

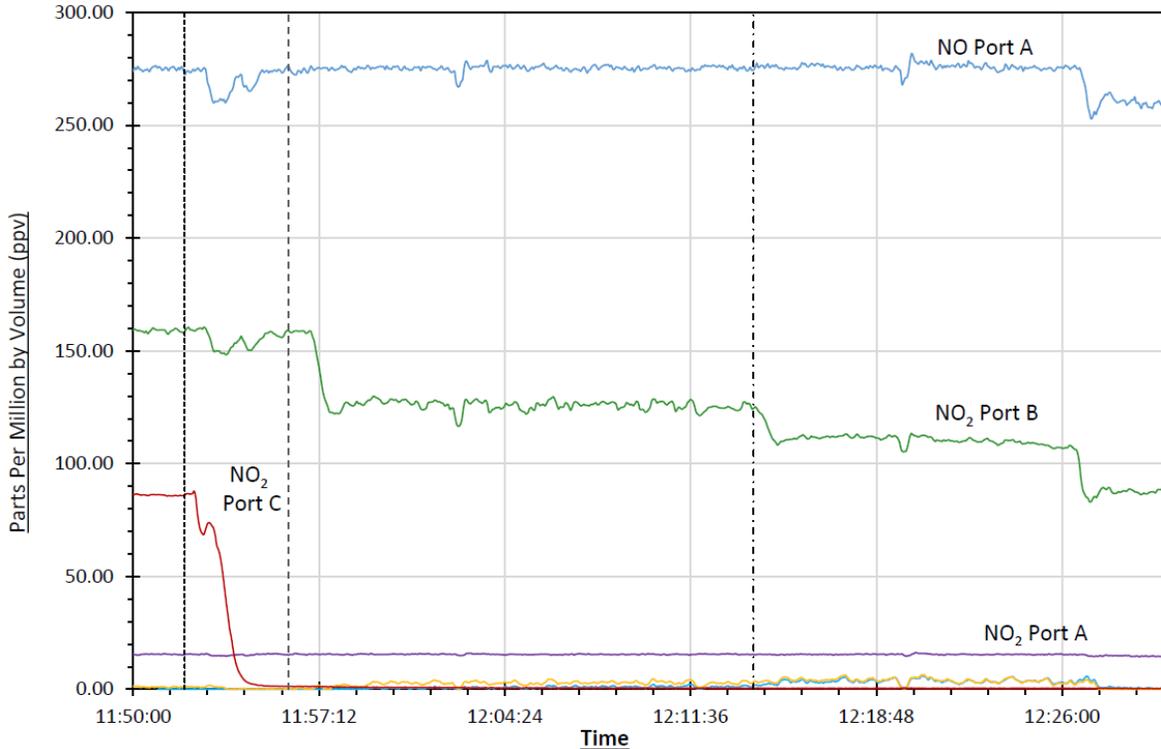


NOx and SO₂ Abatement Case Study

ApHinity® NOx and SO₂ Abatement Case Study Project Description

Market leading semiconductor tool manufacturer independently tests NOx and SO₂ emission abatement utilizing ApHinity NOx treatment technology resulting in +99% reduction in NOx and SO₂ emissions. Equipment and chemicals used: ApHinity CDE10 gas phase chlorine dioxide generator combined with organic catalyst absorption accelerator chemistry dosed into single stage packed bed scrubber.

Test Results



NOx and SO₂ Abatement Performance Chart

	DRE CO ₂	DRE CO	DRE NO	DRE NO ₂	DRE NO _x	DRE SF ₆	DRE SO ₂
Port A to Port B	3.9%	1.8%	100.0%	-536.2%	65.8%	4.3%	100.0%
Port B to Port C	5.7%	2.3%	NA	100.0%	100.0%	2.0%	NA
Port A to Port C	9.4%	4.0%	100.0%	100.0%	100.0%	6.1%	100.0%

Test Result Highlights

- Scrubber water pH 9.0-9.2 (although determined process effective pH range to be 4.0-12.0)
- Airflow 70-100 CFM, Temperature 80°F, RH 55%
- Total Inlet NO_x concentration 300 ppmv, Final scrubber outlet NO_x concentration <1 ppmv
- SO₂ DRE 100%
- All testing performed using FTIR spectroscopy

The information in this bulletin is believed to be accurate, but all recommendations are made without warranty, since the conditions of use are beyond the manufacturer's control. The listed properties are illustrative only, and not product specifications. The manufacturer disclaims any liability in connection with the use of the information, and does not warrant against infringement by reason of the use of any of its products in combination with other materials or in any process.