INFORMATION SHEET

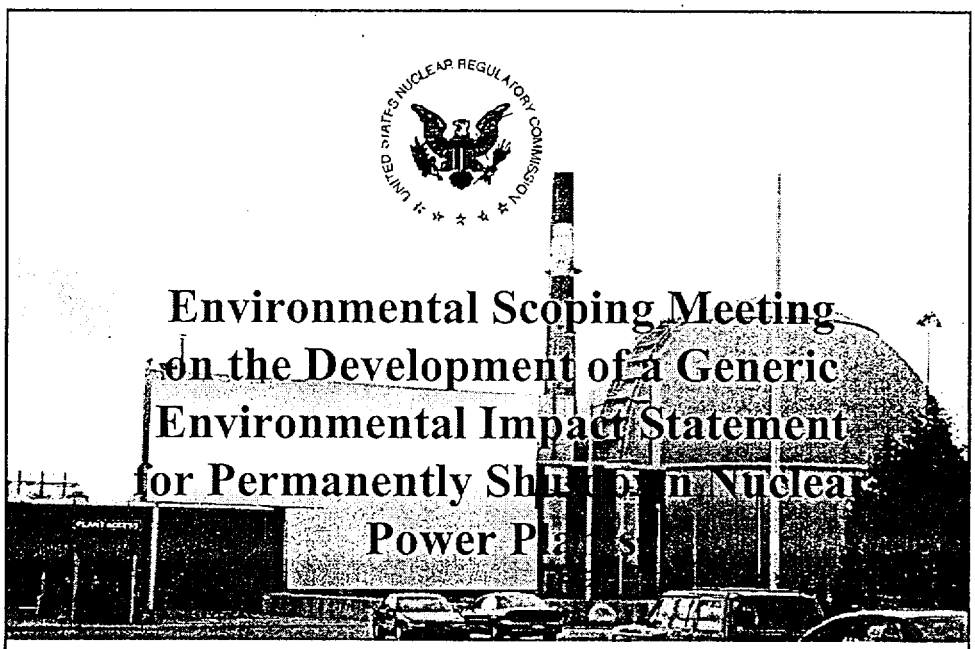
The U.S. Nuclear Regulatory Commission's Public Scoping Process on Environmental Issues Pertaining to Decommissioning Nuclear Power Plants

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.



Environmental Scoping Meeting on the Development of a Generic Environmental Impact Statement for Permanently Shutdown Nuclear Power Plants

San Francisco, California

June 21, 2000

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

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

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

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

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

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 as "site-specific" issues for each facility

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

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

9

When is the GEIS Used?

The GEIS is used through the entire decommissioning process

- Regulations require that no activities be performed during decommissioning that "would result in significant environmental impacts not previously reviewed."
- Hard look taken at the PSDAR stage and the License Termination Plan stage

10

Why is the NRC updating the GEIS?

- **Original GEIS was published in 1988**
  - data is over 12 years old
- **New regulations for decommissioning were published in 1996**
  - examples - PSDAR, LTP and Environmental Justice
- **Increased U.S. decommissioning experience**
  - 21 shutdown facilities in various stages of decommissioning
- **New Issues**
  - rubblization
  - partial site release
  - variations on entombment

11

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

12

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

13

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)

14

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"

15

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

16

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

17

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

18

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

19

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

20

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.

21

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

22

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

23

License Termination process

- soil remediation
- final radiation survey
- termination of license

24

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

25

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

26

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

27

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

28