from a particular facility will be reduced, decommissioning is always or generally environmentally benign. The SEIS should take into account the relevant environmental characteristics at a site and the impacts from the use of unique decommissioning techniques.
- 4) Because the GEIS is by definition a generic, tiering document, it should provide substantive

guidance as to the kind and extent of further environmental information and analysis necessary for NRC to develop site-specific NEPA documents, and for licensees to evaluate environmental impacts in required submissions such as the Post Shutdown Decommissioning Activities Report (PSDAR) or License Termination Plan (LTP). NRC may want to consider replicating the tiering approach taken in its power plant Relicensing GEIS. Whichever approach is taken, it is important for NRC to commit to adequately address alternatives, environmental impacts, and mitigation in either the SEIS or in the site-specific analysis.

The SEIS should address whether and how to incorporate findings of EISs for plant construction and operation that typically do not address decommissioning, subsequent environmental assessments that have accrued during plant operations, and reports on reference facilities. Additionally, this guidance should address the need to assess the degree to which the environmental parameters of the site may have changed during operation.

5) The SEIS should address the relationships between the GEIS and other NRC regulations, policies and reports, such as: 10 CFR Parts 20 & 50; the GEIS for Site Release Criteria; and, NUREGs describing reference reactors.

6) The SEIS should disclose and distinguish between impacts to the natural surroundings (terrain, ecology, wildlife, climate, hydrology, etc.) and public/human health impacts.

7) EPA encourages NRC to make the SEIS user-friendly. Using plain English and straightforward explanations will improve public understanding of decommissioning procedures, requirements, and environmental impacts.

EPA looks forward to working with NRC as it develops what promises to be a particularly needed, current, dynamic, and useful document, to which all stakeholders will have had an opportunity to contribute.

Testimony of Patrick J. Dostie,
State Nuclear Safety Inspector
Office of Nuclear Safety
Maine Department of Human Services

Before the Nuclear Regulatory Commission, May 17, 2000

Regarding the Draft Supplement to the Generic Environmental Impact Statement
on Decommissioning Nuclear Plants

Good Evening. My name is Patrick Dostie. I am the State Nuclear Safety Inspector for the State of Maine. Thank you for the opportunity to address the US Nuclear Regulatory Commission (NRC) on the Draft Generic Environmental Impact Statement (GEIS) for the decommissioning of power reactors. We understand that the document under development is intended to encompass all power reactor decommissioning projects in the United States, including the Maine Yankee decommissioning. That makes the current process a pivotal concern for the citizens of the State of Maine.

We wish to point out that NRC's commitment to a thorough and careful technical discussion and a review of the issues already identified as well as those raised as a result of this scoping process, will not only enhance the public's confidence in the NRC's oversight of the decommissioning, but also its regulatory processes in general.

At this time we have three specific comments to submit for NRC's consideration. First, as the NRC has explained, the proposed document update would replace an antiquated document that does not reflect present decommissioning practice. It is in the interests of the State of Maine and Maine Yankee that the existing GEIS be brought up to date with respect to new techniques such as "rubblization". As suggested in the NRC staff white paper on the rubblization process, the specific proposal embodied in Maine Yankee's License Termination Plan (LTP) is not yet analyzed as to whether it is acceptable under the provisions of the National Environmental Policy Act (NEPA). As Dr. Philip Haines, Deputy Director of the Maine Bureau of Health, commented at Maine Yankee's May 15 public meeting on its LTP and I quote:

"[A ... matter] which the NRC should address promptly, is the lack of an Environmental Impact Statement covering certain processes described in the current [Maine Yankee] LTP. Specifically, burial of rubblized [radioactive] concrete is a new procedure, not covered in the existing GEIS, nor in any other EIS of record. The NRC in its consideration of a revised GEIS is addressing this. However, the revised GEIS is not likely to be ready in time to review this [Maine Yankee] LTP. Absent an applicable GEIS, we believe that a full Environmental Assessment should be done to determine if a [site] specific EIS is necessary to properly consider the potential risks in the proposed plan."

We applaud and second the staff's position in their white paper, which recognizes that the NRC must fulfill its NEPA responsibilities before approving the use of rubbleization.

Secondly, since the proposed document will serve as a replacement to the existing regulatory guidance (NUREG-1496), we recommend that radiological issues be revisited with particular care. A specific analysis should be made for matters not otherwise covered in existing regulatory guidance such as the environmental impact of residual subsurface radioactivity. Note that the current series of regulatory guidance, built around the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), NUREG 1575, do not address the environmental impact of residual radioactive material deeper than 6" below the surface. Nor does it address such challenges as activated concrete/rebar, internal contamination, and sub-slab contamination, some of which were noted in the Advisory Committee on Nuclear Waste's January 24, letter report to the Commission.

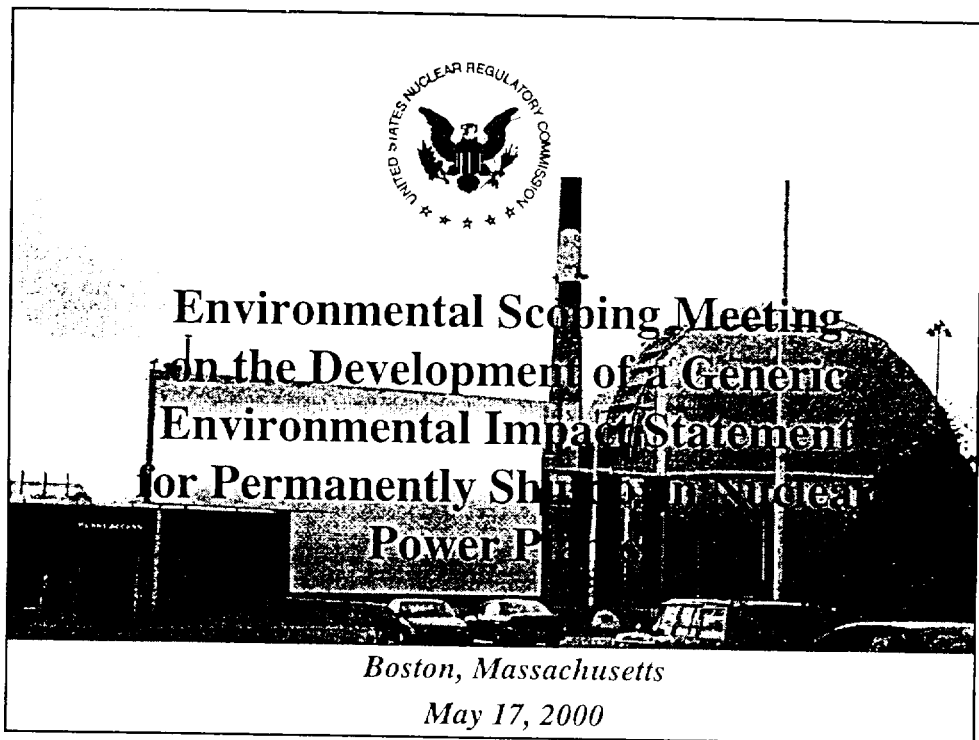
Finally and no less important, we are also concerned about other environmental impacts. This was also aptly expressed by Mr. Brooke Barnes, Deputy Commissioner of the Maine Department of Environmental Protection, at Maine Yankee's May 15 public meeting on the LTP and I quote:

"...decommissioning is not just about radiation. In fact, it may well be that at this site, the potentially significant environmental impacts are traditional concerns such as pH and other "conventional" contaminants---PCBs, heavy metals and painted concrete."

Impacts to groundwater from rubbleization can not be underestimated. Since there are additional contaminants of concern other than radiation, then it is in everyone's best interests that all agencies and stakeholders work cooperatively for the common good and the best outcome. In doing so we will truly set a decommissioning standard for the public good and the nation as a whole.

I again thank the NRC for the opportunity to provide our comments on this scoping process. If other issues are identified, they will be provided to the NRC in writing prior to the July 15 comment deadline.

Slides



Who is the Nuclear Regulatory Commission?

- The NRC was formed as a result of the Atomic Energy Act and Energy Reorganization Act
- The NRC's mission is
 - protection of health and safety
 - protection of the environment
 - common defense and security

Slide 2

How does the NRC protect health, safety and the environment?

This is accomplished through

- Regulations
- Licensing
- Inspection and
- Enforcement

of nuclear reactors from the time of construction through the termination of the license following decommissioning

Slide 3

Purpose of this Scoping Meeting

- discuss the proposed update of the GEIS for decommissioning
- discuss the NEPA process
- provide background information on decommissioning
- discuss review of environmental impacts from decommissioning
- INVITE PUBLIC COMMENT on this activity

Slide 4

What is NEPA?

The National Environmental Policy Act (NEPA) has two aims

- places responsibility upon Federal agencies to *CONSIDER* significant aspects of the environmental impact of a proposed action
- ensures that the Federal agency will *INFORM* the public that it has indeed considered environmental concerns in its decision-making process

Slide 5

What is NEPA?

- Environmental Impact Statements (EISs) are required for major Federal actions.
- Supplements to draft or final EISs are required when there is significant new circumstances or information relevant to the environmental concerns
- Generic EISs are allowed if the impacts are similar and for a number of similar facilities

Slide 6

What is a Generic Environmental Impact Statement for decommissioning?

A GEIS for decommissioning identifies environmental impacts

- that may be considered generic for all nuclear reactor facilities
- that need to be considered in more detail for a specific facility

Slide 7

What is a Generic Environmental Impact Statement for decommissioning?

A GEIS for decommissioning examines the range of environmental impacts from different

- nuclear facility designs
- decommissioning methods
- facility location

Slide 8

How is the GEIS used?

The GEIS is used

- to focus the analysis of environmental impacts - site-specific impacts versus generically-evaluated impacts
- to determine if additional rulemaking is required
- to serve as a basis for additional rulemaking

Slide 9

Why is the NRC updating the GEIS?

- Original GEIS was published in 1988
- New regulations for decommissioning were published in 1996
- Increased U.S. decommissioning experience
 - 21 shutdown facilities in various stages of decommissioning

Sec 10

What will be in the revised GEIS?

- will incorporate new information learned from recent decommissionings
- will only address permanently shutdown reactors
- will be published as a supplement to original GEIS

Sec 11

The NEPA Process for Decommissioning

- Notice of Intent - March 14, 2000
- Scoping Process - March 14 - July 15, 2000
- Evaluation of environmental impacts, alternatives, mitigation measures
- Draft EIS issued for public comment - early 2001
- Public comment period - 60 days after publication
- Final EIS issued - late 2001

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Other Previously Published, Related EISs

- **License Termination** - GEIS in Support of Rulemaking on Radiological Criteria for License Termination (NUREG-1496) - July 1997
- **Low-level waste disposal sites** - FGEIS for 10 CFR Part 61, NUREG-0945 (1982)
- **Spent Fuel repository** - Draft EIS for a geologic repository for spent nuclear fuel at Yucca Mountain, Nevada (August 1999)

*Eva Schaub
Michael
Slide 1*

Decommissioning is defined as

“The process of safely removing a facility from service followed by reducing residual radioactivity to a level that permits termination of the NRC license”

Slide 2

Background on Decommissioning

- 1988 Decommissioning rules required submittal of a Decommissioning Plan
- Mid 1990's - the NRC reassessed the value of the detailed Decommissioning Plan and revised NRC regulations

Slide 3

Decommissioning Process

- Licensee certifies
 - Operations permanently ceased
 - Fuel removed from the reactor vessel
 - Certifications are irreversible
- License no longer authorizes fuel loading
- Post-shutdown decommissioning activities
report

PSDAR

Slide 4

Decommissioning Process

- Site-specific cost estimate
- Long-term storage followed by dismantlement or immediate dismantlement or a combination of both
- License Termination Plan
- License terminated

LTP

Slide 5

What is a Post-shutdown Decommissioning Activities Report (PSDAR)?

The PSDAR is a document submitted early in the decommissioning process that provides a

- description of the planned decommissioning activities
- schedule for the accomplishment of the planned activities
- estimate of expected costs
- discussion of environmental impacts

Slide 6

What is the purpose of the PSDAR?

- Provides a general overview of the facility decommissioning to the public and the NRC
- Allows for any safety inspections prior to major decommissioning activities
- Allows NRC to allocate resources for future inspection oversight
- Requires the licensee to examine their financial resources prior to starting any major decommissioning activities and
- Ensures that decommissioning does not result in environmental impacts not previously considered

Slide 7

What are the Methods of Decommissioning?

- DECON
- SAFSTOR
- A combination of above methods
- ENTOMB
 - 1988 GEIS concluded that ENTOMB probably was not a viable option for decommissioning at that time.

Slide 8

Typical activities performed during DECON

- Decontamination
 - removal of contamination from systems and structures
 - removal of large radioactive components
- Dismantlement
 - removal of piping and other components
 - removal of buildings (possible)
 - transportation of waste to a storage facility

Slide 9

Typical activities performed during the storage phase of SAFSTOR

- Preparations for SAFSTOR
 - deactivate systems
 - drain and flush plant systems
 - perform radiological assessment
- Activities during SAFSTOR
 - preventative and corrective maintenance
 - maintain structural integrity

Slide 10

A look at the permanently shutdown reactor facilities

- 21 reactors shutdown between 1963 and 1998
- 2 completed decon and dismantlement
 - 6 undergoing decon and dismantlement
 - 9 currently in long-term storage
 - 4 planning a combination of long-term storage and decon and dismantlement

Slide 11

A look at the permanently shutdown reactor facilities

Different types and sizes of reactors

- 8 Boiling Water Reactors
- 10 Pressurized Water Reactors
- 3 other
- Between 23 MW and 3411 MW thermal

Slide 12

License Termination process

- soil remediation
- final radiation survey
- termination of license

Slide 13

What Environmental Impacts will be assessed in the revised GEIS?

- Land use
- Water use/quality
- Air quality
- Ecology
- Radiological impacts
- Postulated accidents
- Transportation
- Costs
- Socioeconomic impacts
- Environmental Justice
- Historical and archaeological
- Noise

Slide 14

Schedule and Address for Written Comments

- Written comments will be accepted until July 15, 2000
- Comments can be provided by mail, in person, or e-mail - dgeis@nrc.gov
- NRC point of contact is: Dino Scaletti
1-800-368-5642 ext. 1104