



Subsurface Vapor Intrusion to Indoor Air

ALS has the analytical expertise and project management capabilities to support a variety of soil vapor intrusion and indoor air investigations. Subsurface vapor intrusion has become a topic of particular interest due to factors including:

- Increased recognition of vapor intrusion as an important exposure pathway and greater emphasis on the remediation of contaminated sites that introduce harmful substances into indoor air
- The recent publication of key state and federal Vapor intrusion Guidance documents.

Our air quality laboratory acknowledges the sensitive nature of these projects and takes every effort to ensure each individual project is handled properly. With meticulous attention to detail, our laboratory will review, approve, and provide information for your Quality Assurance Project Plan (QAPP) and/or site specific work plan.



Qualifications

ALS project managers have years of experience assisting clients with indoor air and soil vapor investigations. Laboratory personnel are familiar with the industry regulations and challenges our clients face and understand the issues that often govern such investigations. ALS locations hold accreditations and certifications relevant to their work and area of operation. Participation in NELAP, CALA, AIHA-LAP, DOD, various state and other programs is location-specific. Refer to Scopes of Accreditation for details relevant to each ALS location.

SERVICE

- On-time data delivery and rapid TAT
- Experienced staff with expertise
- Available after-hours and weekends

VALUE

- Competitive pricing
- High-quality sampling equipment

RELIABILITY

- Technical experts that can answer your most difficult questions
- A real focus on quality and process control with a rigorous QA/QC program

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Scan the QR Code with your smartphone or search for "ALS Environmental" on YouTube.

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Sampling Equipment

With an inventory of over 4,000 canisters of various sizes, along with flow controllers, critical orifice assemblies, duplicate tees, Teflon tubing, and Swagelok fittings, the laboratory offers appropriate sampling media for any site specific vapor intrusion investigation. Even in cases of short notice, ALS has the capacity to respond to most analytical needs rapidly. The laboratory offers cost effective, batch-certified Summa canisters for soil gas surveys; these canisters can be fit with critical orifices for time integrated sampling. ALS also offers individually-certified equipment (canisters, precisely calibrated flow controllers, and analog pressure gauges) when indoor air evaluations require ultra low level analysis in the part per trillion range (pptV).

One key practice that our laboratory follows is the segregation of canisters and associated equipment into Ambient (“low”) level and Source (“higher”) level distinctions. Our ambient equipment is used only for low level (e.g. indoor air, ambient air) projects—never for soil vapor sampling, SVE system monitoring, or other higher level applications. This practice adds another layer of quality assurance and peace of mind to indoor air sampling projects where low reporting limits are needed.

Method and Procedures

Most current guidance documents recommend the use of EPA Methods TO-15 or TO-17 for the analysis of volatile organic compounds (VOCs) in vapor intrusion samples. ALS will work closely with you to set up your project prior to sampling, such that all your data quality objectives are met.

The laboratory provides analytical approaches and reporting limits suitable for both soil vapor and indoor air projects. For the analysis of indoor air samples, ALS’ highly trained analysts can perform EPA Method TO-15 in Selective Ion Monitoring (SIM) mode to provide results in parts per trillion levels for client-specific compound lists.



Soil Gas Tracers

Several state guidance documents recommend the practice of leak testing your soil vapor well with a tracer compound when collecting soil vapor samples, to ensure that the well has been constructed and sealed correctly. ALS can support analysis of common tracer compounds such as helium, sulfur hexafluoride (SF₆), and other VOCs as needed. Please contact your local ALS Technical Sales Representative for more details about the pros and cons of each tracer compound.

