

5.5.3 Flares

Flare systems are primarily used to handle large amounts of waste gas or vapors. Gas containing organics is continually fed to and discharged from a stack, with the combustion occurring near the top of the stack and characterized by a flame at the end of the stack. Although flares can be used to destroy organics in accordance with Subpart CC standards, such system can present safety problems including explosion and thermal-radiation hazards from the flame.

The heat content of the waste stream to be disposed is an important consideration in the design and operation of a flare. The gases can either support their own combustion or not. In general, a heating value greater than 7443 kJ/m³ can be flared successfully. If the heating value is below 7443 kJ/m³ it may be necessary to enrich the waste gas by injecting another gas with a higher heating value. Gases with a heating value as low as 2233 kJ/m³ have been flared but at a significant fuel demand. It is usually not feasible to flare a gas with a heating value below 3721 kJ/m³.