

What's that flame?

Flaring helps refineries run safely

A flare is a safety relief valve that a refinery uses to safely burn excess material, or hydrocarbons, which cannot be recovered or recycled. The excess hydrocarbons are combined with steam and safely burned in the flare, which is more environmentally sound than releasing the hydrocarbons directly into the atmosphere. Flaring is used sparingly, but is sometimes used if a facility shuts down, loses power, or has another technical issue.

Refineries are ready to flare whenever needed

Just like a pilot light on a hot water heater, the flare tip is always lit in case flaring is necessary. If a process interruption occurs, the refinery's systems may not be able to send the hydrocarbons through for further refining. In this case, the excess hydrocarbons are routed to the refinery flare systems to be safely burned.

Sometimes noise or smoke accompanies the flare

Though steam helps minimize the amount, there still may be some smoke during flaring. A rumbling noise can sometimes also be heard during flaring. This is due to mixing hydrocarbons, air, and steam. It is chemistry at work. While this may cause concern, it is a normal part of the process and is controlled and closely monitored by refinery operators and regulated by local, state, and federal agencies.

Did you know?

Flaring is essential to safety, but it also can produce a small amount of emissions. AFPM members have invested millions of dollars to test and deploy new technologies to reduce the need for flaring by recovering gases and recycling them internally. At some facilities, the gas that is captured can be rerouted to cogenerate steam and electricity to reduce the amount of energy that needs to be purchased.