

# Applicants' Witness David Gaige, P.E.

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Summary  
Applicants' Exhibit 22



# Summary

- The Administrative Rules of South Dakota include 10 regulations applicable to the emissions resulting from the proposed Big Stone II unit.
- The major pre-construction permit for this type of facility is the Prevention of Significant Deterioration (PSD) permit, as administered by the South Dakota Department of Environment and Natural Resources (DENR).
- Because emissions of SO<sub>2</sub> and NO<sub>x</sub> will be reduced from Unit I, the net emission increase will be below the threshold emission rate requiring PSD Review.

# Summary (continued)

- **Pollutants reviewed under this permit included:**
  - Particulate Matter less than 10 microns (PM10)
  - Carbon Monoxide (CO)
  - Volatile Organic Compounds (VOC)
  - Sulfuric Acid Mist (SAM)
  - Fluorides (F)
- **The Best Available Control Technology (BACT) was determined for these pollutants.**
- **This establishes emission controls for the:**
  - Coal Fired Boilers
  - Cooling Towers
  - Diesel Engines
  - Material Handling System

# Summary (continued)

- Dispersion Modeling was performed to predict potential ambient concentrations of air pollutants. This determined the proposed plant would comply with:
  - ▣ National Ambient Air Quality Standards (NAAQS)
  - ▣ PSD Increments (Class I and Class II)
  - ▣ Air Quality Related Values (AQRVs)
- Other Permits and approvals include:
  - ▣ Operating Permit (Title V)
  - ▣ Acid Rain Rules
  - ▣ Clean Air Mercury Rule (CAMR)