

# Duke Energy Lee Combined License Schedule Discussion

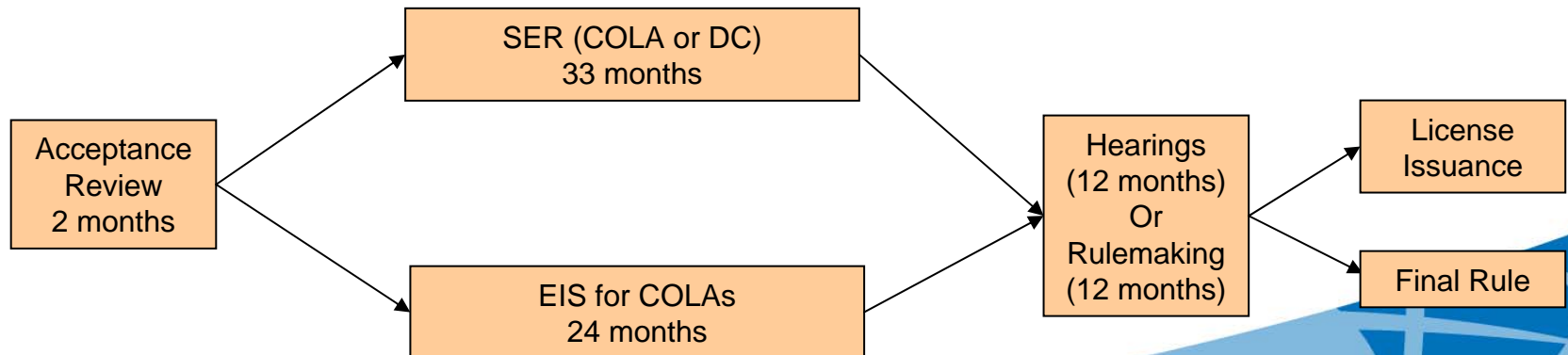
*March 19, 2008*

Joelle Starefos, Project Manager (Safety)

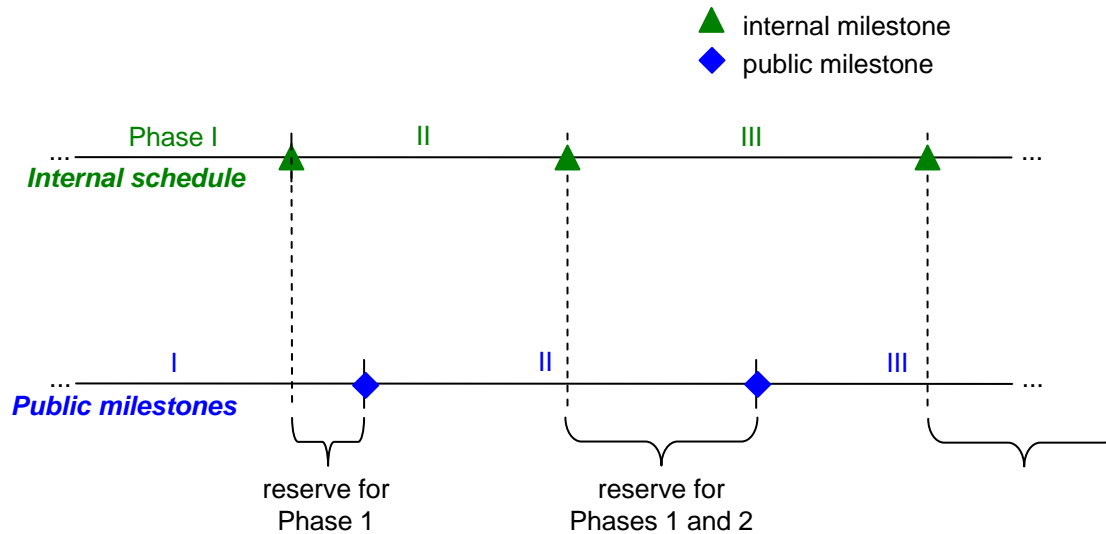
Linda M. Tello, Project Manager (Environmental)

# Licensing Review Phases

- NRC's review of COLs and DCs is organized in the same way
  - Acceptance Review (2 months)
  - 6-Phase SER (33 months includes Management Reserve)
  - 4-Phase EIS (24 months includes Management Reserve)
    - Not covered in detail during this presentation
  - Hearings (COLs) (12 months)
  - Rulemaking (DCs) (Goal is 12 months)

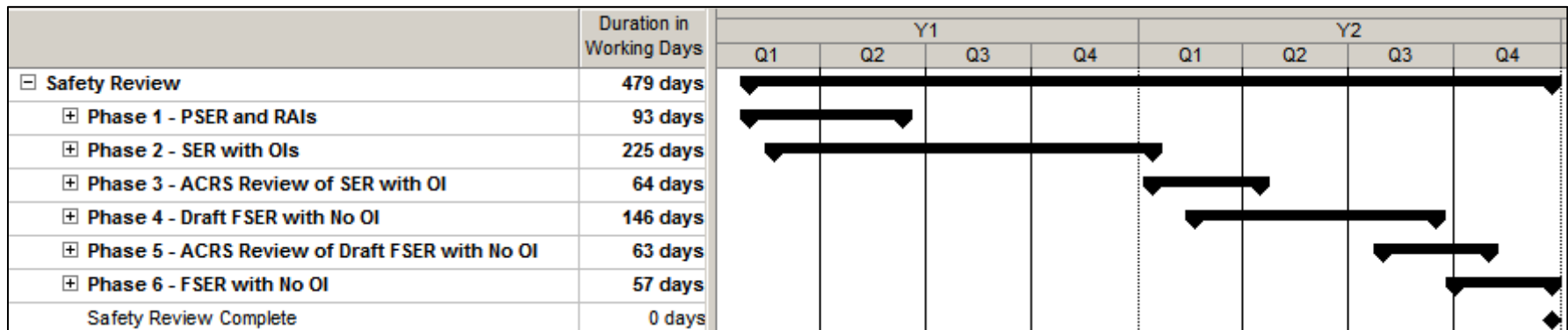


# Management Reserve



# Safety Review 6-Phase SER

1. PSER & RAIs
2. SER with Open Items
3. ACRS Meetings (SER with OIs)
4. Advanced FSER, no open items
5. ACRS Meetings
6. FSER



(Note: Durations in this figure differ from nominal durations.)

# SER Phase 1 – PSER and RAIs

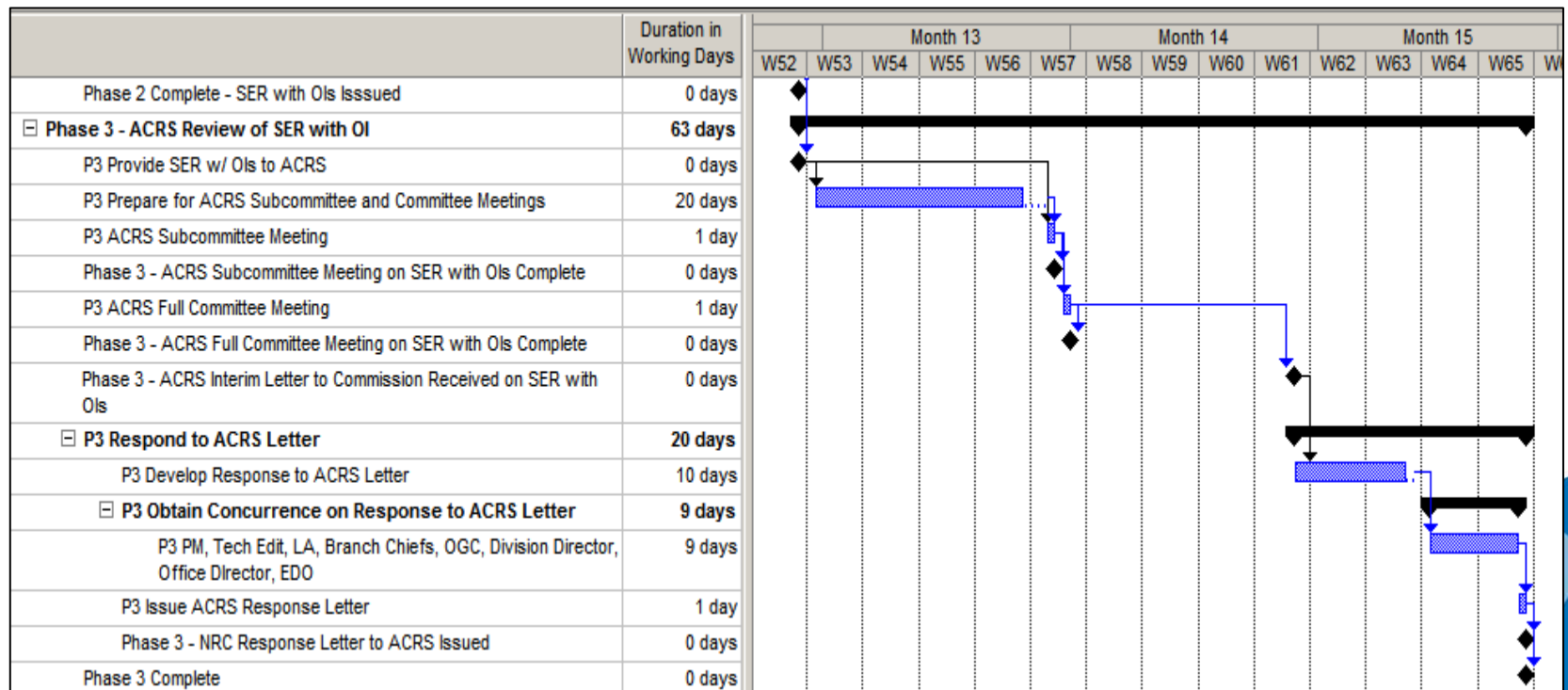
- Begins with start of review
- Ends when for a chapter when all RAIs issued for the chapter
- Includes (for example):
  - Reading COLA/DC
  - Preparing PSER and RAIs
  - Internal peer reviews and concurrence
  - Interactions with applicant
  - Site audit

## Phase 2 – SER with Open Items

- Begins with review of RAI responses
- Ends with submission of completion SER w/OI
  - Includes:
    - Reading responses
    - Preparing SER w/OI input
    - Internal peer reviews and concurrence
    - Interactions with applicant
  - Can be extended – by late RAI responses
  - Staff will evaluate timing of the first ACRS interaction based on the number and complexity of Open Items

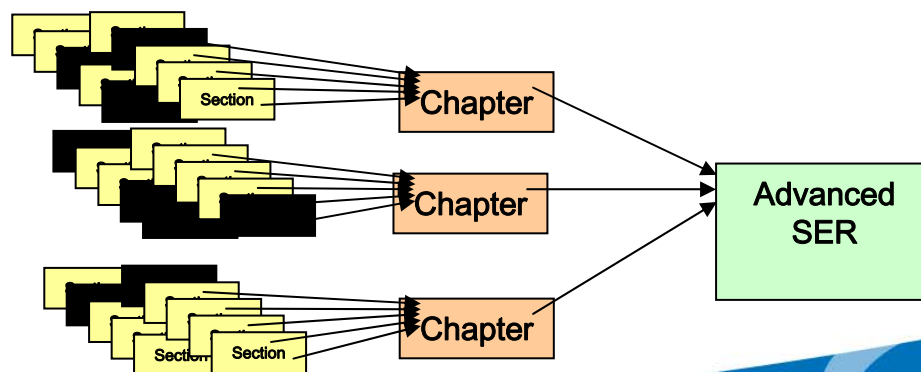
# Phase 3 – ACRS Review of SER

- Begins with Issuance of SER w/OI
- Ends with staff response letter to ACRS



## Phase 4 – Advanced SER

- Advanced SER contains no open items
- Resolves identified open items plus issues resulting from ACRS review
- Includes four general sub-phases (similar to SER w/ OI)
  - Awaiting input from applicant
  - Resolution of OIs and issues by Technical Reviewer
  - Chapter completion process
  - Document completion process
- Work excludes SER chapters and sections without OIs and issues





# Work: SER Phase 4 – Draft FSER

- Begins with receipt of first input from applicant
- Ends with completion of advanced SER
  - Includes:
    - Reading and evaluating applicant input
    - Interactions with applicant
    - Preparing Draft FSER section
    - Internal peer reviews and concurrence
    - Other activities . . .
- Can be extended – by late applicant responses

# Phase 5 – ACRS Review of Advanced SER

- Activities ARE THE SAME as ACRS Review of SER w/OI

## Phase 6 – Final SER

- FSER
- Contains no open items
- Differs from advanced SER only in those areas addressed in ACRS review
- We won't know what these areas are until after ACRS meeting
- Work in these areas can begin as soon as issues are known
- Activities occur in 2 sub-phases:
  - ACRS Issue Resolution
  - Document Completion

# Safety & Environmental Review Schedule - *Background*



- Schedule based on combined license (COL) schedule template
- Template schedule for a COL safety review is 33 months (includes managed reserve)
- Template schedule for a COL environmental review is 24 months (includes managed reserve)
- Schedule for hearing determined by Commission and Atomic Safety and Licensing Board
- Safety review drives schedule, not environmental review

# Resource Allocation

- Schedule milestones are expected to change based on information that is provided today related to the scheduling issues addressed by the meeting agenda
- Schedule reflects reduced effort for portions of schedule associated with work that is significantly standard or incorporated by reference
- Chapters with large resource allocations:
  - Chapter 2 – Site Characteristics
  - Chapter 3 – Design of Structures, Components, Equipment, and Systems
  - Chapter 13 – Conduct of Operations

# Safety Review Milestones

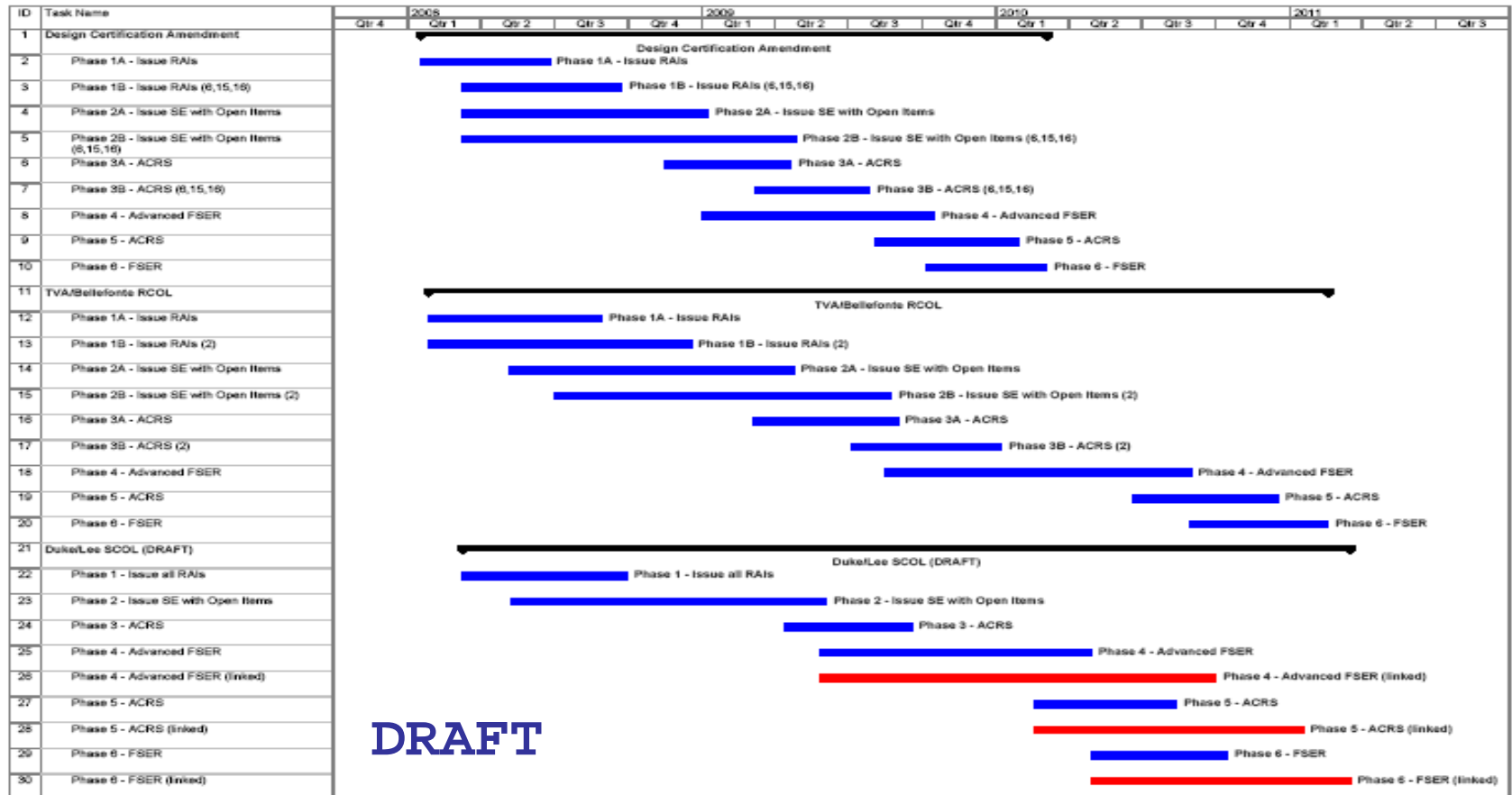
*(Without Lee Schedule Issues Addressed)*

| <b>Review Phases</b>                  |  | <b>DRAFT</b> | <b>Completion Date<br/>(Target)</b> |
|---------------------------------------|--|--------------|-------------------------------------|
| <i>P1</i>                             | Preliminary safety evaluation report (PSER) and requests for additional information (RAIs) |              | September 2008                      |
| <i>P2</i>                             | Issue SER with open items (OIs)  |              | June 2009                           |
| <i>P3</i>                             | ACRS review of SER with OIs completed  |              | September 2009                      |
| <i>P4</i>                             | Issue Advanced SER with no OIs   |              | April 2010                          |
| <i>P5</i>                             | ACRS review of Advanced SER with no OIs completed  |              | August 2010                         |
| <i>P6</i>                             | Issue Final SER with no OIs  |              | October 2010                        |
| Hearing completed and decision on COL |  |              | May 2011                            |

# Safety Schedule Challenges

- AP1000 design certification amendment (DCA) and reference combined license (R-COL) must be issued before subsequent COL (S-COL) may be issued
  - Necessitates resolution of DCA issues (e.g. sump strainer issue) and R-COL standard information review consistent with design-centered review approach
- Resolution of Lee S-COL acceptance review issues:
  - near-surface site ground motion effects methodology review not previously evaluated by the NRC
  - issue associated with update of the Eastern Tennessee Seismic Zone source models
  - characterization of the dynamic response of the fill material beneath the Radioactive Waste building and the impacts and the potential adverse effects on the abutting Class 1 structure

# AP1000 DCA, Bellefonte R-COL & Lee S-COL *DRAFT* Schedules



**DRAFT**

Project: DCA and RCOL and SCOL 2  
Date: Tue 3/15/08

Task  
Split

Progress  
Milestone

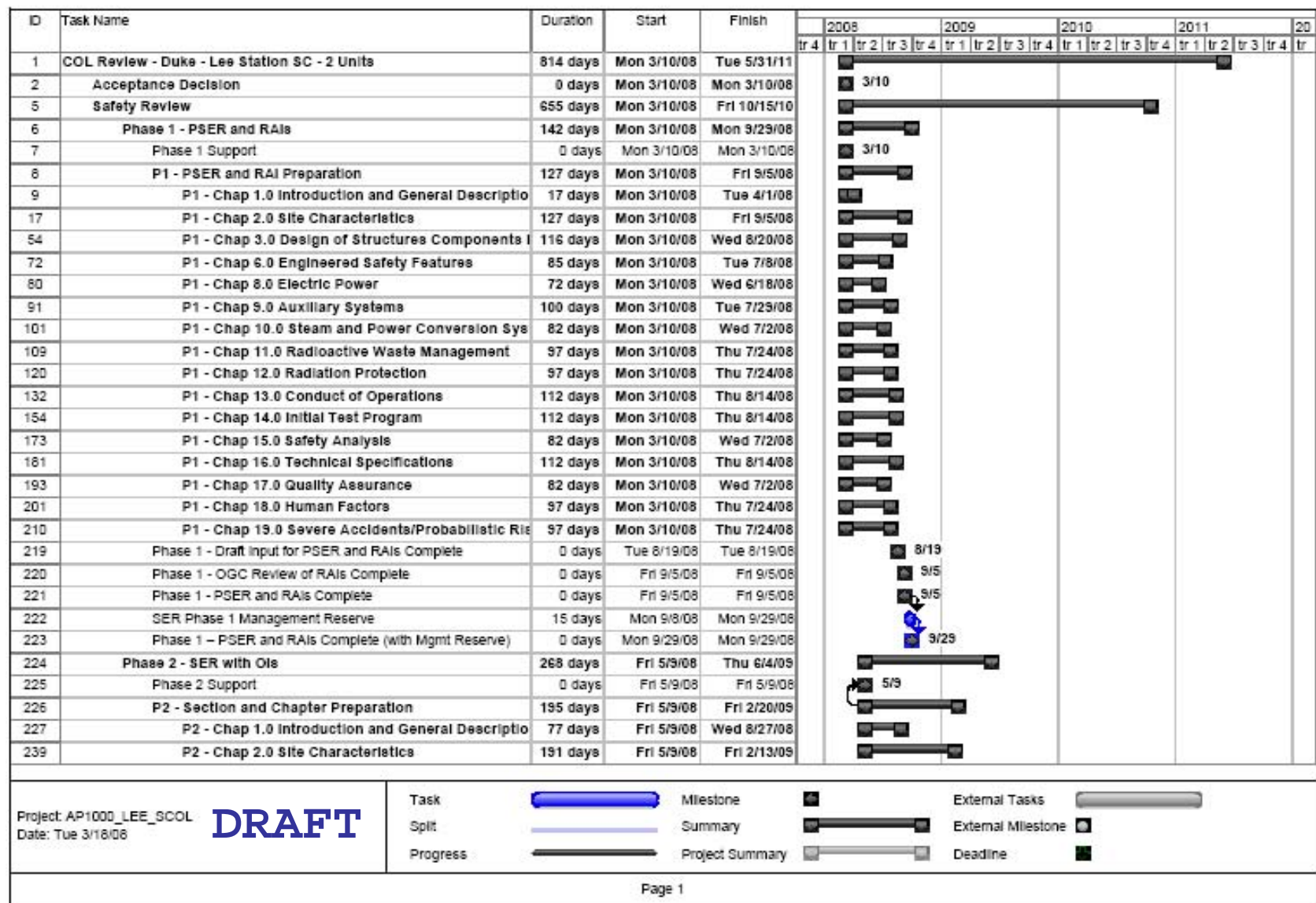
Summary  
Project Summary

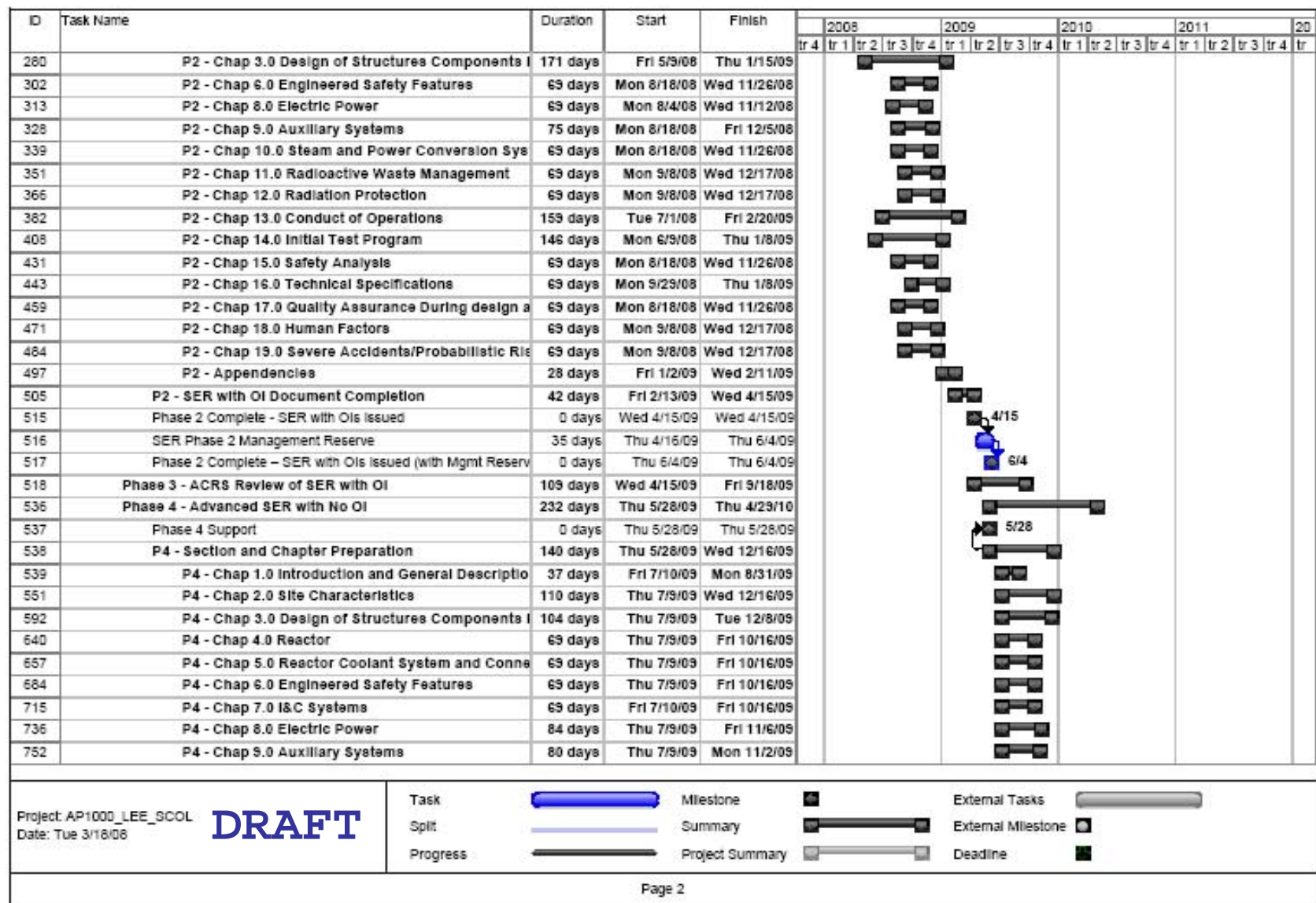
External Task  
External Milestone

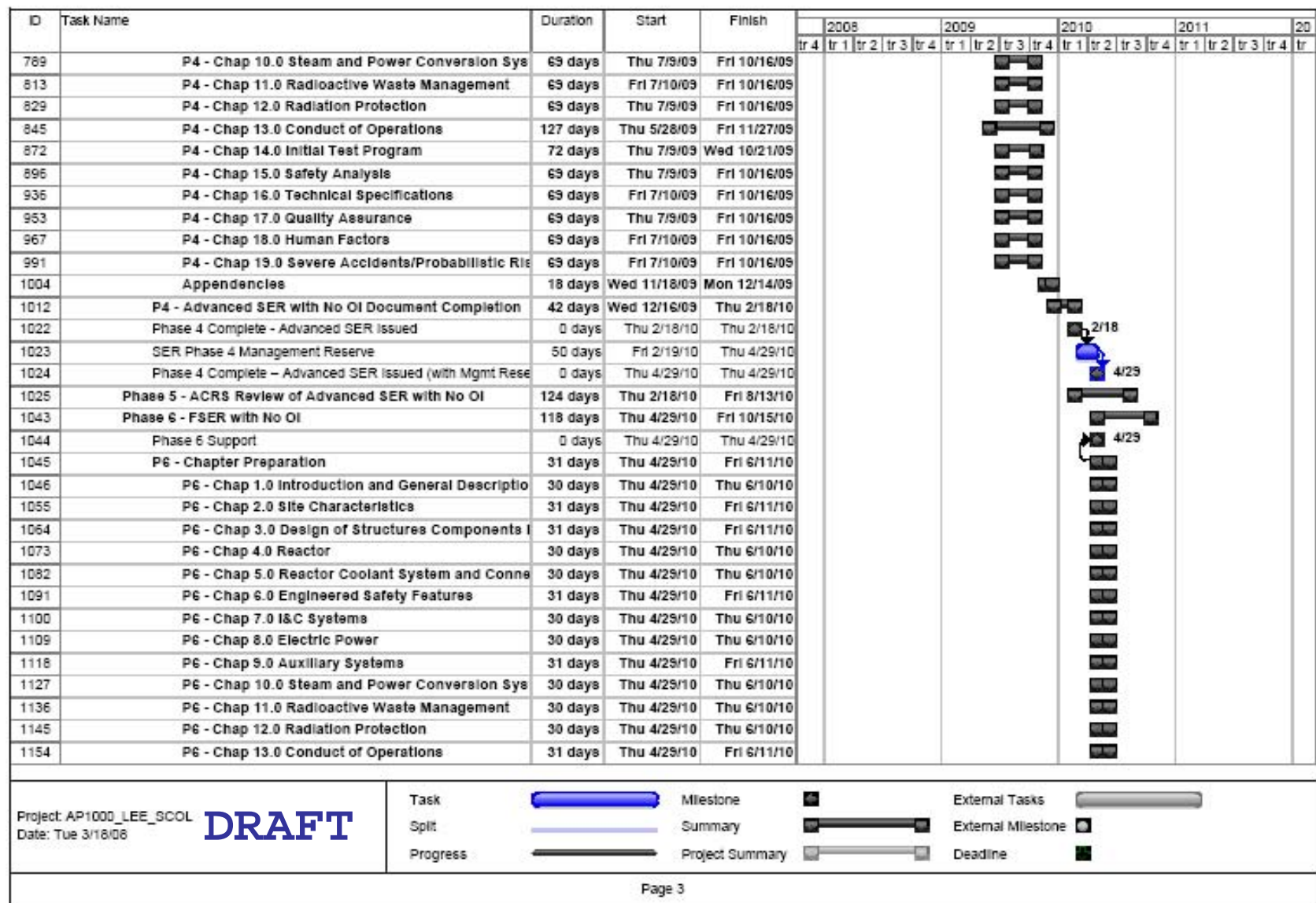
Deadline



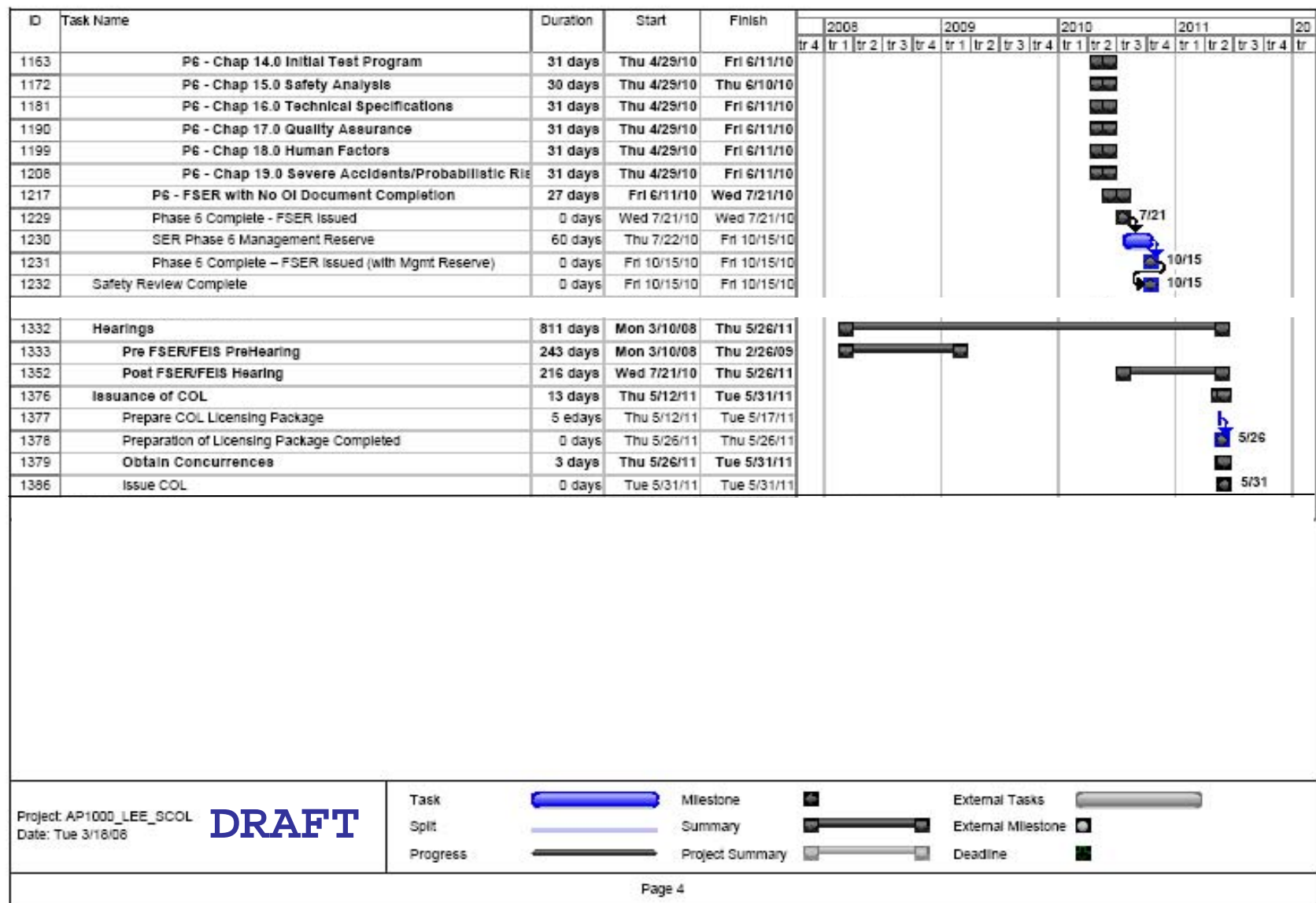












# Environmental Review Milestones

## *DRAFT*

| Review Phases  | Completion Date<br>(Target) |
|--|-----------------------------|
| <i>P1</i> Scoping  | October 2008                |
| <i>Federal Register</i> Notice of Intent Published             | March 2008                  |
| Environmental Impact Statement (EIS) Public<br>Scoping Meeting | May 2008                    |
| EIS Scoping Period Ends  | May 2008                    |
| EIS Scoping Summary Report Issued                              | September 2008              |

# Environmental Review Milestones

## *DRAFT*

| Review Phases |   | Completion Date<br>(Target) |
|---------------|---|-----------------------------|
| <i>P2</i>     | Draft Environmental Impact Statement (DEIS)                       | May 2008                    |
|               | EIS Site Audit (NRC, PNNL, DHS)                                   | April 27- May 02, 2008      |
|               | EIS Site Audit of alternate sites (NRC)                           | April 27-28, 2008           |
|               | EIS RAIs issued to applicant                                      | August 2008                 |
|               | EIS RAI responses received from applicant                         | September 2008              |
|               | DEIS NUREG filed with Environmental Protection Agency (EPA)       | March 2009                  |
|               | NRC issues <i>Federal Register</i> Notice of Availability of DEIS | April 2009                  |
|               | EPA issues <i>Federal Register</i> Notice of Filing               | April 2009                  |

# Environmental Review Milestones

## *DRAFT*

| Review Phases |   | Completion Date<br>(Target) |
|---------------|---|-----------------------------|
| <i>P3</i>     | Draft Environmental Impact Statement<br>Comment Period              | November 2009               |
|               | DEIS public meeting near site complete                              | May 2009                    |
|               | DEIS public comment period ends                                     | June 2009                   |
| <i>P4</i>     | Final Environmental Impact Statement (FEIS)                         | January 2010                |
|               | FEIS published to ADAMS   | February 2010               |
|               | <i>Federal Register</i> Notice of Availability of FEIS<br>published | March 2010                  |

*Questions?*