

Nuclear Regulatory Commission Briefing on New Plants

April 30, 2008



Industry Panel

- **Christopher M. Crane, Chief Operating Officer, Exelon Generation, Chairman, New Plant Oversight Committee**
- **Stephen A. Byrne, Chief Nuclear Officer, South Carolina Electric & Gas, Chairman NEI New Plant Working Group**
- **Anthony R. Pietrangelo, Vice President, Regulatory Affairs, NEI**

Discussion Topics

- **Current Process Overview**
- **Technical/Policy Issues**
- **Industry Priorities**
- **Conclusion**

Current Process Overview

- **Companies will move forward with COL applications**
 - **Construction decision based on numerous considerations – not just COL issuance**
- **Constructive industry-NRC-public interaction**
 - **Site scoping visits**
 - **Design-Centered Review Approach**
- **Potential Process Issues**
 - **Implementing new/revised rules**
 - **Enhancing the environmental review process**

Technical/Policy Issues

- **Maintaining standardization & high quality applications**
- **Level of Safety**
 - **Industry developed safer designs consistent with Advanced Reactor Policy Statement**
 - **Same regulated safety standard for new and existing plants**
- **Implementing PRA requirements for new plants**
- **Supply chain qualifications**

Industry Priorities

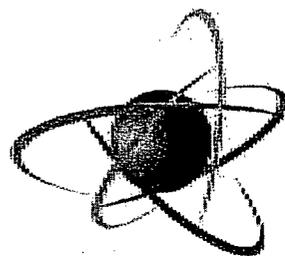
- **Generation III+ deployment (next decade)**
- **Response to COL & DC RAIs**
- **Finalize understandings on COL implementation processes:**
 - **Construction inspection, enforcement and assessment**
 - **ITAAC close-out process, including fuel load authorization process**
- **Complete rulemakings**
 - **Waste Confidence**
 - **Part 73**
 - **Aircraft Impact Assessment**

Conclusion

- **Challenges of parallel reviews recognized**
 - **Industry & NRC staff coming to grips with details of COL processes**
- **Need for integrated industry & NRC COL review schedules**
 - **Incorporate benefits of design centered reviews**
- **Good NRC-applicant-public communication**

List of Acronyms

- **COL – Combined Construction Permit and Operating License**
- **DC – Design Certification**
- **NRC -- Nuclear Regulatory Commission**
- **PRA – Probabilistic Risk Assessment**
- **RAI – Request for Additional Information**



U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

STATUS OF NEW REACTOR ISSUES

April 30, 2008

Luis Reyes

Executive Director for Operations

Agenda

- Accomplishments and Recent Activities
- Status of New Reactor Projects and Rulemaking
- Selected Safety and Environmental Technical Issues and Potential Schedule Impacts

Accomplishments and Recent Activities

Gary Holahan, Deputy Director
Office of New Reactors

Accomplishments Since Last Briefing

- Completed acceptance reviews
- Issued limited work authorization (LWA) rule implementation guidance
- Completed environmental site audits

Other Recent Activities

- Vendor Inspection Initiatives
- Planning and Scheduling Tools
- Recruitment and Knowledge Management

Status of New Reactor Projects and Rulemaking

Thomas Bergman, Deputy Director
Division of New Reactor Licensing
Office of New Reactors

Status of Early Site Permits

- Three Early Site Permits (ESPs) issued
- One ESP under review

Status of Design Certification Reviews

- Four Design Certifications (DCs) issued
- Three DCs under review
- One DC Amendment under review

Combined License Application Reviews

- Nine Combined License Applications (COLAs) submitted
 - Seven acceptance reviews complete and under review
 - Two applications under acceptance review

Ensuring Safety and Meeting Schedule Commitments

- Planning and review tools
- Focus on safety and execution
- Enhanced openness and transparency of project execution

Status of Key Rulemaking Activities

- Aircraft Impact Rulemaking
- Security Rulemaking
- Design Certification Rulemaking
Process

Conclusions

- Planning and review tools have been beneficial
- Schedule commitments are being met
- Continue to develop infrastructure to support new reactor reviews

New Reactor Sump Design Reviews

Christopher Jackson, Chief
Containment and Ventilation Systems
Branch 1
Office of New Reactors

Key Points

- Regulations, guidance and experience are adequate to support new reactor reviews
- Level of detail lagging
- Continuing to receive application supplements – schedule impacts
- New approaches

Path Forward

- Coordination between Offices
- International cooperation
- Planning and conducting safety-focused reviews to bring issue to timely resolution

Limited Work Authorization Rule Implementation

Brent Clayton, Chief
Environmental Technical Support
Branch
Office of New Reactors

Definition of “Construction”

- New definition consistent with agency statutory authority
- Construction or preconstruction
- Changes affect all new reactor site and environmental reviews

Preconstruction Impacts

- Environmental Reports to describe impact of “preconstruction” activities
- Preconstruction impacts assessed only in context of cumulative impacts
- Allows appropriate evaluation of impacts of construction activities being authorized

Interim Staff Guidance

- Level of analysis to separate impacts commensurate with significance of impact
- Simple analyses sufficient in most areas
- Use request-for-additional information process for near-term applicants

Other Permitting Authorities

- Potential timing issues with permits for preconstruction activities
- 1975 Memorandum of Understanding with Army Corps of Engineers being updated to address Part 52 and LWA rule

NRC Resources and Schedules

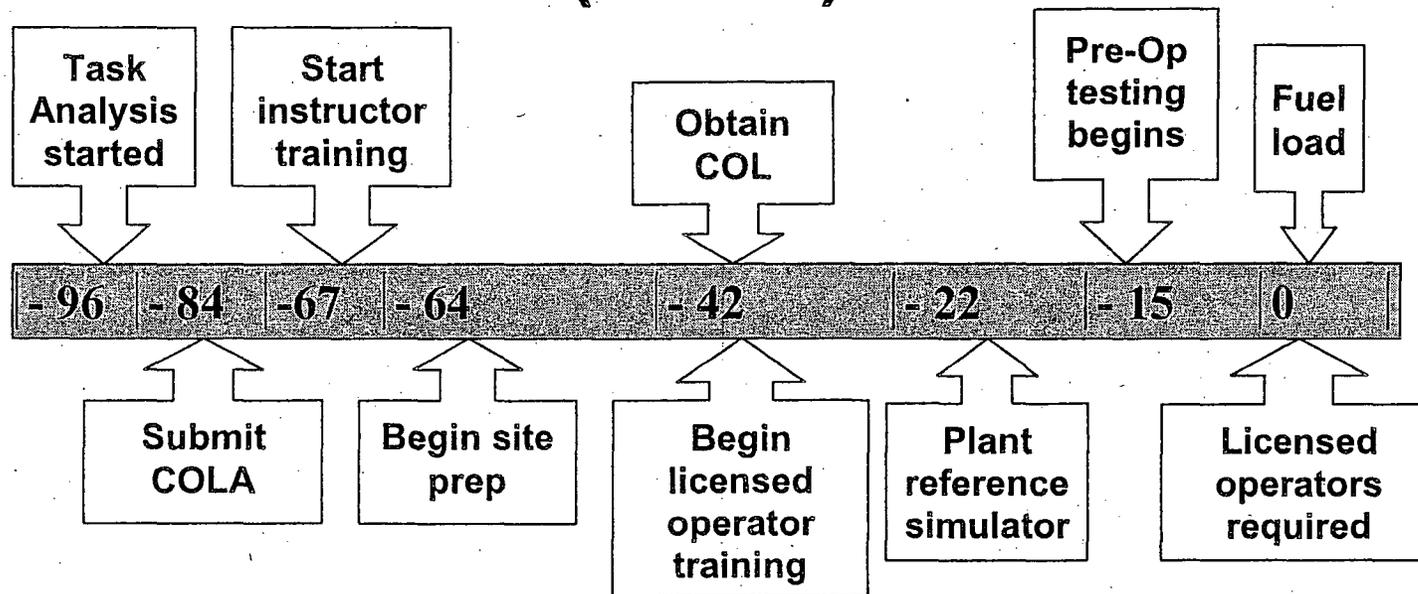
- Timely notification of LWA requests allows proper resource and schedule planning
- Later notification addressed on application specific basis

Operator Licensing for New Reactors

Michael Junge, Chief
Operator Licensing and Human
Performance Branch
Office of New Reactors

Coordination of NRC Reviews and Examinations

Training & Initial Accreditation Timeline (Months)



Operator Licensing Process

- Process for acquiring knowledge and experience required for licensed operator duties post construction
- Topic of numerous public stakeholder interactions
- Industry technical paper under review

Digital Control Rooms

- Operator examination content and administration
- Crew interactions and communications

NRC Readiness

- Simulator for inspectors and examiners
- Examiner training and qualification

Transition to Operating Reactors

- Activities fully coordinated with NRR, TTC, and the Regions
- Conduct of cross training

Acronyms

- COLA – Combined License Application
- DC – Design Certification
- ESP – Early Site Permit
- LWA - Limited Work Authorization
- NRR – Office of Nuclear Reactor Regulation
- TTC – Technical Training Center