

# **NRC's Public Meeting on Mixed Oxide Fuel**



**We Look Forward to  
Your Comments  
and Questions!**

# **NRC's Guiding Principles**

★ **Independence**

★ **Openness**

★ **Efficiency**

★ **Clarity**

★ **Reliability**



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***Protection of the Public Health and Safety, the Common  
Defense and Security, and the Environment***

# THE NRC AND MIXED OXIDE FUEL

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JULY 12, 2000  
COLUMBIA, SC

# THE NRC AND MIXED OXIDE FUEL

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JULY 13, 2000  
NORTH AUGUSTA, SC

# INTRODUCTIONS

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# **WHAT ARE OUR GOALS TODAY?**

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Initiate a Dialog with the Affected Public

- Listen to your comments
- Respond to your questions

# **HOW THE MEETING WILL WORK**

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- Everyone has opportunity to speak
- Note cards are also available
- Please attack issues and not people
- Parking lot
- NRC summary of meeting
- Please sign in
- Please complete feedback form

# **WHAT ARE OUR GOALS TODAY?**

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Discuss NRC's Role in MOX

- The NRC
- The NRC's Role and Responsibilities
- The Licensing Process
- Current and Future Activities
- Public Participation



# **AN OVERVIEW OF MIXED OXIDE FUEL AND THE NRC**

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Melanie A. Galloway, Chief  
Enrichment Section  
Special Projects Branch

# **WHAT IS THE NRC?**

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- Independent regulatory agency
- Experienced

# WHAT IS THE NRC?

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## Mission

- Public health and safety
- Environment
- Security

# WHAT IS THE NRC'S ROLE FOR MOX?

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- Nuclear safety, environment, and security
  - ▶ MOX fuel facility
  - ▶ Transportation
  - ▶ Reactors
  - ▶ Spent fuel disposal

# **A BRIEF HISTORY**

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- Agreement with Russia
- National policy
- Reduce the spread of nuclear weapons

# **A BRIEF HISTORY**

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## **Department of Energy (DOE) Role**

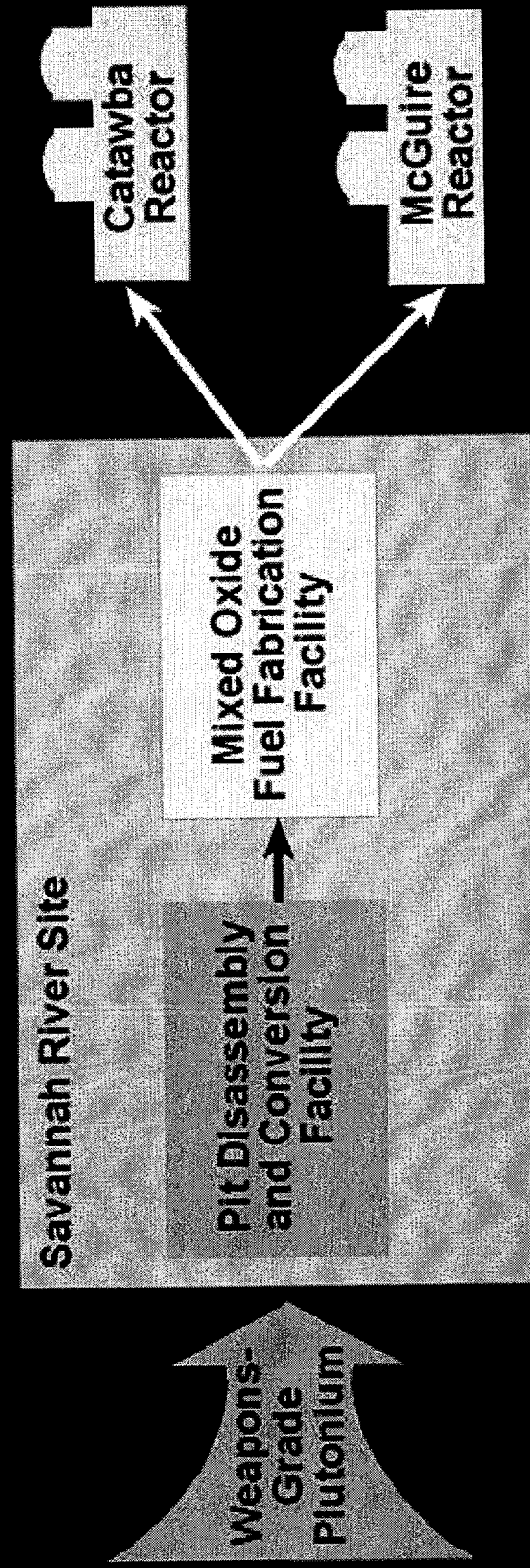
- **Maintains nuclear stockpile**
- **Responsible for surplus plutonium**
- **Implement national policy**

# A BRIEF HISTORY

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- DOE has decided to:
  - ▶ Convert some plutonium to MOX fuel
  - ▶ Contract to build and operate the plant
  - ▶ Fabricate the MOX fuel at Savannah River Site

# NRC Role in Regulating Mixed Oxide Fuel



Yellow = NRC regulated

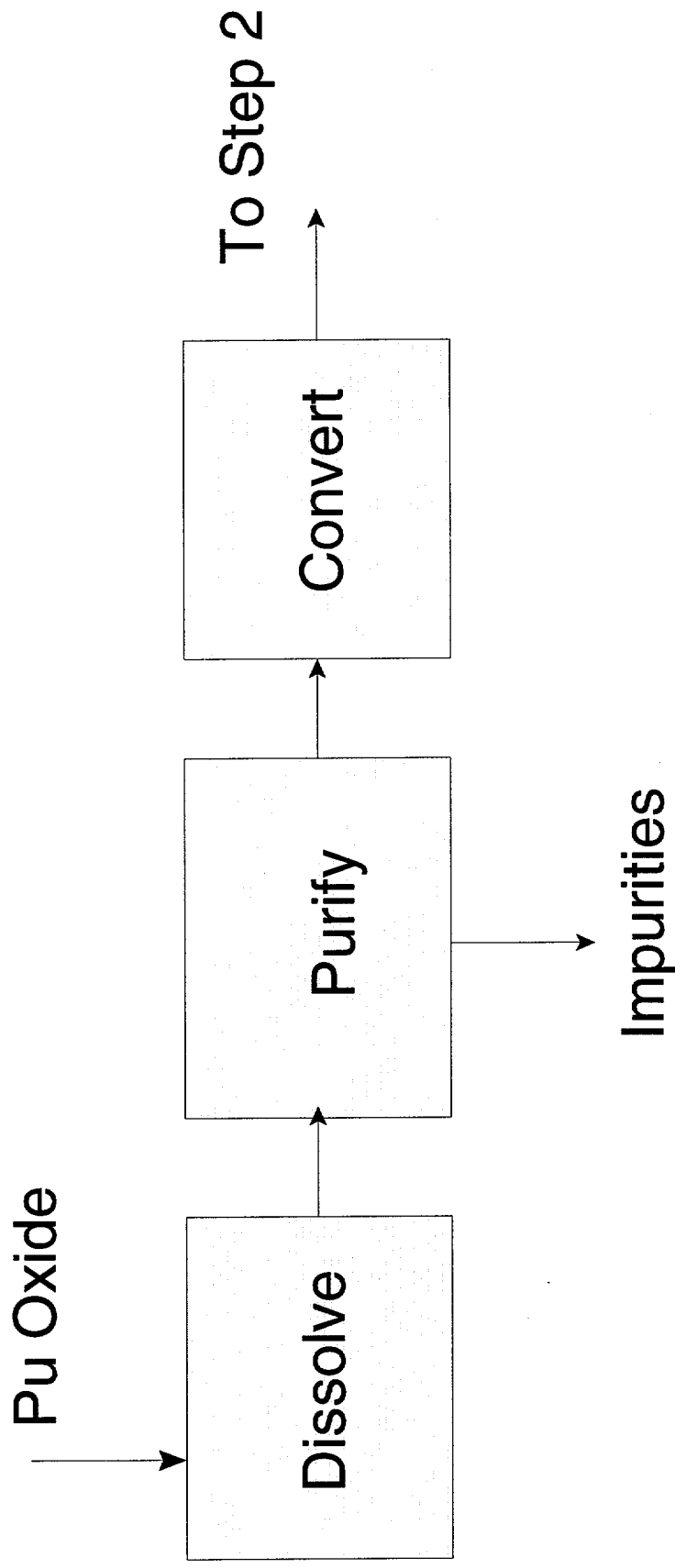
Blue = DOE regulated



# THE MOX PROCESS

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## STEP 1: Purify Plutonium (Aqueous Polishing)

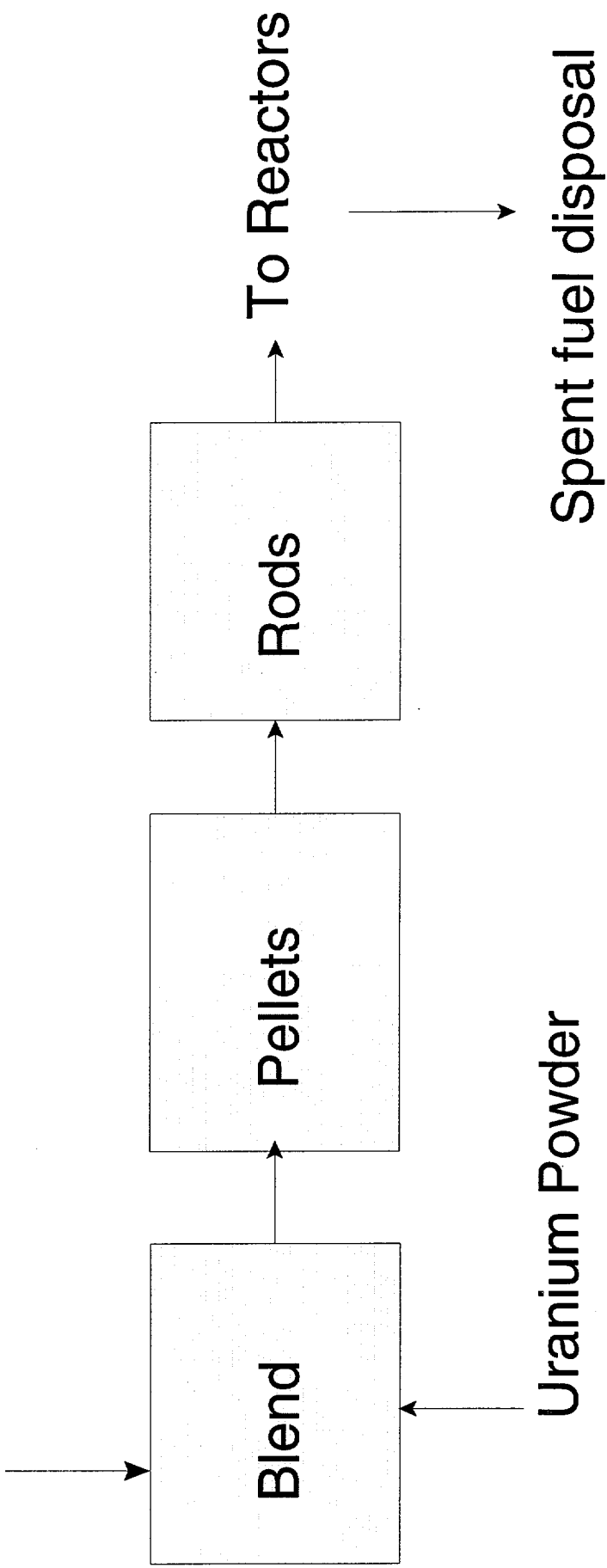


# THE MOX PROCESS

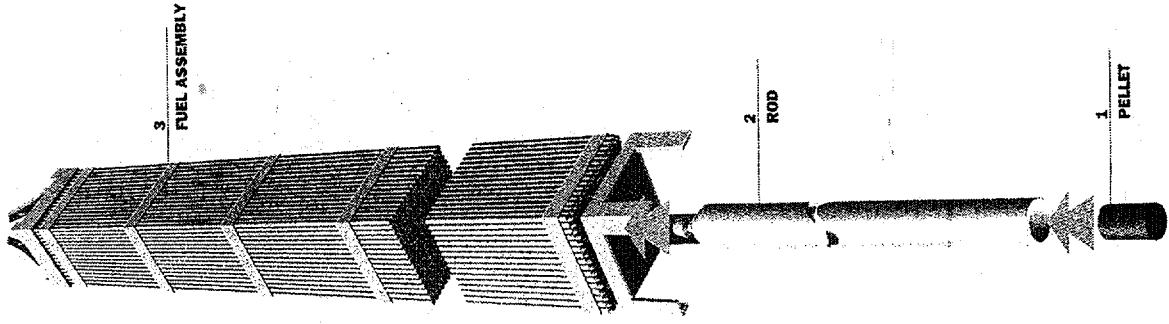
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## STEP 2: Fuel Fabrication

Pu Powder, From Step 1



# MOX FUEL ASSEMBLY



# **NRC Assignments**

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- **Andrew Persinko--Project Manager**
- **Jennifer Davis--NEPA Lead**

# **THE NRC LICENSING PROCESS**

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**Andrew Persinko**

**MOX Project Manager**

# **AREAS OF NRC REVIEW**

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- Fuel fabrication
- Transportation
- Reactors
- Spent fuel disposal

# **NRC SAFETY REQUIREMENTS**

- Code of Federal Regulations (CFR - Title 10)
  - ▶ Fuel facilities (Part 70)
  - ▶ Environmental protection (Part 51)
  - ▶ Transportation (Part 71)
  - ▶ Public hearings (Part 2)
  - ▶ Reactors (Part 50)
  - ▶ Spent fuel disposal (proposed Part 63)

# **ACTIVITIES REQUIRING NRC APPROVAL**

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Fuel Facility

- Construction
- Operation



# **INFORMATION TO START CONSTRUCTION**

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## **Fuel Facility**

- **Site description**
- **Safety design**
- **Quality assurance program**

# **NRC REVIEW PROCESS**

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## **Fuel Facility Construction**

- **Review**
- **Request additional information**
- **Perform analyses**
- **Document results**

# **RESULTS OF NRC REVIEW**

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Fuel Facility Construction  
Possible Outcomes

- Grant approval
- Deny approval
- Grant approval with conditions

# **INFORMATION FOR OPERATION**

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## **Fuel Facility**

- **Safety analysis**
- **Safety equipment / operator actions**
- **Management measures**
- **Emergency plan**
- **Physical protection plan**
- **Material accounting plan**

# **NRC REVIEW PROCESS**

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## **Fuel Facility Operation**

- **Review**
- **Request additional information**
- **Perform analyses**
- **Verify construction**
- **Document results**

# **RESULTS OF NRC REVIEW**

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Fuel Facility Operation  
Possible Outcomes

- Grant license
- Deny license
- Grant license with conditions

# **REACTOR LICENSING**

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## **Use of MOX in Reactors**

- **Reactor regulations**
- **License amendment**

# **ACTIVITIES TO DATE**

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- Standard Review Plan for MOX fuel facility (NUREG-1718)
- Technical meetings
- Planning



# NRC's Mixed Oxide Fuel Future Activities

August  
2000

~2007

~2004

~2002

NRC Finalizes Standard Review Plan	NRC Completes Safety & Environmental Reviews	MOX Facility Construction Start If Approved	NRC Completes Safety Review	Possible Public Hearings Start	Place MOX Fuel In Approved Power Plants
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NRC Receives Construction Application & Environmental Report

Possible Public Hearing Start

NRC Receives Application For Operating License

MOX Facility Construction Complete

NRC Issues Operating License If Approved



*Protection of the Public Health and Safety, the Common  
Defense and Security, and the Environment*

# **NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**

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10 CFR Part 51

Jennifer Davis, Environmental Review Team Lead  
Division of Waste Management

# **NRC ENVIRONMENTAL REVIEW**

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## Introduction

- Law:
  - ▶ NEPA regulations
- NRC requirements:
  - ▶ Environmental protection (Part 51)
  - ▶ Implement NEPA

# **ENVIRONMENTAL IMPACT STATEMENT (EIS)**

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- Required for major federal actions
- Licensing the MOX facility

# **DOE'S EIS**

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Previous NEPA Work By DOE

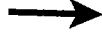
- **DOE EIS for MOX**
- **Record of Decision**
- **Link to NRC EIS**

# THE NEPA PROCESS

Receive Environmental Report



Issue Notice of Intent



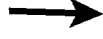
Initiate Scoping Process



Coordinate with  
Federal/State agencies



Receive Public Comments



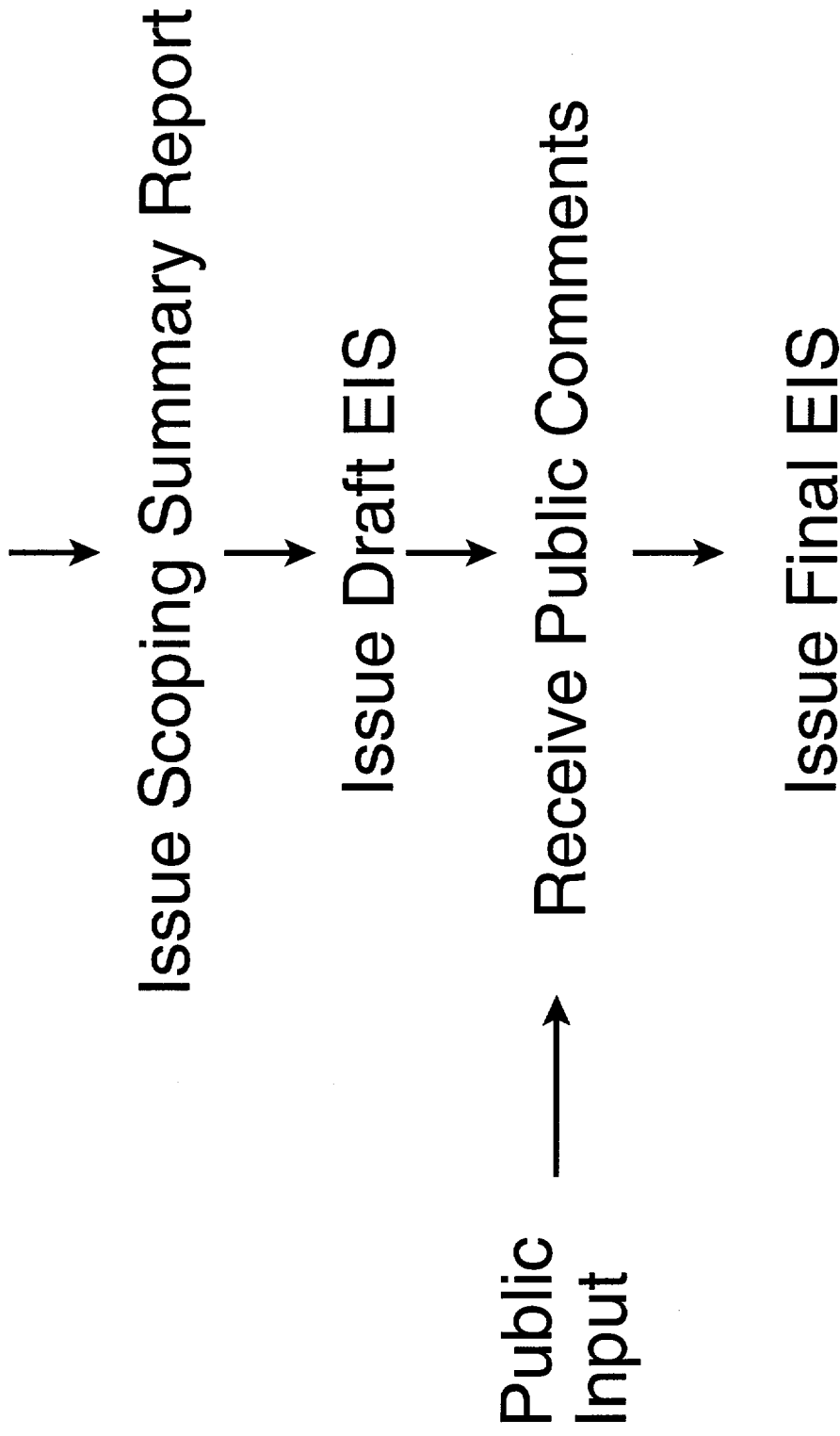
Public  
Input



Public  
Input



# THE NEPA PROCESS



# HEARINGS

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John Hull  
Office of the General Counsel



# **WHAT HEARING PROCEDURES APPLY?**

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- **NRC Regulations (Part 2)**
- **Applications for Materials Licenses**
- **Informal Hearings**

# **WHEN CAN I ASK FOR A HEARING?**

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- After construction information received
- After Federal Register Notice published

# **WHAT INFORMATION WILL I NEED?**

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- Information submitted to NRC to start construction
- Federal Register Notice
- Follow NRC Part 2 regulations

# **HOW DO I REQUEST A HEARING?**

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- Written hearing request
- Detailed statement describing
  - ▶ Affected interests
  - ▶ Areas of concern

# **WHAT HAPPENS TO MY HEARING REQUEST?**

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- NRC administrative judge rules
- Judge specifies issues
- Parties make written presentations

# **ARE THE JUDGE'S DECISIONS FINAL?**

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- They may be appealed
- NRC Commissioners decide appeals
- Federal courts may review NRC decisions

# **PUBLIC PARTICIPATION**

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Mindy Landau  
Office of Public Affairs

# **PUBLIC PARTICIPATION**

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- **NEPA**
  - ▶ Scoping meetings
  - ▶ Public comments
- **Hearings**
- **Call, e-mail or write**
- **[www.nrc.gov](http://www.nrc.gov) (interactive web site)**
- **ADAMS**



# Questions and Answers

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