

## Hazardous Waste Incineration Plant

Verantis recently designed and installed a rotary kiln and APC system for a hazardous waste incineration plant in Saudi Arabia.

The combustion system uses a rotary kiln for primary combustion of bulk and packaged solid waste, sludge, and liquid waste and a secondary combustor capable of burning liquid waste. The rotary kiln is rated for a maximum heat release of 62 MM Btu/h (65,370 MJ/h). The kiln is 13.5 meters long and has a total volume of 190 m<sup>3</sup> and equipped with a variable speed drive. Design conditions will allow the kiln to process from 8-60 metric tons of waste per 24-hour period, depending on the physical and chemical properties of the wastes.

Refractory Lined Quad Evaporative Cooler to reduce flue gas temperature from 1,250°C to 170°C.

Hydrated lime and activated carbon storage and injection into the gases exhausting the evaporative cooler/spray reactor to control dioxin and heavy metal emissions and to react with a portion of the acid gases

Eight Compartment Bag Filtration System with 1,792 filter bags (PTFE) and a total filtration area of 2,330m<sup>2</sup>.

Two-stage acid gas scrubber including a wetted approach, fixed throat quench chamber, followed by a spray tower packed bed absorber

Induced Draft Fans for up to 110,947 Am<sup>3</sup>/hr of Flue Gas that is exhausted through a 40 meter high stack.

