

## **Phase I Assessments/Transaction Screens**

SAS provides *Transaction Screens and Phase I Environmental Site Assessments (ESA)* for clients involved in real property transfers. These services are typically required by lending institutions when financing commercial, industrial, or agricultural property. The *Transaction Screen or Phase I ESA* establishes the Innocent Landowner Defense, whereby prospective buyers have the opportunity to determine whether recognized environmental conditions (RECs) exist at the property. This investigation involves “appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice.”

- All Phase I Environmental Site Assessments are conducted in accordance with the widely accepted ASTM E1527-00 Standard.
- The research technicians at SAS have performed hundreds of Phase I assessments and have over 50 years of collective experience.
- SAS personnel are experienced in conducting multiple parcel site assessments and corridor studies for projects such as Department of Transportation highway projects and Ohio VAP Phase I Property Assessments.
- We understand the complexity and the stringent time schedules that often must be accommodated to successfully complete these projects.

## **Facility Audits/Due Diligence**

SAS provides Facility Compliance Audits, TSDf Audits, and Due Diligence Assessments for clients. The facility audits focus on compliance issues related to the facility’s permits and physical operations, SPCC plans, and waste disposal. SAS performs audits on TSDf facilities on behalf of our clients focusing on permit compliance and environmental liability. The SAS Audit Team comprises members with expertise in specific aspects such as RCRA Part B permits, wastewater treatment, storm water management, training, health and safety, and soil and groundwater contamination.

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## **Phase II Assessments**

A *Phase II Environmental Site Assessment (ESA)* may be necessary when either possible or actual subsurface contamination has been suspected or identified at a property.

- *The Phase II ESA* will generally be composed of the following:
  - Development of a work plan identifying potential chemicals of concern and investigation objectives,
  - Surface and/or subsurface sampling and analysis of soils and water using the following methods to investigate, delineate, and characterize contamination:
    - Soil sampling via direct push systems or mechanical drill rigs,
    - Installation of monitoring wells via direct push systems or mechanical drill rigs, and
    - Groundwater sampling from monitoring wells,
    - Data evaluation is performed by comparing the concentrations of the chemicals of concern to an applicable regulatory action level,
    - Documentation is prepared detailing methodologies used, results, conclusions, and recommendations, and
    - Communicating (as appropriate) with the applicable regulatory agency at the local, state, and federal level.
  
- Our experience in developing and implementing subsurface investigations means you will be provided with the information you need to evaluate risk and make informed business decisions.

## **Risk Assessment and Modeling**

*Risk Assessment and modeling* techniques are used to realistically evaluate the potential for exposure to residual chemicals of concern in soil, groundwater, surface water, sediments, and air. The risk assessment approach focuses on identifying reasonable pathways and receptors and results in:

- Developing site-specific or chemical specific clean-up levels,
- Identifying critical pathways that may require further action, and/or
- Evaluating risk for scenarios other than those assumed in developing generic standards.

### **SAS' Experience Includes:**

- Risk assessments under a variety of regulatory programs including the Ohio VAP, BUSTR, and RCRA.

- Completion of over twenty risk assessments that have been submitted to BUSTR. The majority of these have either received No Further Action (NFAs) or have NFAs pending.
- Completion of various risk assessment and modeling projects in support of 14 Ohio VAP projects.
- Risk assessment as part of the due diligence process for commercial/industrial properties.
- Groundwater modeling for optimizing remediation alternatives.

### **Remediation and Landfill Services**

If it is determined during the Phase II ESA that soil, groundwater, or other media contain hazardous substances and/or petroleum products at concentrations above allowable regulatory levels, then remediation services may be necessary. SAS is experienced in both ex-situ and in-situ remediation alternatives. These services can include any or all of the following:

SAS has designed, implemented, and successfully remediated several sites using one or a combination of the following technologies:

- Soil Vapor Extraction
- Air Sparging
- Bioremediation
- Groundwater Pump and Treatment
- Separate Phase Product Recovery
- Soil Removal
- Remedial Technologies Evaluation
- Pilot Testing
- System Design
- System Installation
- Operation & Maintenance

SAS' remediation staff is also experienced in the design and maintenance of landfill leachate and methane gas collection systems. SAS has also been retained to modify and upgrade several leachate and gas systems to improve their effectiveness, thereby decreasing operational costs.

SAS personnel are thoroughly familiar with handling turnkey projects as well as any component of the remediation process. SAS regularly communicates with various regulatory agencies regarding permitting, reporting, and final site closure documentation.

### **Regulatory**

#### **Regulatory Expertise Ensures Compliance**

Effective navigation through the regulatory system can provide significant savings to the client. Those savings gained by using SAS are realized in the following ways:

- Cost avoidance – successful negotiation of reduced or eliminated assessment and remediation requirements on contaminated facilities,
- Penalty avoidance – compliance to avoid penalties,
- Grant applications – preparation of applications for financial assistance under Brownfields Redevelopment Grants, Clean Ohio Revitalization Program, and the Clean Ohio Assistance Fund, and
- Petroleum reimbursement funds – active resolution of reimbursement issues and applications to ensure the client reimbursement.

SAS assists our clients through the sea of regulatory compliance on a daily basis. Our staff effectively helps the client solve their environmental problems allowing the client to focus on their business. The services our regulatory staff provides includes:

- Negotiating risk-based closures,
- Management of application process to obtain permits for air, stormwater, waste water, and groundwater discharges and permits to install/operate,
- Timely report submittal with an emphasis on administrative and technical completeness,
- Negotiating remediation requirements, action levels, and Agency deadline requirements:
- Natural attenuation evaluations,
- Water, soil, and air treatment specifications, and
- Computer modeling,
- Inspections and site audits as required by Agency,
- Preparation of Spill Prevention, Control, and Countermeasure (SPCC) Plans,
- Relationship development with regulatory agencies, and
- Litigation support.

### **Regulatory Programs**

- SPCC
- Ohio VAP
- Clean Ohio
- RCRA
- NPDES
- UST Closure

### **Brownfield Services**

**Brownfields** – Real property (mostly industrial or commercial in nature) where the expansion, redevelopment, or reuse is complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Through interfacing with various regulatory agencies and their established programs, the Brownfield can be turned into a viable economic asset.

**Types of Services Provided by SAS under the Brownfield Program:**

- General Consulting by Professional Geologist or Ohio Certified Professional (CP)
- Phase I and Phase II Property Assessments and Risk Assessments
- Interaction with Ohio EPA to Obtain *Covenant Not to Sue (CNS)* under Ohio VAP
- Issuance of NFA Letters under the Ohio VAP

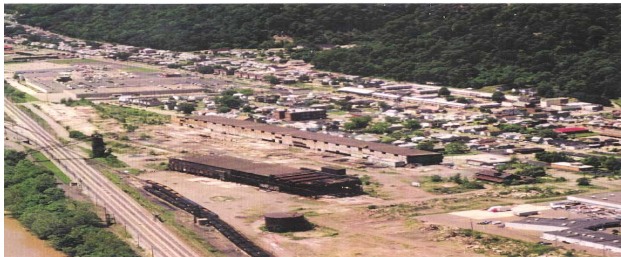
**SAS has worked on more than 30 Ohio Voluntary Action Program projects, including...**

- *9 No Further Action Letters,*
- *2 Urban Setting Designations, and*
- *5 Ohio EPA Covenants Not to Sue (CNS)*

**Specific Brownfield Projects include:**

- Industrial Laundry/Dry Cleaning Facility (Covenant Issued)
- Former Thermometer Assembly Facility (CP Services)
- Former Pressed Steel Facility (Covenant Issued)
- Former Steel Mill (Covenant Issued)
- Metal Forming Company
- Bulk Fuel Terminal

**SAS partners with the EPA's Brownfields Initiative to achieve the USEPA's Brownfield Mission...** "to empower States, communities, and other stakeholders in economic development to work together in a timely manner to assess, safely clean up, and sustainably reuse brownfields."



**Brownfield before**



**Brownfield after**