

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 SO₂ and NO_x 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)