



# Incremental Sampling Methodology Update

## The Interstate Technology and Regulatory Council (ITRC) is excited to start an update Team in January 2019 on Incremental Sampling Methodology.

ITRC is a state-led coalition dedicated to reducing barriers to the use of innovative environmental technologies. ITRC represents over 1,000 individuals, across 50 states, working to produce guidance and training on innovative environmental solutions. Bringing together teams of state, federal, tribal, industry, academic, and stakeholder experts, ITRC broadens and deepens technical knowledge and reduces barriers to expedient regulatory approval. Since 1995, the collective success of this coalition has generated huge benefits to the environment, inspired new technical innovations, and saved hundreds of millions of dollars.

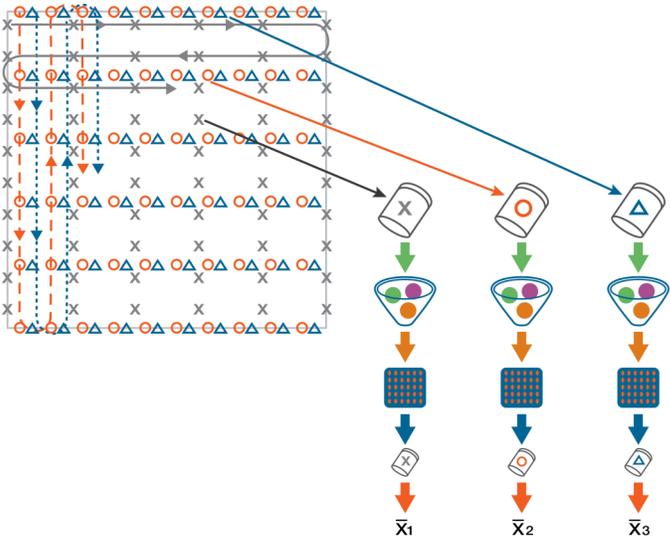
ITRC is a program of the Environmental Research Institute of the States, managed by the Environmental Council of the States. This partnership is based on a commitment to protect and improve human health and the environment across the country.

## INCREMENTAL SAMPLING METHODOLOGY (ISM)

Incremental sampling is a structured sampling protocol that reduces data variability and increases sample representativeness. The objective of incremental sampling is to obtain a single sample for analysis that has an analyte

concentration representative of the decision unit. Done properly, ISM significantly improves the reliability of sample data, as well as the time and cost needed to investigate and remediate soil and sediment contamination by using structured protocols that reduce data variability and provide a reasonably unbiased estimate of mean contaminant concentrations.

ISM has been increasingly used in the environmental field for sampling contaminants in soil. Experts have found that the sampling density afforded by collecting many increments, together with the disciplined processing and subsampling of the combined increments, can yield more consistent and reproducible results than those obtained by more traditional (i.e., discrete) sampling approaches.



---

## ABOUT THE ISM UPDATE TEAM

In 2009, ITRC established a Team to evaluate ISM for sampling soils at hazardous waste sites and potentially contaminated properties. The ISM Team convened national experts in toxicology, risk assessment, statistics, soil sampling, among others. Key efforts of the ISM Team included performing a statistical analysis of ISM performance, identifying considerations for unique laboratory processes and procedures, evaluating the suitability of ISM to various contamination scenarios and contaminant categories, and identifying the strengths and weaknesses of ISM.

This resulted in the 2012 ITRC guidance document on Incremental Sampling Methodology (ISM) that

presented an advancement in how sites with soil and sediment contamination are characterized for risk assessment and remediation purposes.

However, in the past six years, ISM-type investigation methods have evolved, and regulators have gained more experience in the application of ISM in the field. This update Team will revise the ISM guidance document and training to focus on the practical implementation of ISM-type sample collection and analysis, and incorporate experience gained since 2012. The updated guidance document and training will be organized to mirror the stages of a site investigation.

### JOIN THE TEAM!

The ISM Update Team will begin in January 2019! By joining the Team, you will have the opportunity to contribute to the guidance document and training materials. To join, click here: <http://itrcweb.org/Membership/TeamRegistration>

### GENERAL PROJECT SCHEDULE

There will be monthly conference calls to update the online guidance document and training materials. The document will be sent to ITRC members for external review in early 2020 and will be publicly available in mid-2020.

**For more information, please contact the Co-Team Leaders:**

**Caroline Eigenbrodt**

[caroline.eigenbrodt@dec.ny.gov](mailto:caroline.eigenbrodt@dec.ny.gov)

**Troy Keith**

[troy.keith@tn.gov](mailto:troy.keith@tn.gov)



**ITRC**

1250 H St. NW, Suite 850  
Washington, DC 20005  
[itrcweb.org](http://itrcweb.org)



ECOS

Last Updated: December 2018