



# **CCNPP USEPR Site Layout and Subsurface Investigation**

NRC Meeting  
6/12/06

06/12/06

# Agenda

- Monday :
  - Meet NRC at UniStar site HQ
  - Presentations on site activities and QA/CAP programs
  - Safety briefing
  - Narrated van tour of site
  - NRC witness site activities
  - Conclude
  
- Tuesday :
  - All meet at site
  - Continue with site activity review/discussion
  - Meet reps from MD DNR
  - NRC exit observations

# Overview of Site Description and New Plant Layout Study

- CCNPP Site Description
- Site Layout Study
  - Evaluation categories:
    - Environmental
    - Land use and Zoning
    - Construction Considerations
    - Construction Facility Considerations
    - Switchyard Considerations
    - Security
    - Permanent Facility Considerations
    - Impact to Existing Facilities

# New Plant Layout Study

## – Go/no-go criteria

- Compliance with CWA 316 (a) & (b)
- Minimal impact to threatened and endangered species (tiger beetles, eagles)
- Impact to Transmission Corridors
- Impact to cemeteries
- Proximity to hazardous pipelines
- Unknown subsurface conditions

## Site Layout Study Results (cont.)

- Narrowed down to two options (north & south)
- Each option has three (3) variations of cooling towers
  - Forced draft
  - Natural draft
  - Hybrid
  - Selection criteria
    - Height, land use, plume, salt drift, power needs, cost, noise, etc.....
- BOP study is in progress

***South option selected as the base case for CCNPP COLA***

## Subsurface Investigation

- Purpose
  - Develop subsurface investigation locations for potential Units 3 and 4 power blocks at Calvert Cliffs, plus switchyard, proposed cooling tower configuration, heavy haul road, and intake and discharge piping locations.
  - Developed and implemented under Bechtel's QA Program

## Subsurface Investigation

- References
  - Basis for boring locations is derived from guidance obtained from relevant elements from:
    - Regulatory Guide 1.132
    - Regulatory Guide 1.138
    - Regulatory Guide 1.198
    - Regulatory Guide 1.70
    - NQA-1, 1994, Subpart 2.20

## Subsurface Investigation

- Documents Prepared
  - Calculation, “Basis for Subsurface Investigation”
  - Core Bore Location Drawings
  - Technical Specification
  - Detailed Procedures and Workplans



## Subsurface Investigation

- Subsurface Investigation Scope
  - Standard Penetration Tests (40' to 400')
  - Ground Water Observation Wells (50' or 100')
  - Cone Penetrometer Tests (50' or 100')
  - Field Electrical Resistivity (4 tests, spacing up to 300')
  - Borehole Geophysical Logging (400' and some 200')
  - Suspension P-S Velocity Logging (400', some 200')
  - Bulk Sampling from Test Pits (20 pits)
- Laboratory Testing of Selected Samples

## **Subsurface Investigation – QA Program**

**Site Characterization is performed under the Bechtel Power Corporation QA program**

- Subcontractors are also working under Bechtel's QA program**
- QA oversight is provided:**
  - at start of each work task**
  - periodically**

**UniStar observes site characterization activities to ensure quality meets UniStar expectations**

## **Subsurface Investigation – Corrective Action**

**Bechtel is responsible for corrective action program implementation:**

- Issues have been identified and corrective actions taken**