Air Pollution Treatment Technologies

Sulfur Dioxide Gas Treatment Technologies	
SO_2 Scrubbers *There are several scrubbing techniques to remove SO_2 from gaseous by-products*	• **Wet Scrubbers.** Wet scrubbing removes SO_2 by dissolving it in a non-volatile liquid, like water. • **Dry Scrubbers.** Dry scrubbing can remove SO_2 by reacting it with lime and then collecting dry solids in a filter, like a baghouse. • **Condensation.** A condensation process can be used to convert SO_2 gas into a liquid by altering the system pressure or temperature and then removing the pollutant as a condensed liquid.
Nitrogen Gases Treatment Technologies	
NO_x Flue Gas Treatment	Flue gas treatment technologies remove nitrogen gases from gaseous by-products after the NO_x has been formed. It can use wet or dry techniques involving catalytic reactions, chemical adsorption, and/or irradiation.
Volatile Organic Compound (VOC) Emission Controls and Treatment Technologies	
Activated Carbon Adsorption	Activated carbon is one of several adsorbent mediums that can chemically and/or physically alter a VOC, thus removing it from the gas stream. Activated carbon filtration units can be added and adapted to many operations and can be installed at various stages of a process or operation, making them an appropriate control technology for any number of operations that generate VOCs. Activated carbon systems can remove VOCs from the air stream as well as from water.
Combustion/ Incineration	Incineration that assures complete combustion can effectively destroy VOCs; about 98% combustion efficiency is required. As a practical matter, it is extremely difficult to achieve complete combustion for most operations.