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Air Quality Measurements for Compliance & Process Analysis

Comprehensive Solutions for Complex Air Quality Compliance

Since 1989, SAS has provided air emissions measurement, air permitting, air dispersion modeling, air pollution control engineering and design, and regulatory consulting to industrial, commercial, state, local, and federal clients. SAS delivers a comprehensive analysis of complex air quality issues.



SAS assists their clients in preparing and troubleshooting process and air pollution control equipment operation in preparation for the compliance test. Permit limits are often predicated on results of compliance tests. It is therefore imperative to optimize process operating parameters while still meeting all permitted emission limits.

SAS assists their clients in optimizing operations to achieve maximum permitted process throughputs. For example, before a compliance test we will evaluate industrial boiler performance against original design parameters and good combustion practices. In some cases it is advantageous to conduct parametric testing for combustion and pollution control systems optimization. SAS can do this for our clients without having to hire expensive engineering consultants.

For routine compliance testing, we understand our clients' permitting needs. As companies continue to address air quality issues associated with the Clean Air Act, SAS is poised to provide complete air testing and engineering services to meet specific needs with emphasis on data quality and professional service.

Proven Air Measurement Experience

SAS leadership in criteria pollutant and hazardous air pollutant measurements is a result of over 45 combined years of experience in performing air emission measurements for industrial, commercial and government clients. Our clients include Shaw Industries, Black & Veatch, duPont, _____.

SAS employs state-of-the-art sampling and analytical equipment to measure organic and TRS emissions, including gas chromatographs (GC) and FTIR technologies.

- Quantify multiple compounds simultaneously
- Fast results (within minutes)
- Continuous monitoring

Major source testing services include:

- CEMS certification and RATA (Parts 60 and 75)
- PM, PM10/2.5 (filterable), CPM
- HCl/HF (IC on-site or next-day results)
- Hg (OHM or M30B with on-site analytical)
- Speciated metals
- SO3 with on-site analytical
- Field GC (VOC, TRS)
- Dioxins/furans, SVOC, speciated VOC

- SORBENT
INJECTION TESTING**
- SCR TUNING SERVICES**
- WFGD/DFGD**
- FFBH/ESP**
- MULTI-POLLUTANT
CONTROL TRIALS**
- RTOs/TOs**
- PROCESS VENTS**



Mobile Air Quality Test Lab

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ii Acronyms

acfm	actual cubic feet per minute	NESHAP	National Emission Standards for Hazardous Air Pollutants
ASTM	American Society for Testing and Materials	NIOSH	National Institute of Occupational Safety and Health
Btu	British Thermal Unit	NO ₂	nitrogen dioxide
CAA	Clean Air Act	NO	nitrogen oxide
CAAA	Clean Air Act Amendments of 1990	NO _x	oxides of nitrogen
CEM	Continuous Emissions Monitor	NSPS	New Source Performance Standards
CO	carbon monoxide	ORNL	Oak Ridge National Laboratory
CO ₂	carbon dioxide	PIC	products of incomplete combustion
CPM	condensable particulate matter	POHC	principle organic hydrocarbons
Cr ⁺⁶	hexavalent chromium	PM	particulate matter
DOE	Department of Energy	PM _{≤2.5}	PM equal to or less than 5 μm aerodynamic diameter
DRE	destruction and removal efficiency	PSD	Prevention of Significant Deterioration
EPA	U.S. Environmental Protection Agency	RCRA	Resource Conservation and Recovery Act
GC	gas chromatography	SARA	Superfund Amendments and Reauthorization Act
GWh	gigawatt-hour	SAS	Southern Air Solutions
HAP	hazardous air pollutant	SIP	State Implementation Plan
HCl	hydrogen chloride	SO ₂	sulfur dioxide
HF	hydrogen fluoride	TBtu	trillion Btu
ID	induced draft	TRS	total reduced sulfur
lb	pound	TSCA	Toxic Substances Control Act
LDAR	Leak Detection and Repair	TVA	Tennessee Valley Authority
MATS	Mercury and Air Toxics Standard	VOC	volatile organic compounds
MMBtu	million Btu	VOST	volatile organic sampling train
N ₂	nitrous oxide	μm	micrometer or micron

1.0 Introduction

Southern Air Solutions Corporation (SAS) offers our clients the quality and professionalism of a large environmental engineering & consulting firm with the efficiency, flexibility and responsiveness of an independent small engineering business. SAS personnel have more than 70 years of combined experience exclusively providing air quality services to the energy, petroleum and chemical industries.

SAS works exclusively in the air quality environmental field. Our background in air emissions measurement, air pollution control system evaluation and design, air permitting, air dispersion modeling and regulatory consulting gives us a comprehensive understanding of complex air quality issues and how best to provide solutions.

Stack testing is used not only for compliance, but in most cases SAS utilizes its testing capabilities as a vital diagnostic tool for evaluating air pollution control problems. Whenever problems arise you need an organization with the experience and capabilities to solve them. SAS offers cost competitive compliance testing. But we also pride ourselves on being a solutions oriented company. Years of experience in the power generation and chemical industries have enabled us to provide services for diagnosing and solving complex air pollution control problems.

As companies continue to address air quality issues associated with the Clean Air Act (especially the new Utility MATS and newly proposed ICI Boilers and Process Heaters NESHAP regulations), SAS is poised to provide complete air testing and engineering services to solve your air pollution control and regulatory compliance needs.

SAS provides comprehensive source testing, air permitting, environmental engineering and field laboratory services to industrial clients. These services include quality on-site analytical capabilities for ASTM D6784-02 (Ontario Hydro Method or OHM), Method 30B sorbent traps and ion chromatography for HCl/HF. Results are available next day for evaluation and optimization of air pollution control equipment. This option can yield significant savings of time

and money over conventional off-site laboratory services and provides maximum flexibility for troubleshooting complex problems.

Our staff is comprised of chemical and civil engineers and air pollution specialists with a depth of experience in all areas of air quality services. All SAS engineers have worked in industrial plants and have extensive “hands-on” experience in examining production processes from the perspective of emissions and wastes. Our industrial experience has been nurtured and developed by providing services to clients in the electric utility, iron and steel, printing, petroleum refining, petrochemicals, pharmaceutical, surface coating, synthetic organic chemicals, synthetic rubber, and other chemical process industries. The complete range of services offered by SAS includes:

- Source emissions testing
- Multi-pollutant control full-scale field trials
- Air pollution control equipment evaluation, design and startup/commissioning
- Ambient air monitoring
- Air permitting and regulatory compliance support
- Emissions inventory programs
- Fugitive emissions programs
- Indoor air quality evaluations.

This Statement of Qualifications specifically focuses on source emissions testing services provided by SAS. The types of air testing services routinely offered are discussed in Section 2.0. Section 3.0 contains project briefs as well as a client list, and Section 4.0 contains resumes of key personnel.