8. LFG Treatment (English)

**Landfill Gas Treatment**

**Landfill Gas Treatment and Use Options**
- Flare Station: The facility at which the LFG is gathered and thermally destructed.
- Recovery: The utilization of the LFG for productive purposes; can include power generation, low/high BTU fuel.

**This Section Provides..**
- An outline the major components of an active LFG flare station.
- Understand the basic design, function, advantages, and disadvantages of utility and enclosed flares.

**Blower/Flare Station Major Components, cont.**
- Flare (utility and enclosed)
- Instrumentation and controls
- Electrical equipment/supply
- Condensate handling systems
- Air compressors

**Well Head Flares**
- Small flares that attach to the top of a well.
- Solar igniter, sparks every 30 minutes
- No automatic valve.
- Simple, easy to install and use.
- Good reliability.
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8. LFG Treatment (English)

Open vs. Enclosed Flares

Advantages of Utility (open) Flares
- EPA Best Demonstrated Technology (BDT)
- 98% destruction efficiency
- Relatively inexpensive
- Simplicity
- Low maintenance

Disadvantages of Utility (open) Flares
- Visible flame
- Wind turbulence flame-out
- Difficulty monitoring (combustion products)
- Operating temperature is not controlled

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8. LFG Treatment (English)

Open vs. Enclosed Flares

Advantages of Enclosed Flares
- 99% destruction efficiency
- Balance NOx and CO emissions
- No visible flame
- Can monitor/record operating temperature
- Exhaust can be compliance tested

Disadvantages of Enclosed Flares
- Cost
- More Complex
- Higher potential maintenance

Condensate Collection Systems at Flare

- Sumps
- Barometric traps
- Storage tanks

Condensate Treatment and Disposal

- Return to landfill
- Sewage treatment facility
- Hazardous waste treatment facility onsite
- Evaporation into the flare

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