



# R.L. Sutton Water Reclamation Facility (WRF) is an Award-Winning Facility Serving Cobb County for Half a Century

- Built in 1971 and expanded several times.
- One of four WRFs in Cobb County Water System.
- Serves east Cobb County including parts of Smyrna and Marietta.
- Largest permitted treatment capacity in Cobb County at 50 million gallons/day (mgd).
- Facility used for incineration of biosolids from 1982 until 2016.
- During the wastewater treatment process, liquids are separated from solids. Those solids are then treated physically and chemically to further reduce the moisture content producing organic matter called "biosolids".



Since 2000, the Georgia Association of Water Professionals (GAWP) has recognized R.L. Sutton WRF with a **Gold or Platinum Award** for permit compliance nearly every year. GAWP has also named it **Plant of the Year in the Advanced Treatment** category twice during that time.





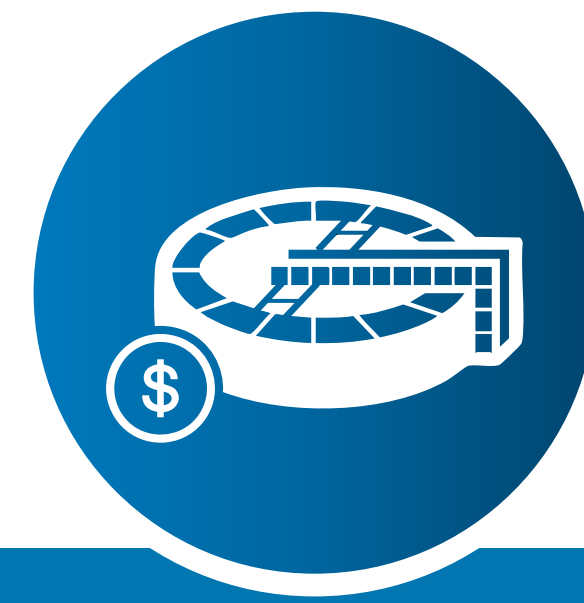


# Focus on Cost-Effective Operations Built into R.L. Sutton Water Reclamation Facility (WRF) Since the Beginning



**1971 - 1985**

- Originally treated 1.5 million gallons per day (mgd) & expanded to 10 mgd in 1973.
- Initially, biosolids dried in open beds, then hauled to landfill.
- Multiple hearth incinerator built for biosolids disposal and began operation in 1982.
- Treatment capacity expanded to 26.5 mgd.



**1991**

- Treatment capacity expanded to 40 mgd.
- Second incinerator added to accommodate additional capacity.
- Incinerators continued to be more cost-effective way to dispose of biosolids compared to landfilling.



**2008**

- Two fluidized bed incinerators installed to replace the older multiple hearth units.
- New incinerators improved operational efficiency while meeting more stringent air emission requirements.



**2016**

- U.S. EPA implements more stringent air emissions requirements.
- Incinerators taken out of service because landfilling biosolids was more cost-effective than upgrading incinerators to meet new emissions standards.

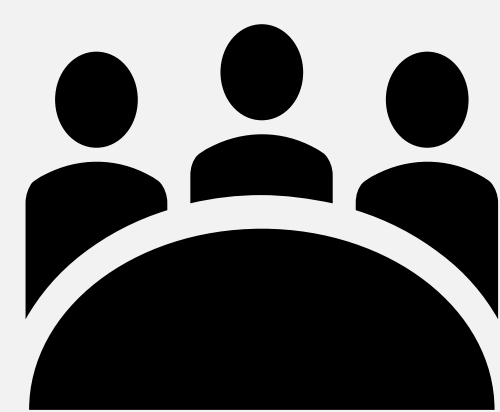


**2019/2020 - Today**

- Georgia landfill requirements changed, which reduced capacity for biosolids, forcing many utilities to haul biosolids to out of state landfills.
- CCWS considered various options for biosolids disposal.
- Initiated proposal request for design and construction of solids handling improvements.

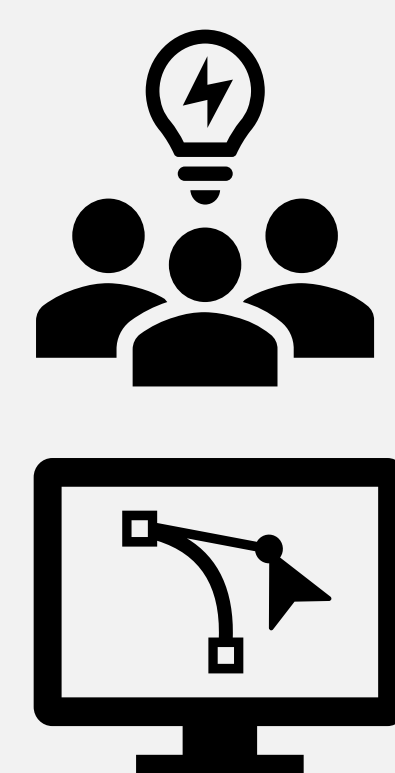
## Looking Ahead

**Summer 2025**



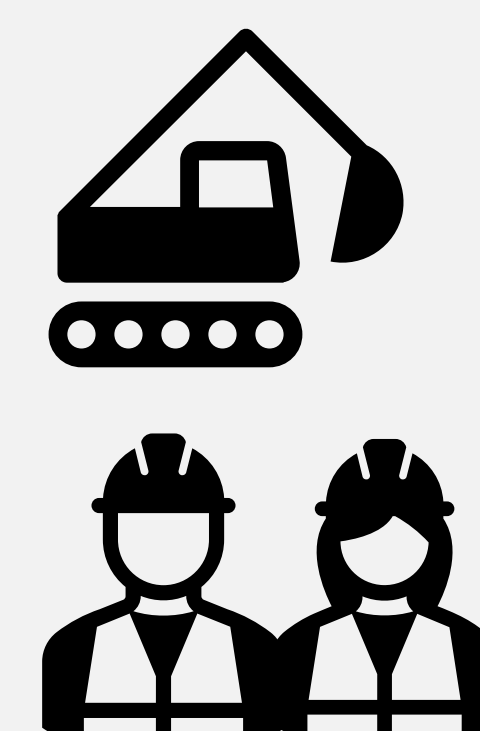
Select contractor for design-build of WRF improvements including upgrades to incinerators.

**Fall 2025**



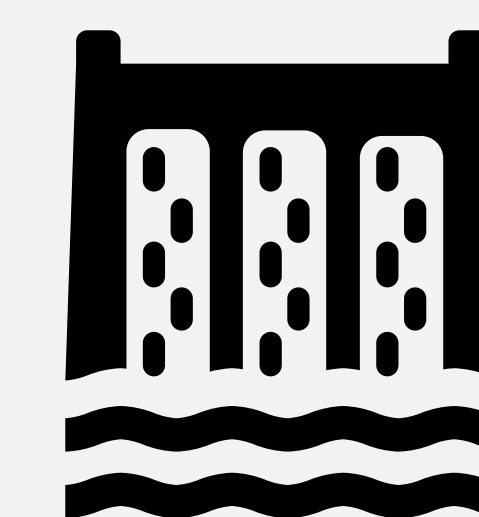
Start design of WRF improvements, which will be done in phases.

**Fall 2027**



Start construction of WRF improvements.

**Fall 2029**

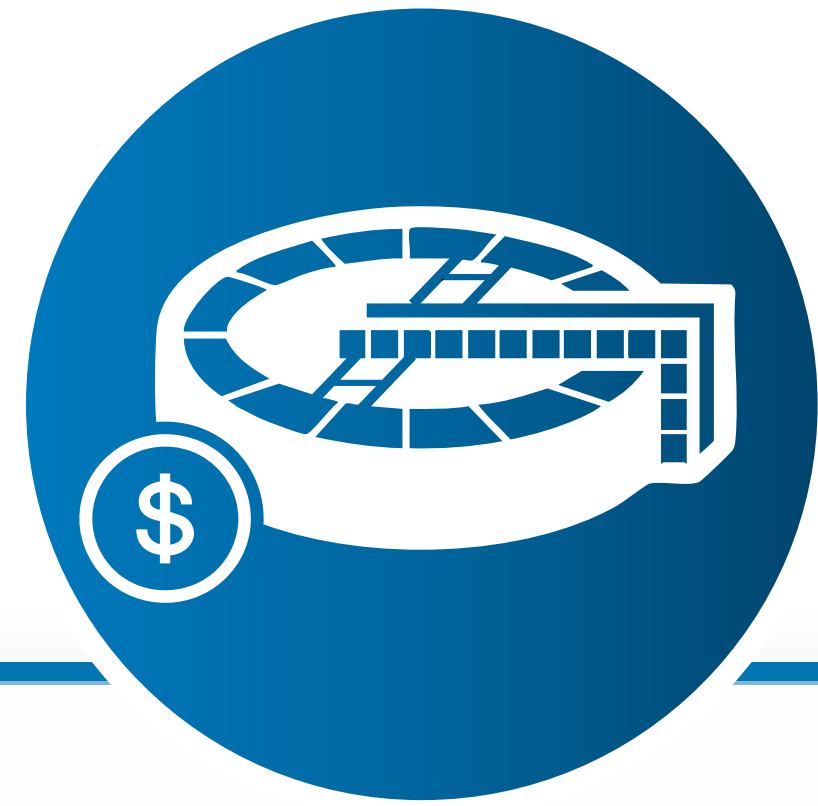


Complete WRF improvements and return incinerators to service.





# Considerations for Restarting Incinerators at R.L. Sutton Water Reclamation Facility (WRF)



## OPERATONAL

- **Proven Method:** Biosolids incinerated for nearly 35 years (1982-2016) as safe, reliable, and cost-effective disposal method.
- **Existing Infrastructure:** Incinerators and associated solids handling equipment already in place at R.L. Sutton WRF.
- **Solids Reduction:** Incineration reduces volume of biosolids by 95% and destroys all pathogens leaving an inert ash.
- Initial plan is to incinerate biosolids from R.L. Sutton WRF and South Cobb WRF, Cobb's two largest plants.
- Should an issue arise with landfiling, Cobb may temporarily incinerate biosolids from the two smaller plants until another landfill is available.



## FINANCIAL

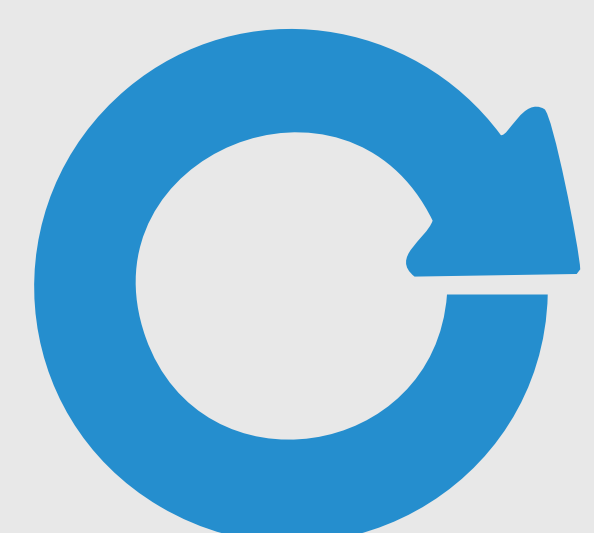
- **Landfill Costs Soaring:** Costs to haul and landfill biosolids out of state have quadrupled since 2016.
- **Landfill Uncertainty:** Limited space or refusal to accept biosolids at landfills creates uncertainty for budgeting.
- **Cost-Effective:** Incineration is the most cost-effective option considered.
- **10 Year Payback:** CCWS anticipates recouping the costs of the upgrade project in 10 years from savings in disposal costs.



## ENVIRONMENTAL

- **Strict Air Emissions:** Incinerators will be outfitted with newest technology ensuring air emissions meet or exceed U.S. Environmental Protection Agency (EPA) requirements.
- **Strict Oversight:** Permit will set parameters for operations, maintenance, and continuous monitoring of incinerators, plus third-party testing of emissions from incinerator stack.
- **Odorless:** Incineration produces no odor.
- **Landfill Relief:** Reduces landfill burden in Georgia and surrounding states.
- Reduces number of truck miles and emissions on Georgia roads. No increases to trucks on Atlanta Road from accepting biosolids from South Cobb WRF.

## Additional Consideration



The inert ash produced by incinerating biosolids has potential **beneficial reuse** as material for road construction or as landfill cover creating **operational, financial, and environmental opportunities** for CCWS.





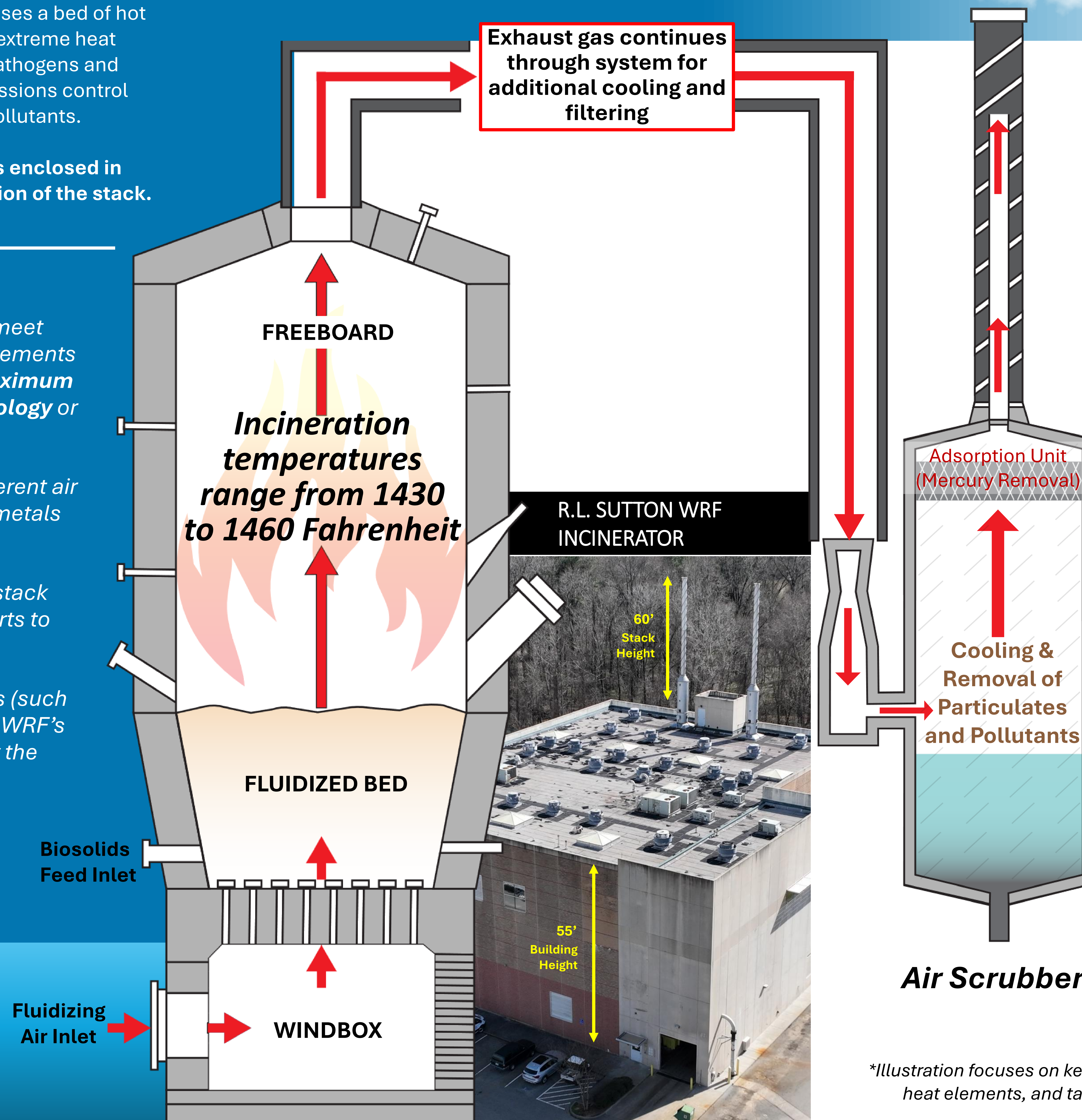
# Incineration Inside and Out at R.L. Sutton Water Reclamation Facility (WRF)

Exhaust Primarily Water Vapor, Air, & Carbon Dioxide

A **fluidized bed incinerator (FBI)** uses a bed of hot sand/granular material to transfer extreme heat directly to biosolids to eliminate pathogens and reduce organic matter to ash. Emissions control equipment scrubs and captures pollutants.

The entire incineration process is enclosed in a building except for the top portion of the stack.

- Upgraded incinerators will meet federal **Clean Air Act** requirements per Section 129 through **Maximum Achievable Control Technology** or **MACT** standards
- MACT regulates several different air pollutants including heavy metals and particulate matter.
- Permitting requires annual stack testing and monitoring reports to show compliance.
- Technology-based solutions (such as SPC modules) support a WRF's ability to remain at or below the MACT limits on emissions.



Incinerators will meet or exceed EPA's very aggressive emission standards, which are based on health risk assessments. The permitted air emissions limits are expected to be as follows:

Parameter	Limit
Particulate Matter	18 milligrams per dry standard cubic meter
Hydrogen Chloride	0.51 parts per million by dry volume
Carbon Monoxide	64 parts per million by dry volume
Dioxins/Furans	1.2 nanograms per dry standard cubic meter
Oxides of Nitrogen	150 parts per million by dry volume
Sulfur Dioxide	15 parts per million by dry volume
Cadmium	0.0016 mg per dry standard cubic meter
Mercury	0.037 mg per dry standard cubic meter
Lead	0.0074 mg per dry standard cubic meter

\*Illustration focuses on key components of system. Connective piping, heat elements, and tanks comprise the fully enclosed system.