

Temporary On-Site Sorbent Injection

# SORB-N-JECT™ Technology

for

SO<sub>2</sub>, SO<sub>3</sub>, Hg, HCl, HF  
Emissions Mitigation



Answering questions about the use of powdered sorbents for emissions mitigation in electricity-generating facilities just got easier. Nol-Tec Systems now offers its proven Sorb-N-Ject™ Technology in a variety of portable, temporary/demonstrative designs. These systems are small but complete -- enabling on-site testing, fact finding, and adjustment prior to full-scale system design, installation and start-up.

## How It Works

Our portable configuration simulates full Sorb-N-Ject™ System functionality, but is designed on a smaller scale, usually contained in two or three units.

The first unit holds and feeds the sorbent using a vertical silo or bulk bag unloader.

The second unit is a semi-trailer (shown above) housing the components that make the portable system operate: blowers, compressors, heat exchanger, electrical controls, piping, etc.

The third unit contains a skid mounted sorbent milling system.

Nol-Tec sets-up the system, including piping to the injection sites. We also dismantle and remove it when the testing and/or temporary period is completed to your satisfaction.



You may have already determined the sorbent most effective for removing the pollutants from your emissions; however, if you're considering various materials, Sorb-N-Ject™ Technology and our portable system can aid your decision process with thorough & accurate testing.

## Typical Sorbent Materials

- Hydrated Lime
- Trona
- Sodium Bicarbonate
- Powdered Activated Carbon

Nol-Tec can conduct full performance and demonstration testing. Testing time ranges from a few days to several weeks. Temporary injection coverage, while the permanent system is being installed, typically runs 2 to 6 months.

## WHY Use a Temporary System?

- Test effectiveness of various sorbents
- Determine proper injection locations
- Verify quantity of chemical required
- Provide temporary sorbent injection while permanent system is being installed
- Provide temporary injection as needed, such as during the ozone season



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# SORB-N-JECT™ Technology

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## PORTABLE SYSTEM ARRANGEMENTS



### Vertical Silo

Nol-Tec's portable, vertical silo is installed on a customer-supplied concrete pad and filled with sorbent using a pressure differential, self-unloading truck. A separate tractor trailer contains the motive air blowers, compressor, air dryer, air surge tank, heat exchanger, electrical controls, and conveying line piping components to volumetrically discharge the materials as required. You provide the sorbent, electrical power, and injection lances on the duct.



The vertical silo is easily transported to site.



### Bulk Bag Unloader

Nol-Tec supplies a pre-assembled portable bulk bag unloader, along with the loss-in-weight feed system and all electrical controls needed to operate the system. A blower package, heat exchanger and conveying line components are shipped separately. You supply bagged sorbent, electrical power, and compressed air.

This system can be used in conjunction with the vertical silo: the vertical silo is the storage vessel and a small pneumatic system transfers sorbent from the silo into the hopper of the bulk bag unloader.



### Rotary Pin Mill System

Nol-Tec provides an in-line, blow through, variable speed mill with all required electrical controls. The skid mounted modular system, which includes a bypass line, sets up easily requiring only a level set down area, and electrical power source.

The mill reduces average particle size for trona and sodium bicarbonate which improves SO<sub>2</sub> and SO<sub>3</sub> pollutant removal efficiencies and reduces sorbent usage requirements. Demonstration testing allows quantitative analysis to determine cost effectiveness of sorbent milling for each specific application.



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