

*EVENING
SESSION*



FUTURE LICENSING WORKSHOP

WELCOME

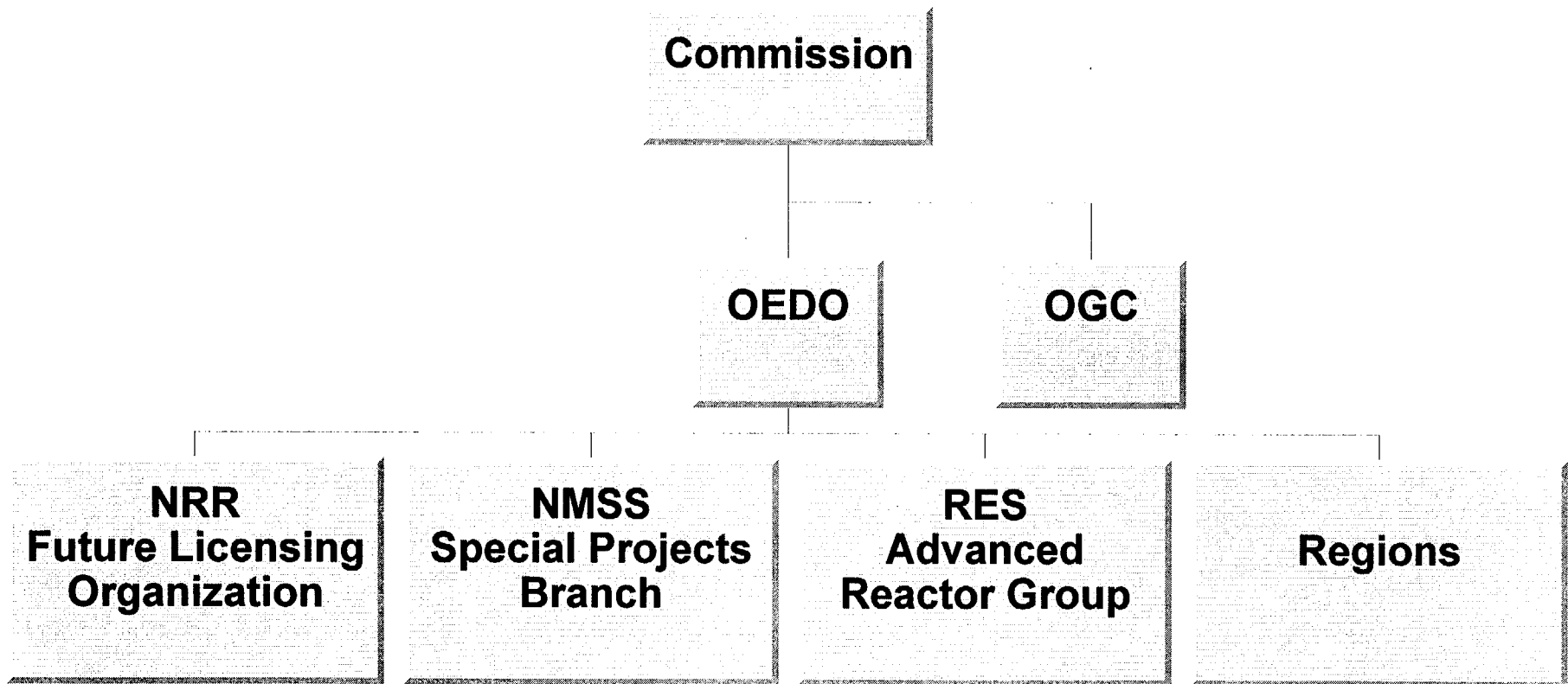
Marsha Gamberoni
NRR Future Licensing Organization

Purpose

To present an overview of the licensing processes and current activities associated with future licensing.

To provide an opportunity for external stakeholders to comment on the processes and raise issues.

NRC Organization



Future Licensing Organization

Staffing

James E. Lyons
SES Manager

Marsha Gamberoni
Section Chief

Jerry Wilson
Sr. Policy Analyst

Nan Gilles
FLIRA Lead

Tom Kenyon
Siting PM

Alan Rae
AP 1000 PM

Eric Benner
Regulatory Infrastructure PM

Joe Sebrosky
ITAAC & Construction PM

Amy Cabbage
Diane Jackson
PBMR PM

Joe Williams
Sr. Project Manager

Cheri Nagel
Secretary

Future Licensing Organization

Near-term Objectives

- Provide central point of contact for NRR future licensing efforts
 - Manage current activities
 - ▶ Pre-application reviews
 - ▶ Rulemaking
 - Coordinate FLIRA
 - Stakeholder interactions
-

Office of Nuclear Materials Safety & Safeguards

What We Do:

- Uranium Recovery Operations
- Uranium Conversion & Enrichment
- Nuclear Fuel Manufacturing
- High Level Waste Storage, Transportation, Disposal
- Low Level Waste Storage, Transportation, Disposal
- Fresh/Spent Fuel Storage Canisters/Transportation

Office of NMSS

**Office of Nuclear Material Safety and
Safeguards**

**Martin J. Virgilio, Director
Margaret V. Federline, Deputy Director**

**Program Management Policy
Development and Analysis Staff**

**John J. Linehan, Director
Dan Gillen, Deputy Director**

**Division of Fuel Cycle Safety and
Safeguards**

**Michael F. Weber, Director
Robert C. Pierson, Deputy Director**

**Division of Industrial and Medical
Nuclear Safety**

**Donald A. Cool, Director
Susan M. Frant, Deputy Director**

Division of Waste Management

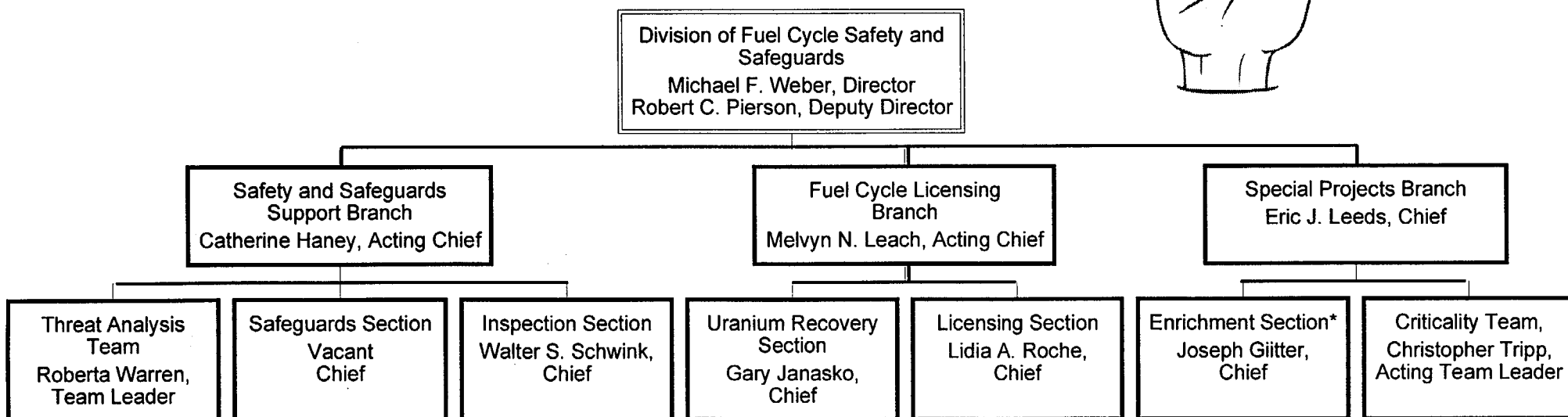
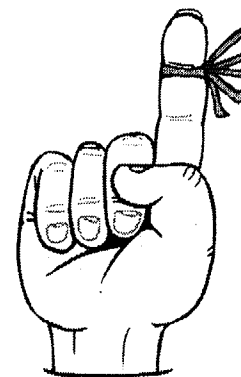
**John T. Greeves, Director
Josephine M. Piccone, Deputy Director**

**Spent Fuel
Project Office**

**E. William Brach, Director
M. Wayne Hodges, Deputy Dir.
Charles Miller, Deputy Director**

Office of NMSS

Division of Fuel Cycle Safety and Safeguards



Office of NMSS

Division of Waste Management

Division of Waste Management
John T. Greeves, Director
Josephine M. Piccone, Deputy Director

**Environmental & Performance
Assessment Branch**

Thomas H. Essig, Chief

**Environmental & LLW
Projects Section**

Charlotte E. Abrams, Chief

**Performance Assessment
and Integration Section**

Sandra L. Wastler, Chief

Decommissioning Branch

Larry W. Camper, Chief

**Facilities Decommissioning
Section**

Robert A. Nelson, Chief

Special Projects Section

Scott W. Moore, Chief

**High-Level Waste
Branch**

C. William Reamer, Chief

**Projects and Engineering
Section**

N. King Stablein, Chief

Repository Site Section

David J. Brooks, Chief

Office of NMSS

Spent Fuel Project Office

Spent Fuel Project Office

E. William Brach, Director

**Licensing & Inspection
Directorate**

Charles L. Miller, Deputy Director

Technical Review Directorate

M. Wayne Hodges, Deputy Director

Licensing Section

Vacant, Chief

**Transportation & Storage
Safety & Inspection Section**

Michael Tokar, Chief

**Technical Review
Section A**

Earl P. Easton, Chief

**Technical Review
Section B**

Jack Guttman, Chief

Office of NMSS

Division of Industrial and Medical Nuclear Safety

**Division of Industrial and
Medical Nuclear Safety**

**Donald A. Cool, Director
Susan M. Frant, Deputy Director**

Rulemaking & Guidance Branch

Patricia K. Holahan, Chief

Materials Safety Branch

John W. Hickey, Chief

Section A

**Melanie Galloway,
Chief**

Section B

**Allen G. Howe,
Chief**

Section A

**Frederick C. Sturz,
Chief**

Section B

**Frederick D. Brown,
Chief**

**Sealed Source &
Device Team**

**John P. Jankovich,
Team Leader**

RES Advanced Reactor Group

Staffing

Regulatory Effectiveness Assessment and Human Factors Branch

Branch Chief: John H. Flack
Assistant Branch Chief (TBD)

**Advanced
Reactor
Group**

Sr. Level Advisor
Stu Rubin

**PBMR
Pre-Application**

Stu Rubin

**HT-MHR
Pre-Application**

Jose Ibarra

**IRIS
Pre-Application**

(TBD)

Framework

Prasad Kadambi

Advanced Reactor Group

Near-term Objectives

- Provide central point of contact for RES advanced reactor research activities
- Current activities
 - ▶ Pre-application review of non-LWR designs
 - ▶ Generation IV
 - ▶ Framework
- Matrix in RES Expertise
- As practicable, capitalize on Agency expertise
- Stakeholder interactions

Part 52/Combined License

- Created additional licensing processes -1989.
- Combined construction permit and conditional operating license for a nuclear power plant.
- Resolves safety and environmental issues before authorizing construction of the nuclear plant.
- Provides for public participation prior to siting and construction of nuclear power plants.

Early Site Permits

- Allows applicant to “bank” a site for 10 - 20 years

- Review issues
 - ▶ site safety
 - ▶ emergency planning
 - ▶ environmental protection

- Several opportunities for public involvement

- Schedule

Design Certification

- Allows an applicant to pre-approve a standard plant design by rulemaking.
- Reduces licensing uncertainty and facilitates standardization.
- 3 standard designs have been certified.
- Application for AP1000 expected in 2002.

Construction Inspection Program

- Inspections, Tests, Analyses and Acceptance Criteria (ITAAC)
 - ▶ Program for verifying that the facility has been constructed and will be operated in conformity with the license, the provisions of the AEA, and the Commission's rules and regulations
- Programmatic ITAAC
 - ▶ Should a COL application contain ITAAC on operational programs such as security, training and emergency planning
 - ▶ Federal Register Notice issued June 25, 2001
 - ▶ Public comment period ends August 8, 2001

Construction Inspection Program

- Construction Inspection Program Reactivation
 - ▶ FLIRA input will include reactivated plant scenario, standard design, and custom design
 - ▶ Draft report on revised construction inspection program issued in 1996 is the key guidance document

Rulemakings

- General Rulemaking Process
- Specific Rulemakings:
 - ▶ Update to 10 CFR Part 52
 - ▶ Alternative Site Reviews
 - ▶ 10 CFR Part 51, Tables S-3 and S-4

Future Licensing and Inspection Readiness Assessment (FLIRA)

- February 13, 2001 Staff Requirements Memorandum
 - ▶ Access technical, licensing and inspection capabilities
 - ▶ Assess the regulatory infrastructure supporting Parts 50 and 52
- FLIRA Report
 - ▶ Postulated scenarios, schedules, resources, skills
- Readiness Challenges
 - ▶ Especially the need for industry plans and information

Preapplication Reviews and Licensing Approaches

- Alternative license approaches
- Preapplication reviews identify issues for Commission policy guidance and staff technical resolution for design certification
- Current reviews: AP1000 and Pebble Bed Modular Reactor (PBMR)
- Expected reviews: Gas turbine-modular helium reactor (GT-MHR) and International Reactor Innovative and Secure (IRIS)

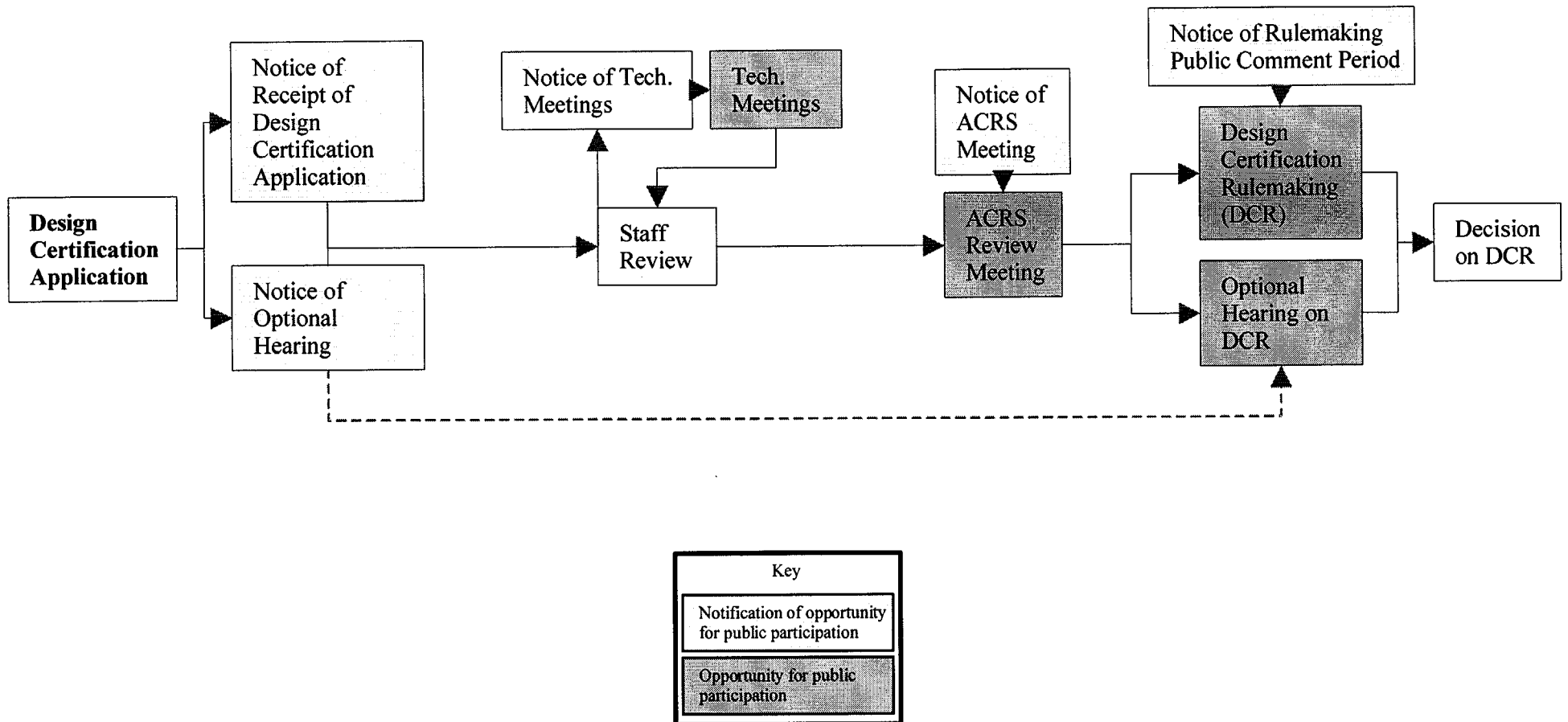
Preapplication Reviews and Licensing Approaches

- Advanced Reactor Policy statement encourages early interaction for new reactor designs
- Preapplication reviews identify issues for Commission policy guidance and staff technical resolution for design certification
- Current reviews: AP1000 and Pebble Bed Modular Reactor (PBMR)
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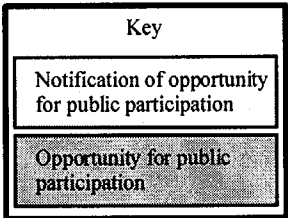
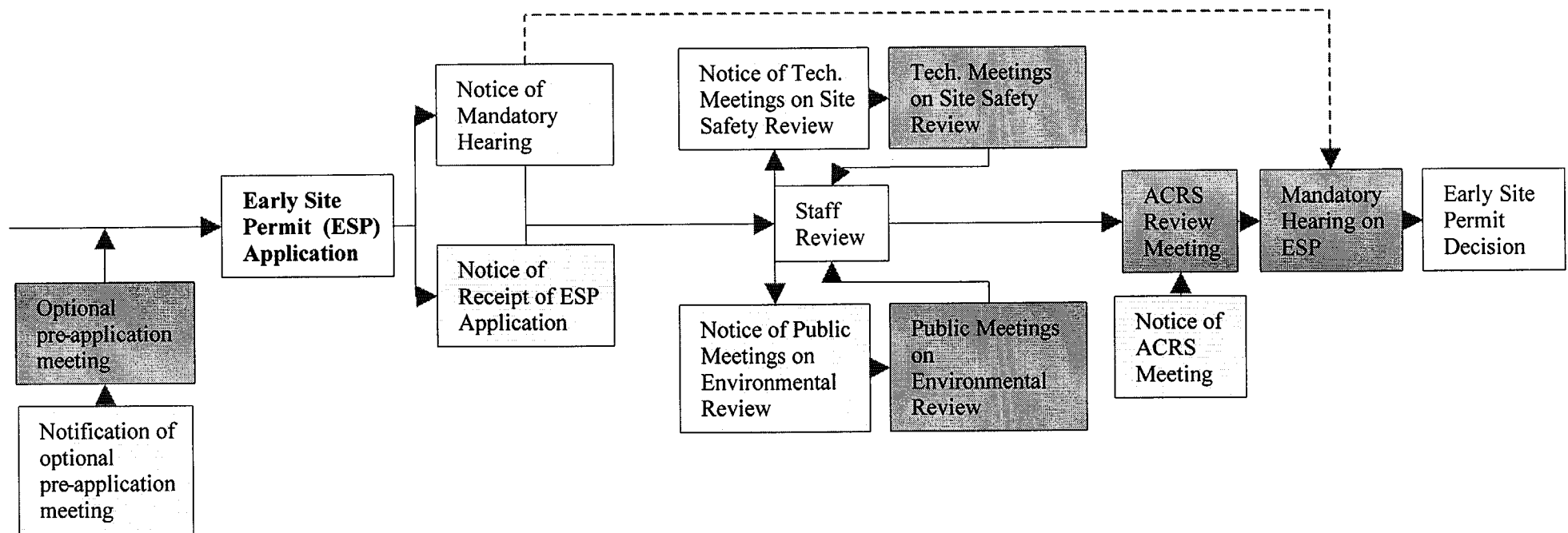
Nuclear Fuel Cycle Issues

- Fuel Manufacturing and Fabrication
- Fuel Quality Control and Qualification
- Transportation (Fresh and Spent Fuel)
- Safeguards (Material Control & Accounting, Physical Protection, International)
- Spent Nuclear Fuel (Storage, Handling)
- Decommissioning

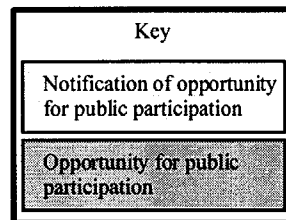
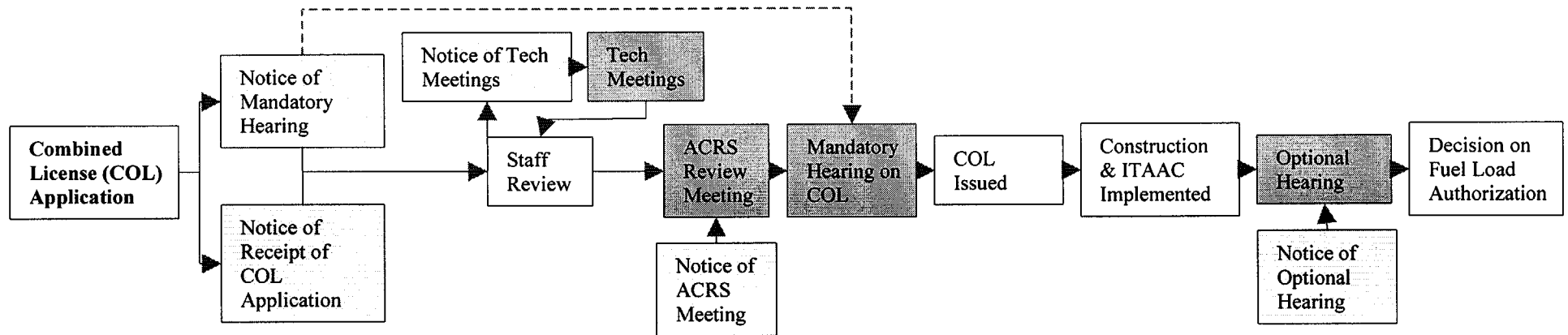
Design Certification Process



Early Site Permit Process



Combined License Process



SUPPLEMENTAL PACKAGE

RULEMAKING SESSION

July 25, 2001

Diane Jackson

NRR Future Licensing

Organization

Policy Issues

- Commission guidance sought on several legal and financial issues for:
 - ▶ Merchant plants
 - ▶ Modular plants
 - ▶ Non-LWR reactor designs
- Issues led by Exelon Generation in Pebble Bed Modular Reactor preapplication review

Policy Issues (cont.)

Merchant Plants

- Decommissioning funding assurance
- Antitrust reviews
- Financial qualifications

Policy Issues (cont.)

Modular Plants

- Price-Anderson protection
- Number of licenses
- NRC annual fees
- Operator staffing

Policy Issues (cont.)

Non-LWR Reactor Designs

- Decommissioning funding formula
- Uranium fuel cycle for gas reactors