

24 MW SLUDGE- & WASTE WOOD-FIRED POWER PLANT

CLIENT: Snowflake White Mountain Power Company
LOCATION: Snowflake, Arizona

The scope of this project was as follows:

1. Evaluate existing used power plant equipment for installation in a paper mill sludge- and wood waste-fired power plant. Plant includes a 200,000 PPH, 850 psig, 900°F bubbling bed boiler and a 24 MW extraction and condensing turbine/generator.
2. Select all equipment.
3. Determine equipment required on the boiler to meet present DEQ & EPA requirements.
4. Complete engineering for power plant, sludge dewatering, and woodyard installation.
5. Project management.

The following engineering tasks were completed as part of this project:

- Power plant heat and mass balance evaluation
- Overall plant general arrangements and layouts
- Structural, including top hung boiler structure
- Boiler island design around B&W field erected boiler
- Air emission permitting
- Emission controls design
- Turbine island design
- Cooling tower installation design
- Sludge dewatering system design
- Design of all foundations
- Building design
- Developed all P&IDs
- Design of all electrical systems, including utility substation tie-ins
- Design of instrumentation and controls
- Piping design
- FM and insurance carrier requirements
- Drawing requirements and standards
- Budget controls
- Project scheduling
- Project management



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