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

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

THE NRC AND MIXED OXIDE FUEL

JULY 12, 2000
COLUMBIA, SC

THE NRC AND MIXED OXIDE FUEL

JULY 13, 2000
NORTH AUGUSTA, SC

INTRODUCTIONS

WHAT ARE OUR GOALS TODAY?

Initiate a Dialog with the Affected Public

- Listen to your comments
- Respond to your questions

HOW THE MEETING WILL WORK

- 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?

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

Melanie A. Galloway, Chief
Enrichment Section
Special Projects Branch

WHAT IS THE NRC?

- Independent regulatory agency
- Experienced

WHAT IS THE NRC?

Mission

- Public health and safety
- Environment
- Security

WHAT IS THE NRC'S ROLE FOR MOX?

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

A BRIEF HISTORY

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

A BRIEF HISTORY

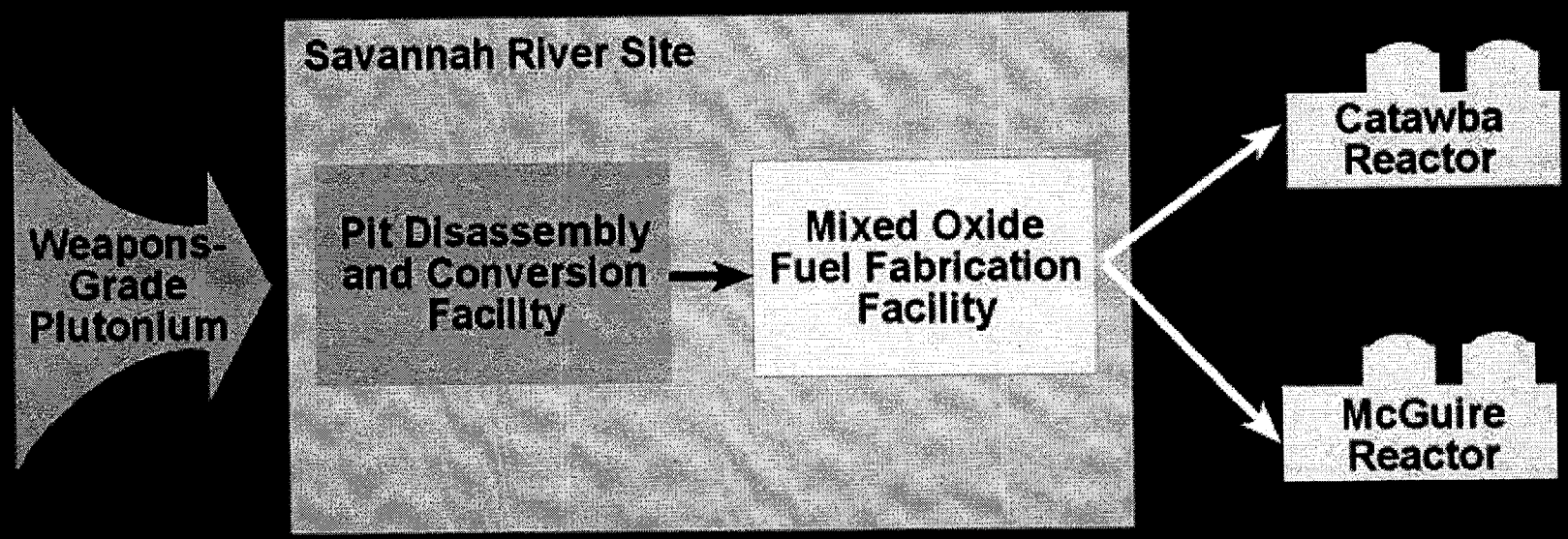
Department of Energy (DOE) Role

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

A BRIEF HISTORY

- 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

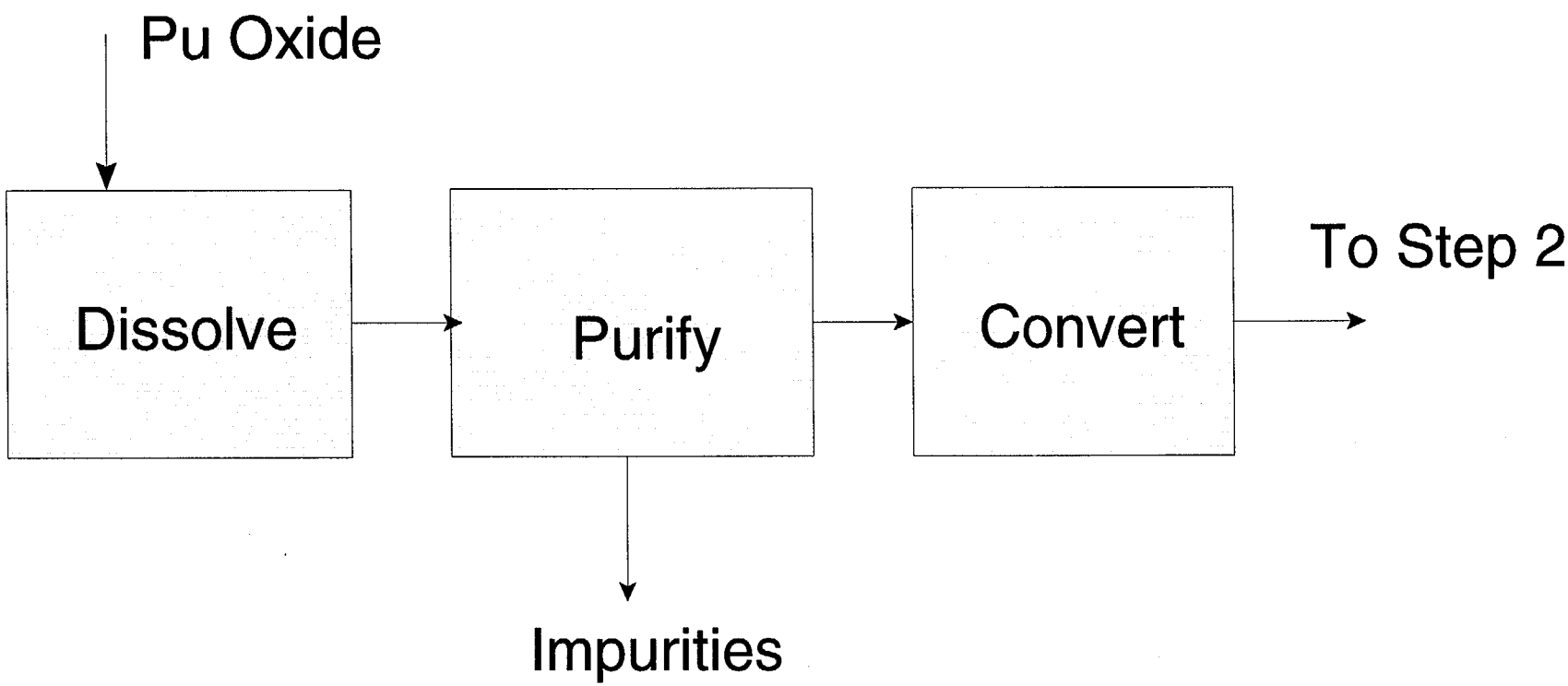


Yellow = NRC regulated

Blue = DOE regulated

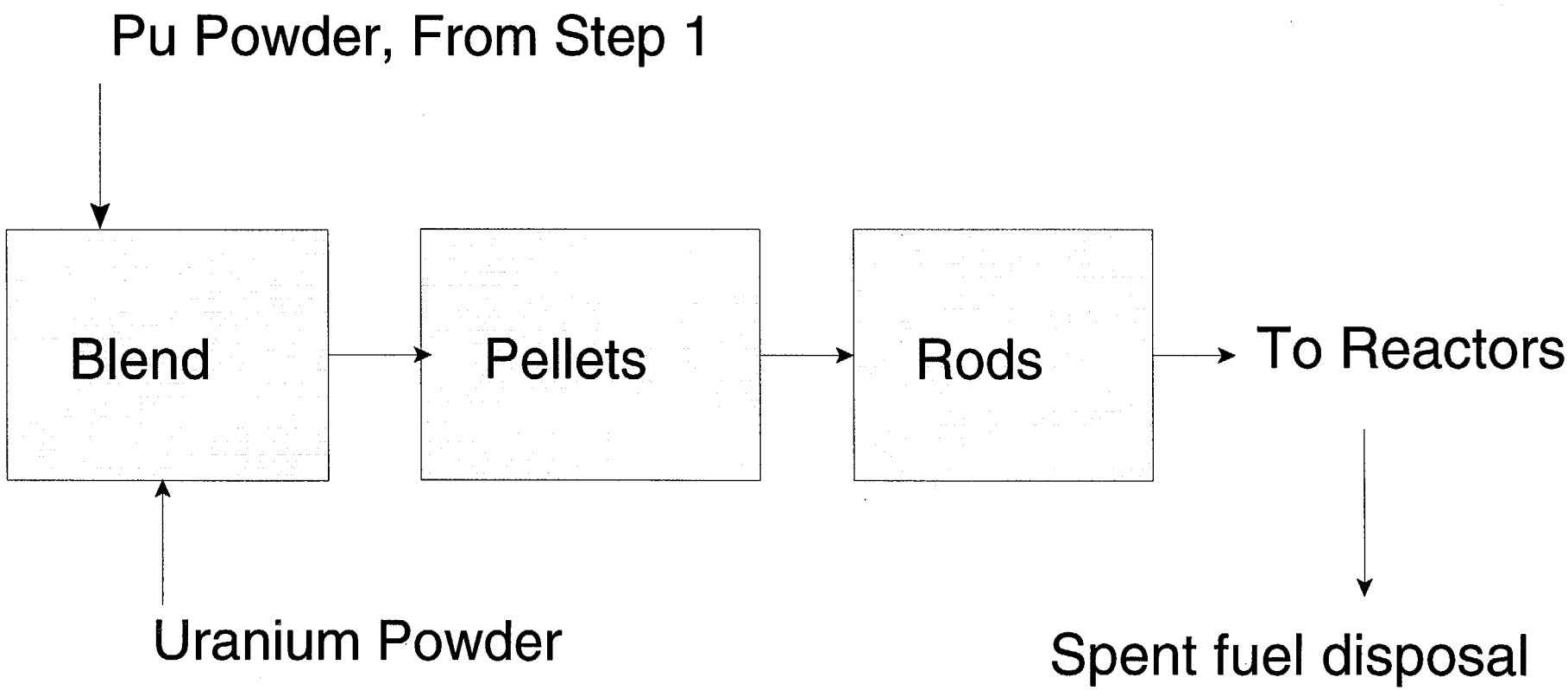
THE MOX PROCESS

STEP 1: Purify Plutonium
(Aqueous Polishing)

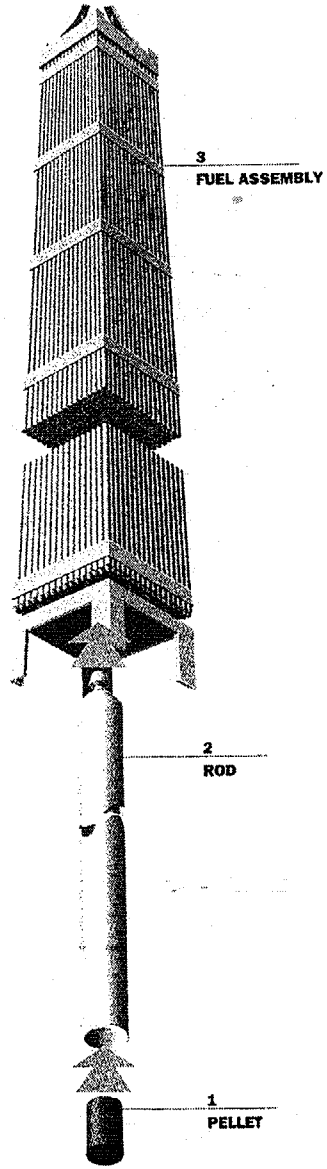


THE MOX PROCESS

STEP 2: Fuel Fabrication



MOX FUEL ASSEMBLY



NRC Assignments

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

THE NRC LICENSING PROCESS

Andrew Persinko

MOX Project Manager

AREAS OF NRC REVIEW

- 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

Fuel Facility

- Construction
- Operation

INFORMATION TO START CONSTRUCTION

Fuel Facility

- Site description
- Safety design
- Quality assurance program

NRC REVIEW PROCESS

Fuel Facility Construction

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

RESULTS OF NRC REVIEW

Fuel Facility Construction
Possible Outcomes

- Grant approval
- Deny approval
- Grant approval with conditions

INFORMATION FOR OPERATION

Fuel Facility

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

NRC REVIEW PROCESS

Fuel Facility Operation

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

RESULTS OF NRC REVIEW

Fuel Facility Operation
Possible Outcomes

- Grant license
- Deny license
- Grant license with conditions

REACTOR LICENSING

Use of MOX in Reactors

- Reactor regulations
- License amendment

ACTIVITIES TO DATE

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

NRC's Mixed Oxide Fuel Future Activities

August 2000

NRC Finalizes Standard Review Plan

NRC Receives Construction Application & Environmental Report

NRC Completes Safety & Environmental Reviews

Possible Public Hearing Start

~2002

MOX Facility Construction Start If Approved

NRC Receives Application For Operating License

NRC Completes Safety Review

MOX Facility Construction Complete

~2004

Possible Public Hearings Start

NRC Issues Operating License If Approved

~2007

Place MOX Fuel In Approved Power Plants

UNITED STATES NUCLEAR REGULATORY COMMISSION

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

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

10 CFR Part 51

Jennifer Davis, Environmental Review Team Lead
Division of Waste Management

NRC ENVIRONMENTAL REVIEW

Introduction

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

ENVIRONMENTAL IMPACT STATEMENT (EIS)

- Required for major federal actions
- Licensing the MOX facility

DOE's EIS

Previous NEPA Work By DOE

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

THE NEPA PROCESS

Receive Environmental Report

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Issue Notice of Intent

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Public Input → Initiate Scoping Process

↓

Coordinate with Federal/State agencies

↓

Public Input → Receive Public Comments

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THE NEPA PROCESS

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Issue Scoping Summary Report

↓

Issue Draft EIS

↓

Public Input → Receive Public Comments

↓

Issue Final EIS

HEARINGS

John Hull
Office of the General Counsel

WHAT HEARING PROCEDURES APPLY?

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

WHEN CAN I ASK FOR A HEARING?

- After construction information received
- After Federal Register Notice published

WHAT INFORMATION WILL I NEED?

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

HOW DO I REQUEST A HEARING?

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

WHAT HAPPENS TO MY HEARING REQUEST?

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

ARE THE JUDGE'S DECISIONS FINAL?

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

PUBLIC PARTICIPATION

Mindy Landau
Office of Public Affairs

PUBLIC PARTICIPATION

- NEPA
  - Scoping meetings
  - Public comments
- Hearings
- Call, e-mail or write
- www.nrc.gov (interactive web site)
- ADAMS

Questions and Answers