

IPS Composting System

SIEMENS

Partnering enabled Rapid City to complete the third and final phase of its biosolids and municipal solid waste (MSW) composting facility on time and within budget.

The first phases of the solid waste program, the Material Recovery Facility and the two rotating bioreactors, were completed in 1997. Economic concerns prompted the City to put the final phase composting project on hold.

Interest was renewed in 1999 when Rapid City decided to upgrade its Water Reclamation Facility and discovered that biosolids land application would require purchasing an additional 1100 acres of land. Co-composting biosolids with MSW would achieve greater economic benefits, meet the recycling goals and preserve landfill space.

However, problems surfaced again in 2002 when the first round of bids for the composting facility exceeded the project budget.

Siemens presented an approach that the City and its engineer, Alliance of Architects and Engineers, ultimately accepted. The three entities formed a technical team and conducted an intense design workshop to achieve the project and budget objectives.

Within six months the design was complete, the project was successfully rebid and construction was underway.

The facility follows the bioreactors and is comprised of the active composting facility, aerated curing and a refining building with a screen and destoner. The compost product is used in land reclamation and landscaping projects.

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RAPID CITY, SOUTH DAKOTA

Owner: City of Rapid City

On Line: May 2003

Engineers: Alliance of Architects and Engineers

Capacity: 355 cubic yards per day

Processing: Municipal Solid Waste with Biosolids

Facility Size: 9 bays, each (feet) 10 wide x 8 high x 280 long for 29 days retention; 47,000 SF enclosed composting building; 20,000 SF compost aerated curing shelter for 30 days retention; refining building; 3 acres product storage

Odor Control: Chemical scrubber with 24,000 SF biofilter