



# Heterogeneous Site Characterization Through Incremental Sampling Methodology

*Gain the increased confidence that the reported concentrations of environmental contaminants actually represent the conditions at the site.*

Incremental Sampling Methodology (ISM) is designed to collect soil samples that specifically represent predefined sections of a site with less uncertainty than ordinarily achieved with discrete sampling. Therefore,

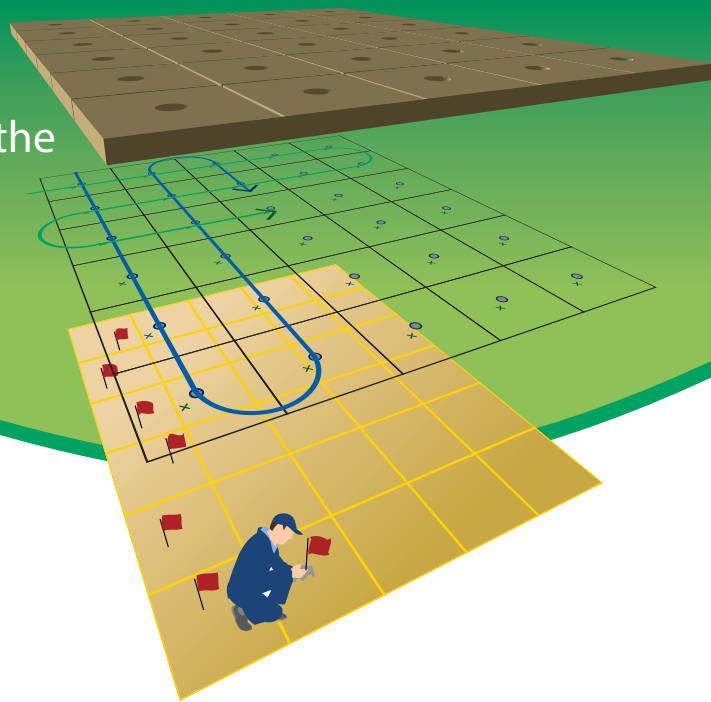
- Reducing uncertainty means increased confidence that the reported concentrations of environmental contaminants actually represent the conditions at the site.
- Increased confidence means less remediation when the concentration is really below the action limit.
- Fewer missed hot spots, that if not found, increase human and environmental health risks and if found at a later date require expensive remobilization and remediation.

**ISM produces representative samples and results upon which to build confident decisions.**

TestAmerica has designed its ISM services as a turnkey solution for our clients providing a single source solution. TestAmerica is uniquely qualified and committed to provide ISM support to our clients. Our services include:

- Technical support to the investigative team from our senior, ISM experienced analytical chemists during the development of the ISM plan.
- Comprehensive ISM sample processing for sample conditioning, particle size selection, particle size reduction, and analytical splitting and subsampling to support the project goals
- Comprehensive laboratory testing services.

Significant effort goes into planning and collecting representative field samples. A similar level of effort should be applied at the laboratory to maintain representativeness through all processing steps.



Incremental Sampling Methodology is a structured composite sampling and processing protocol having specific elements designed to reduce data variability and increase sampling representativeness for a specific volume of soil under investigation.

### TestAmerica Solutions to ISM Testing Challenges

TestAmerica's ISM Best Practices Group has developed standards that identify systematic laboratory sample handling, processing, and quality control procedures to address the complexities and challenges associated with ISM projects.

TestAmerica's ISM Laboratories are committed to providing detailed technical support during the ISM development process, outstanding client services, the appropriate sampling processing, subsampling, analytical methods and detection limits, the highest integrity, and the fastest turnarounds with the best accuracy and precision at a competitive price.

### ISM is a structured composite process that starts with systematic planning

ISM uses the **Conceptual Site Model** as the foundation for establishing quantitative soil sampling objectives. The goal of ISM is to produce a small subsample with the same contaminant concentration as originally present in the field.

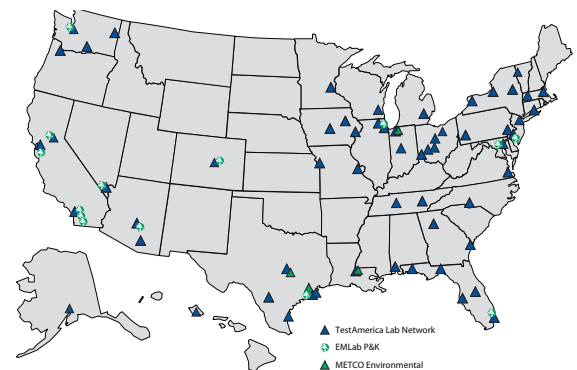
Thus, using ISM, the planning, the sample collection, processing and subsampling are executed properly; the final analytical results provide a reasonably unbiased estimate of the mean contaminant concentration within the decision unit.

### Key steps in selecting laboratory processes include:

- Identify the sample
- Select analytes
- Choose how to manage soil moisture
- Select a soil disaggregation technique
- Choose a sieve size
- Select a milling technique
- Choose a subsampling technique
- Select the analytical determination method(s)

### TestAmerica Locations Supporting ISM:

Burlington 802.660.1990	Canton 330.497.9396	St. Louis 314.298.8566
Denver 303.736.0100	Seattle 253.922.2310	Sacramento 916.373.5600



For additional resources, news and Incremental Sampling Methodology specifics, visit:  
[www.testamericainc.com/ISM](http://www.testamericainc.com/ISM)

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