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DATE OF MEETING

05/28/2002

The attached document(s), which was/were handed out in this meeting, is/are to be placed in the public domain as soon as possible. The minutes of the meeting will be issued in the near future. Following are administrative details regarding this meeting:

Docket Number(s)

Project Number 689

Plant/Facility Name

TAC Number(s) (if available)

Reference Meeting Notice

May 16, 2002

Purpose of Meeting
(copy from meeting notice)

To discuss issues related to Early Site Permit applications

and reviews. Topics include corporate organization,

schedules for applications, and ESP preparation

NAME OF PERSON WHO ISSUED MEETING NOTICE

Ronaldo Jenkins

TITLE

Senior Project Manager

OFFICE

NRR

DIVISION

NRLPO

BRANCH

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Docket File/Central File
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DF03

AGENDA
MAY 28, 2002, MEETING
WITH NUCLEAR ENERGY INSTITUTE (NEI)
T10A1 1:00 PM-4:00 pm

1:00 p.m.	Introductory Comments	NRC / NEI
1:10 p.m.	ESP Applicant Preparations <ul style="list-style-type: none">. Organization. Milestones and Schedule. NRC Staff/ Applicant Interactions	Dominion/Exelon/Entergy
1:55 p.m.	NRC Organization for ESP Applicants	NRC
2:05 p.m.	ESP Applicant Fee Structure	NRC
2:15 p.m.	Break	
2:25 p.m.	Discussion of May 20, 2002 Letter from NEI <ul style="list-style-type: none">. QA Requirements of ESP Information (ESP-3). ESP Issue Status Summaries. IMC-2511A. Timing of NRC Public Meetings	NEI/NRC
3:15 p.m.	NRC Review Standard for ESP Applications	NRC/NEI/Applicants
3:30 p.m.	NEI Timeline for NRC Review	NRC/NEI/Applicants
3:40 p.m.	Public Comment	
3:50 p.m.	Summary	NRC/NEI/Applicants
4:00 p.m.	Adjourn	

Early Site Permit Meeting with Nuclear Energy Institute

May 28, 2002
NRC Handouts

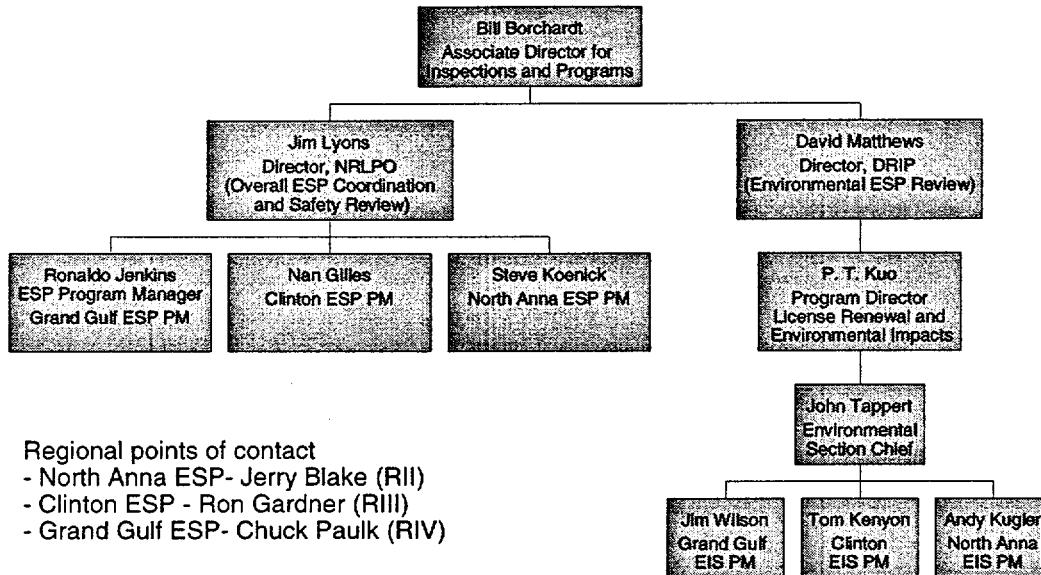
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Early Site Permit Meeting

- **NRC Organization Structure**
- **ESP Fee Structure**
- **QA Requirements for ESP Information**
- **ESP Issue Status Summaries**
- **IMC-2511A**
- **Timing of NRC public meetings**
- **NRC Review Standard for ESP applications**
- **NEI Timeline for NRC Review**

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NRC ESP Organization Structure



ESP Fee Structure

- Staff will arrange for project numbers for each potential applicant.
- Fee-recoverable TAC numbers will be arranged for each applicant to cover pre-application activities.
- Generic activities are non-fee recoverable.
- Applicant specific activities are fee recoverable.
Waivers can be sought in accordance with Part 170.
- Group meetings with the applicants will be split three ways and charged to the fee recoverable TAC numbers.

QA Requirements for ESP

- In the February 22, 2002 staff letter the staff requested the methodology for collecting ESP data prior to the filing of the application be provided to the staff. A review of the subject methodology would assist the staff in identifying any issues which should be addressed now.
- Based upon a preliminary review of the NEI response dated May 20, 2002 it is clear that anecdotal details regarding the ESP QA Program are not sufficient for the staff to identify potential issues.
- While it is recognized that there is no requirement for an NRC preapplication review of an Applicants's QA Plan, the staff believes that such a review would be beneficial to ensuring that the ESP review is completed in a timely manner.

ESP Issue Identification/Resolution Process

- The use of NEI's proposed ESP Issue Status Summaries (ISS) is an appropriate vehicle to document the areas of common understanding between NEI and the NRC Staff.
- However, the level of detail of the ISS between the Staff and the ESP Applicant may not be sufficient to capture all of the discussions (e.g., pre-application) necessary to ensure a successful ESP process.
- Therefore, consistent with the License Renewal Process Model, the staff will develop an issue tracking system to document the resolution of ESP Applicant and/or NRC Staff concerns through the end of the application period.

Inspection Manual Chapter (IMC)-2511A

- **Expectations regarding NRC interactions prior to ESP submittals.**
 - **Staff agrees with NEI that there is no requirement for pre-application activities with the applicant.**
 - **Staff will perform a pre-application meeting with the public.**
 - **Staff believes pre-application activities with the applicant make the process more efficient.**
- **IMC-2511A - Early Site Permit Inspection Activities**
 - **Staff will discuss with stakeholders the guiding principles that it will use to develop this IMC.**
 - **Staff does not plan to request public comment on drafts of IMC-2511A.**

Timing of NRC Public Meetings

- **NRC is working toward a public meeting near the announced ESP sites beginning in the Fall of 2002.**
- **The purpose of the meeting will be to explain to members of the public near the site the ESP process and to highlight areas of public involvement in the process.**
- **NRC will work with all its stakeholders to coordinate this effort.**

NEI Timeline for NRC Review

- **SECY-01-0188, "Future Licensing and Inspection Readiness Assessment," estimated 30 months for an ESP review**
 - **Assumed unlimited resources**
 - **1 application**
 - **Hearing of limited scope**
- **NRLPO developing an integrated schedule which incorporates license renewal and other critical work.**
- **NRC plans to address the NEI Timeline by September 2002.**

NRC Review Standard for ESP Applications

Goal: Collect in one document the applicable regulatory guidance

- **Provides a clearer definition of review scope to assist work planning efforts to enhance the quality and timeliness of ESP review.**
- **References to existing review criteria (i.e., applicable SRP sections, Branch Technical Positions, NUREGs etc.).**
- **Review Standard will be issued for comment by the end of the year.**



Entergy Nuclear

ENTERGY EARLY SITE PERMIT PROJECT

**NRC/NEI ESP Meeting
May 28, 2002
Two White Flint**

**George Zinke
Project Manager
Entergy Nuclear**

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AGENDA

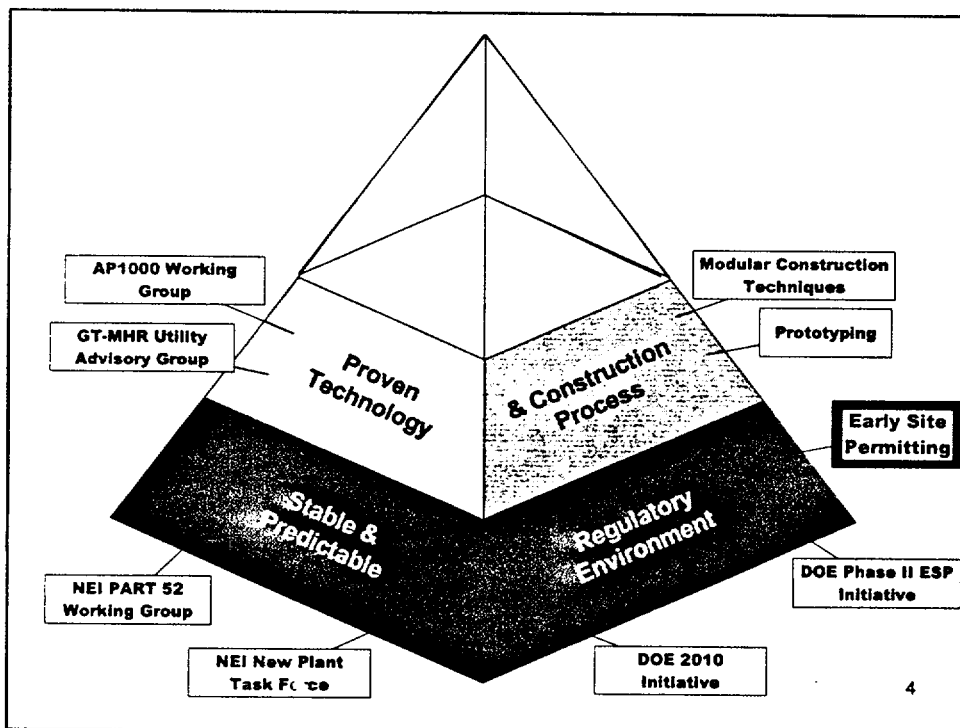
- Introduction
- Project Objectives
- Organization
- Approach
- Status / Schedule
- Miscellaneous Topics

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Project Objectives

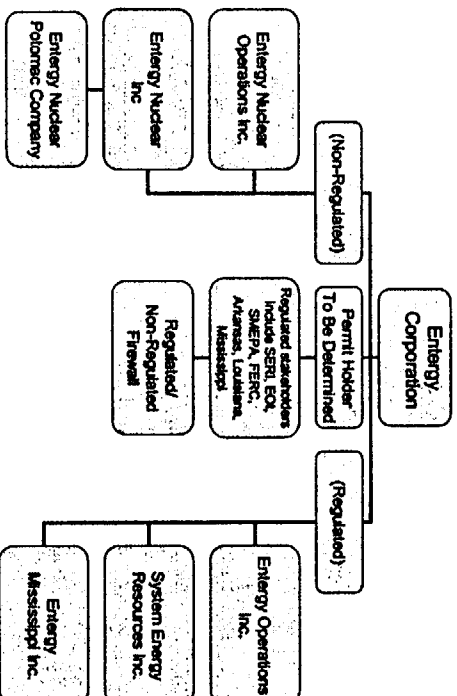
- Demonstrate the Part 52 Early Site Permit process
- Develop an efficient ESP development process which allows banking multiple sites
- Bank an ESP for GGNS site

3



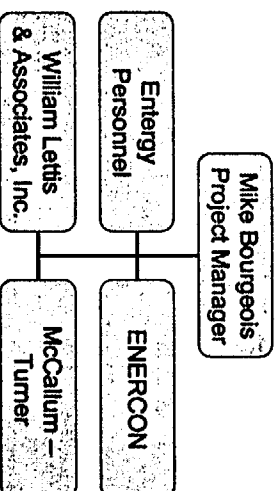
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Entergy Structure – GGNS Project

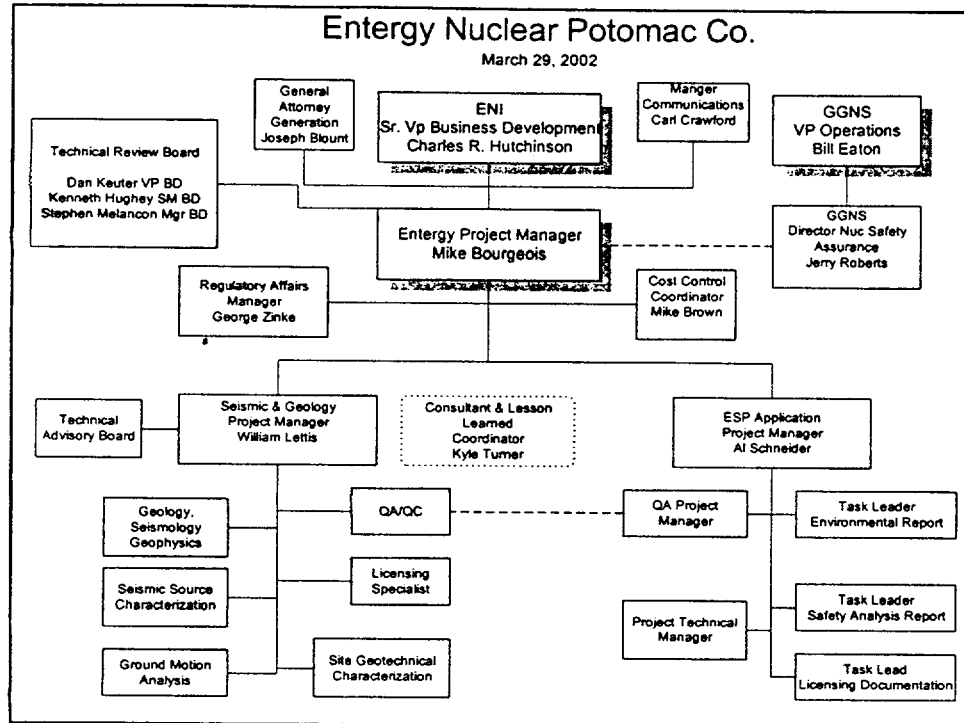


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ESP Project Organization



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Approach

- Process for selection of GGNS
- Communication Plan developed & implemented
- Developed major implementation plans
 - Project Plan
 - Project Quality Plan
 - Seismic Approach
- Generic Issue Resolution NRC/NEI

Approach

- Data Acquisition
- Gap Analysis
- Investigations / Analysis
- Application Preparation
 - Use of NRC regulations, SRP's, guidance
 - NEI Working Group
 - Information sharing
 - Consistent formats, level of detail
 - Peer reviews

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Status / Schedule

- | | |
|---------------------|------------------|
| • Site Selected | Complete |
| • Data Acquisition | Started |
| • Data Compilation | Late Summer '02 |
| • Draft Application | Early Spring '03 |
| • Submittal | Early Summer '03 |

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Miscellaneous Topics

- **Contacts:**

Senior Executive:
Charles R. Hutchinson
Entergy Nuclear
Sr VP, Business Development
1340 Echelon Parkway
Jackson, MS 39213
(601)368-5294

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ESP Project Manager:
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ESP Regulatory Manager
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Miscellaneous Topics

- **Communications**
- **Fees**
 - NRC initiated activities
 - Generic Meetings
 - Review Fee Reduction
- **ESP Data Sources**
 - Reliance on docketed information

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Exelon Generation Company
Early Site Permit

U.S. NRC Kick-Off Meeting
May 28, 2002
White Flint, Maryland

May 28, 2002

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Agenda

- ☐ Objectives
- ☐ Organization & Points of Contact
- ☐ Approach
- ☐ Pre-application ESP Schedule
- ☐ Interactions With The NRC
- ☐ Administrative Issues

May 28, 2002

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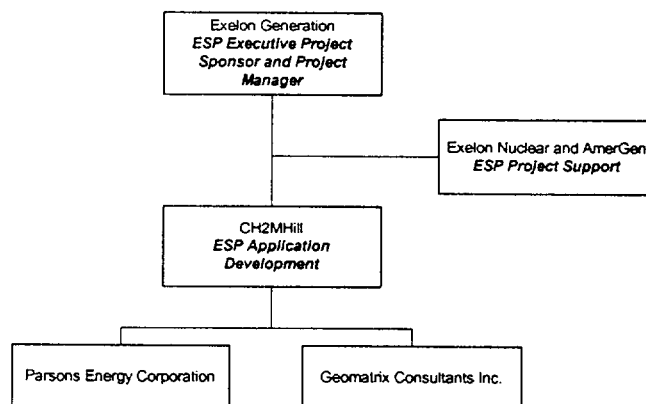
Objectives

- ☐ Demonstrate the Part 52, *Early Site Permit* (ESP) process
- ☐ Develop a quality Early Site Permit application
- ☐ Obtain an ESP for the Clinton, Illinois site
- ☐ Support an efficient NRC ESP review and approval process
- ☐ "Bank" ESP permit for future use

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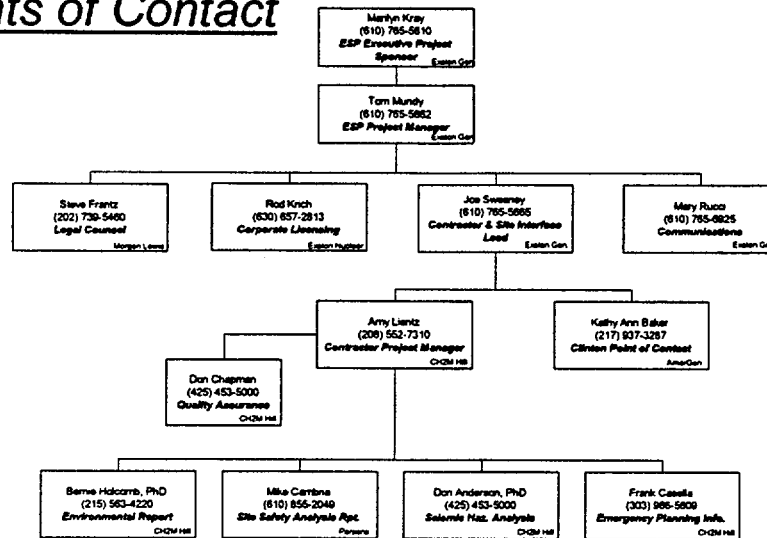
ESP Project Organization



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Points of Contact



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Approach

- ☐ Developed process to screen potential sites
- ☐ Communication Plan developed & being implemented
- ☐ Developed major implementation plans
 - o Project Plan
 - o Project Quality Plan
 - o Seismic Analysis Approach
- ☐ Generic issue resolution through NEI ESP Task Force

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Approach (Cont'd)

- ☐ Data acquisition
- ☐ Gap analysis
- ☐ Investigations / analysis
- ☐ Application preparation
 - o Use of NRC regulations and guidance
 - o NEI Task Force
 - Information sharing
 - Consistent formats, level of detail
 - Peer reviews

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Pre-application ESP Schedule

- ☐ Resources Selected - Complete
- ☐ Site Selected - Complete
- ☐ Prepare Site Safety
 - Analysis Report (SSAR) - Spring 2003
 - Site Characteristics - Summer 2002
 - Bounding PPE - Summer 2002
 - Seismic Work - Summer 2002
 - Description of Facility - Fall 2002
 - Field Work - Fall 2002
- ☐ Environmental Report (ER) - Spring 2003
 - Draft ER - Winter 2002
- ☐ Emergency Plan (EP) - Spring 2003
 - Draft EP Major Features - Winter 2002

**ESP
Submittal
June 2003**

May 28, 2002

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Interactions With The NRC

(In the period prior to application submittal)

- ☐ Monthly
 - o NEI Early Site Permit Task Force
 - Discussions to resolve generic ESP issues such as:
 - Quality expectations
 - Seismic methodology
- ☐ As requested by applicant
 - o Discuss application specific items, issues or concerns
- ☐ In coordination with NRC conducted public meetings

May 28, 2002

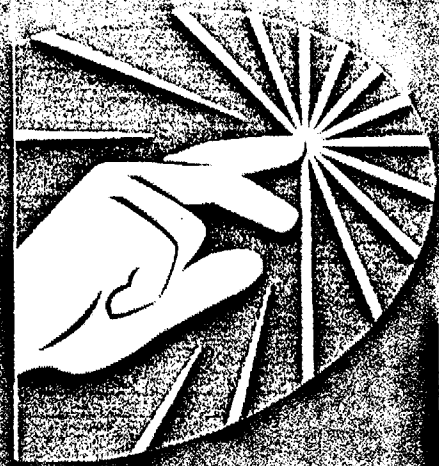
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Administrative Issues

- ☐ Primary Point-of-Contact – Exelon Licensing
 - o Rod Krich – Vice President, Licensing Projects
- ☐ Assignment of NRC docket number
- ☐ Fees
 - o Applicant requests
 - o Generic meetings
 - o Fee reduction for lead applications
- ☐ Billing for applicant specific interaction:
 - o Exelon Generation Company, LLC
 - 200 Exelon Way
 - KSA 3-E
 - Kennett Square, PA 19348
 - Attn: Mr. Joseph Sweeney

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Dominion

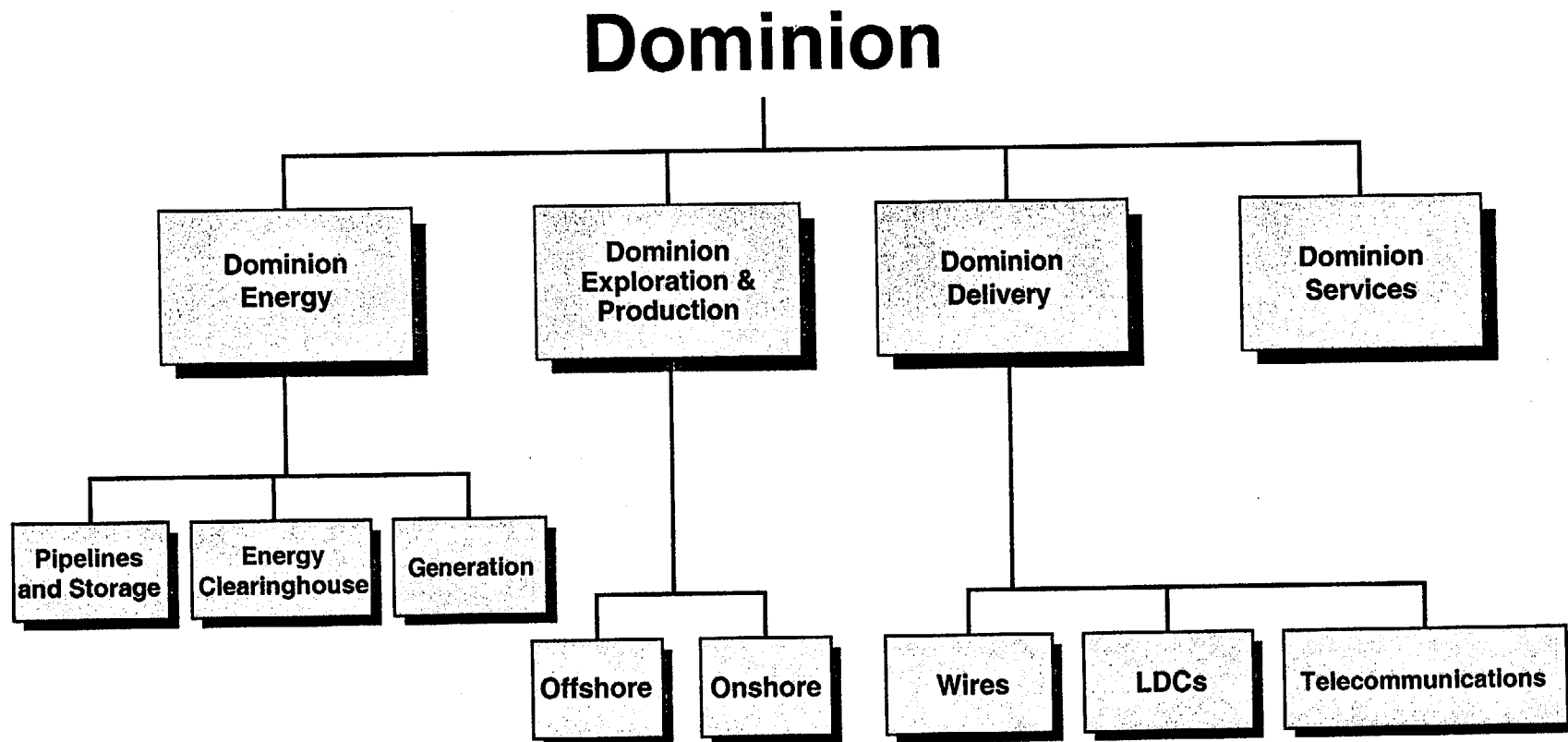
Presentation to NRC Staff
Early Site Permitting Activities

May 28, 2002

Agenda

- Introduction
- Organization
- Goals
- Site Selection
- Licensing Approach
- Schedule

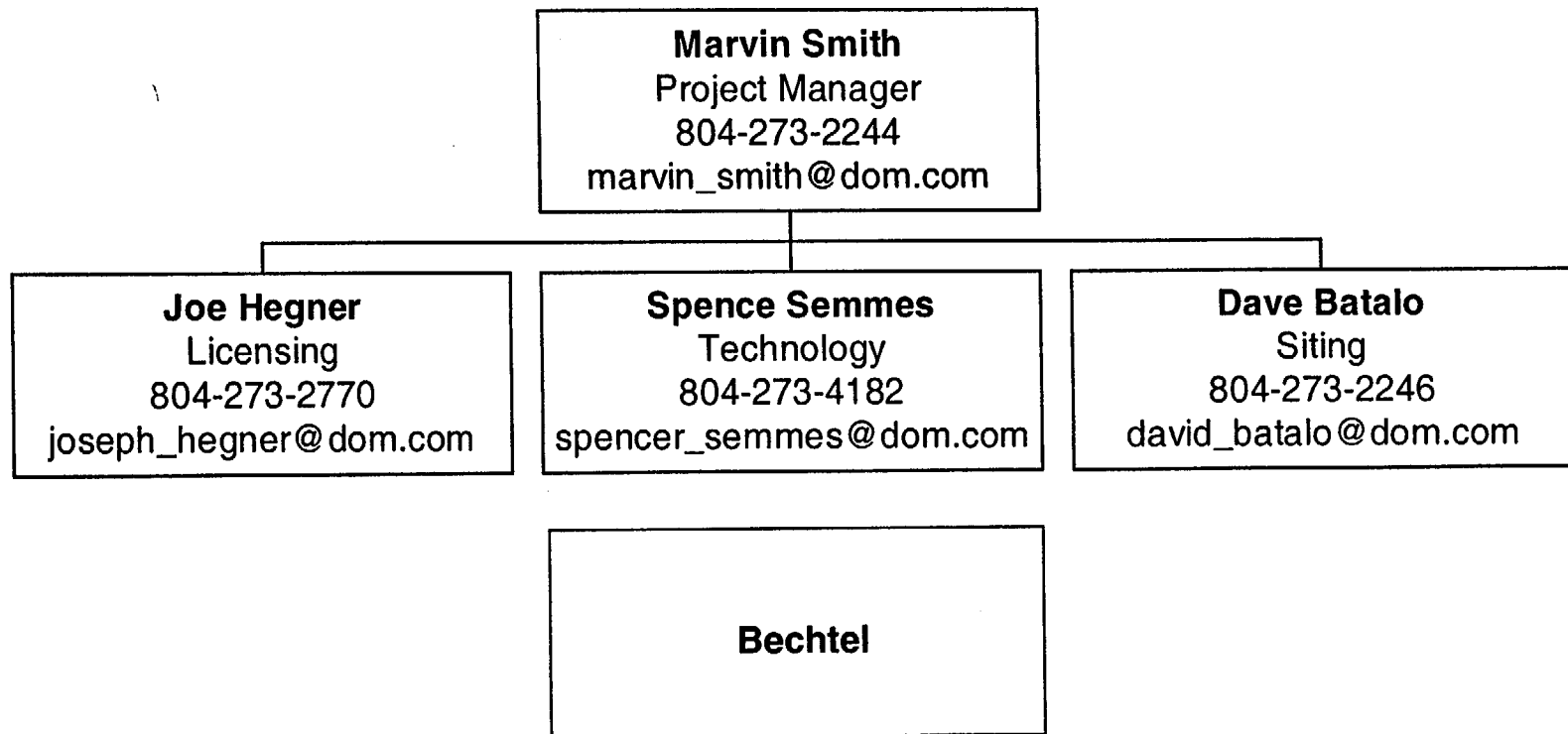
The Dominion Organization



Dominion ESP Project Objectives

- Established in June 2001
- Maintain the nuclear option
- Evaluate advanced reactor technologies
- Demonstrate the Part 52 licensing process

ESP Project Organization



ESP Project Accomplishments

- Completed Dominion sites feasibility study
- Selected North Anna as preferred ESP demonstration site
- Informed NRC of intent to apply for ESP
- Received DOE award (co-funding) to evaluate feasibility of commercial and federal sites
- Submitted proposal for DOE co-funding to support North Anna ESP application

Site Selection Process

- Advantages of existing site
 - Owned and controlled
 - Demonstrated acceptable in prior NRC licensing actions
 - Originally licensed for four units
 - Large amounts of data available
 - Transmission access
- Leverage NRC's familiarity with existing site and its licensed facilities
- Utilized comprehensive methodology
- Performed business assessment

Licensing Approach

- Utilize existing processes, programs, and resources within Dominion
- Utilize existing guidance, when possible
- Develop new or revised guidance
- Cooperate with NEI and other applicants
- Emphasize open communications
- Perform activities in a quality manner

NRC Guidance

- Substantial portions of existing guidance are difficult to effectively and efficiently utilize
 - Dated, and/or founded in the Part 50 process
 - Tends to assume the reactor technology is known
 - Intended as staff guidance, but used by industry
 - Written to support other licensing actions
- Applicants will work with staff to develop or revise guidance

NRC Fees

- 10 CFR 170.11 provides for fee exemptions
- 10 CFR 170.21 describes types of activities for which fees are not assessed, including
 - Assisting NRC in the development of regulatory guidance
 - Exchanging information to support regulatory improvements
- The first-wave ESP applicants will contribute to developing and refining guidance and demonstrate that an important element of the Part 52 process is workable
- Industry should benefit through reduced NRC fees for first-wave applicants

Communications

- Maintaining commonality with other announced ESP applicants
 - Improve efficiency and effectiveness
 - Reduce NRC review time
 - Coordinate through NEI
- Fostering early interaction with NRC staff
 - Senior management forum
 - Joint kick-off meeting
 - Common technical issues meetings
- Keeping stakeholders informed
 - Support NRC near-site public meetings at appropriate times

ESP Application Outline

- Site Safety Analysis Report
 - 10 CFR 52.17(a)(1)
 - 10 CFR 50.34 (a)(1)
 - 10 CFR 100
 - RG 1.70
- Environmental Report
 - 10 CFR 52.17(a)(2)
 - 10 CFR 51.45
 - 10 CFR 51.50
 - NUREG-1555
- Emergency Preparedness
 - 10 CFR 52.17(b)(1)
 - 10 CFR 52.17(b)(2)
 - NUREG-0654 (R1/S2)

ESP Application Milestones

ESP Application	Start Date	Complete Draft
QA Plan	May 2002	July 2002
SSAR	July 2002	July 2003
ER	July 2002	August 2003
EP (Major Features)	Sept. 2002	March 2003
Site Redress Plan	March 2003	June 2003
Major Issues		
Geology, Seismology, Geotechnical	June 2002	Submittal target date September 2003
PPEs	July 2002	
Accident Analysis	July 2002	
Geography and Demography	July 2002	
Meteorology	July 2002	
Hydrology	August 2002	
Uranium Fuel Cycle and Transportation Impacts	August 2002	
Cooling Water	October 2002	

EARLY SITE PERMIT PROJECTS

Quality Assurance

**NRC/NEI ESP Meeting
May 28, 2002
Two White Flint**

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Agenda

- Background
- Regulatory Issues
- Approach
- Example

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Background

- 01/10/02 Meeting NRC/NEI
- 02/22/02 letter, NRC to NEI
 - Referenced NRC IMC 2511 – LWR Pre-CP Inspection Program
 - IP 30001, IE/Utility Corporate Management Mtg
 - IP 35002, "NRR/IE/Utility Early QA Meeting
 - IP 35016, "Initial Pre-CP Quality Assurance Inspection"
 - "Pre-CP Phase is applicable to each nuclear power plant from the time the NRC receives formal notification of the utility's intentions to build a nuclear power plant, up to issuance of the construction permit"

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Background

- 04/24/02 Meeting NRC/NEI
- 05/20/02 NEI Response to NRC letter
 - No decision to "build"
 - 10CFR50.34(a)(7) not applicable to ESP process
 - Need for Quality Plan consistent with 10CFR50 Appendix B for portions of safety assessment (e.g. geology, hydrology, meteorology, seismology)

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Regulatory Issues

- Regulations do not address QA requirements for ESP
- Future reference of ESP in COL Application mandates reliable data
- 10CFR50.34(a)(7) not applicable to ESP process
- 10CFR50.9 applicable
- NRC Inspection Procedures not written for part 52 processes

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10 CFR Part 50, Appendix B

- Defines QA requirements for design, construction and operation of SSC
- Applies to all activities affected safety related functions of SSCs
 - designing – purchasing – testing
 - fabricating – handling – operating
 - shipping – storing – maintaining
 - cleaning – erecting – repairing
 - installing – inspecting – modifying

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Contrast with ESP

- Focus of ESP is on demonstrating suitability of a site for future design and construction activities
- ESP does not authorize construction or operation of any nuclear related SSC
- ESP may establish inputs for future design efforts

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Industry Views

- ESP applications must contain accurate data and present conclusions based on rigorous and reliable use of the data
- ESP applicants should identify the sources of all data used in the application and provide assurance that collection and use of the data has been subject to rigorous controls
- Processes consistent with relevant portions of 10CFR Part 50 Appendix B QA Requirements can provide assurance for those elements of the ESP that could affect future design of safety related SSC
- Alternatives to 10CFR Part 50 Appendix B QA Requirements can also provide assurance

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Industry Views

- Blanket use of existing operating plant QA Programs (and implementing procedures) problematic
 - Programs and procedures written specifically for activities affecting operating plant SSC's
 - Not relevant to siting studies for future plants
 - Organizations different
 - Intra-company restrictions
 - Regulatory Commitments inappropriate for new plants
 - Many referenced Regulatory Guides and Standards have been withdrawn
 - Not reviewed or approved for new plant activities

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Industry Approach to Quality in ESP Application Development

- Pre-Planned
 - Project Plan
 - Quality Plan
 - Identifies processes to be used to ensure reliable data, analyses, and conclusions
 - Can be implemented contractually
 - Procedures
- Data Quality and Pedigree
- Data Analysis Quality
- Oversight
- Records

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Example (Entergy)

- Entergy has determined that seismic, and selected geological, meteorological, and hydrological data may be used as input during future detailed design efforts of safety related SSCs
- Entergy is subjecting these areas of the ESP preparation to a process consistent with 10 CFR 50 Appendix B QA Program
- Entergy will establish appropriate quality requirements for all other elements of the ESP to assure an accurate basis for determining site suitability

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Example (Entergy)

- Interface with Entergy QA Program Manual
 - Interface practical & efficient
 - NOT industry commitment or model
 - Selected primary vendor qualified by Entergy to work under their own QA Plan and Procedures with experience doing so
 - Secondary vendors and subcontractors subject to primary vendor QA Plan
 - Future assessment of key elements of ESP Project

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Example (Entergy)

- Enercon QA Plan
 - **Corporate QA Program**

Organization	Document Control
Corrective Actions	QA Records
Audits	Instruct., Proc. & Draw.
 - **Corporate Standard Procedures**

Project Planning	QA Training
Calculation Control	Software Control
3 rd Party Design Review	

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Example (Entergy)

- Enercon QA Plan (cont)
 - **Project Planning Document**

• Scope	Roles & Responsibilities
• Project Records	Audit Schedule
 - **Project Instructions**
 - Hydrological and Meteorological Data Mgt
 - Compilation of Geosciences Database
 - Preliminary Evaluation of Uniform Hazard Spectra

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Example (Entergy)

- Example of Data Collection and Use - Hydrological Data for Probable Maximum Flood (PMF)
 - Data Sources
 - U.S. Weather Service (NOAA)
 - U.S. Army Corps of Engineers - Vicksburg Dist.
 - U.S. Geological Survey Watershed Databases
 - NPDES Outfall gauge height data from GGNS
 - Precipitation measurements from GGNS meteorological data tower

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Example (Entergy)

- Example of Data Collection and Use - Hydrological Data for PMF (cont)
 - Regulatory Guidance
 - NRC Regulatory Guide 1.70, Section 2.4.2
 - NRC Regulatory Guide 1.59, Design Basis Floods for Nuclear Power Plants
 - NRC Regulatory Guide 1.102, Flood Protection for Nuclear Power Plants

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Example (Entergy)

- Example of Data Collection and Use - Hydrological Data for PMF (cont)
 - Methodology
 - Define maximum expected flood levels on Mississippi River [Current conditions vs. history]
 - Define local probable maximum precipitation
 - Evaluate site storm water run-off and infiltration
 - Determine site water levels for potential safety related systems, structures, and components

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Example (Entergy)

- Example of Data Collection and Use - Hydrological Data for PMF (cont)
 - Application of Quality Requirements
 - Evaluate “reliability” of source data
 - Review data sets for completeness and reasonableness
 - Controls over calculations using data
 - Controls over calculation inputs
 - Independent review
 - Software quality assurance for computer codes

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Example (Entergy)

- Example of Data Collection and Use - Hydrological Data for PMF
 - Application of Quality Requirements (Cont)
 - Controls over results
 - Independent technical review
 - Audit/surveillance of process controls
 - Records and documentation maintained as QA records

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Example (Entergy)

- Conclusions
 - Appropriate Quality requirements will be applied to data acquisition and use
 - Results will be accurate and verifiable
 - Results can be used for future COL design activities

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