

Incremental Sampling Methodology, Growing into an Everyday Tool

Instructor Biographies

Hayley Brittingham, M.S.
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Hayley Brittingham is an Environmental Statistician with Neptune and Company, Inc. in Denver, Colorado and has worked for the company since 2017. She is experienced in both fundamental statistical principles and their practical implications. She designs and reviews sampling plans using a variety of sampling techniques and analyzes both discrete and incremental sampling datasets for use in transparent and defensible decision making.

Since 2018, she has participated on the Interstate Technology and Regulatory Council (ITRC) incremental sampling team. She co-authored sections on statistical analysis and sampling plans in the ISM-2 guidance document, and was a trainer for the ISM-2 statistics module as part of the internet-based training.

Mark L. Bruce Ph.D.
Senior Technical Advisor
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Dr. Mark Bruce has over 40 years of environmental analytical chemistry experience in academic and commercial laboratories. He has led method development and modification projects for both organic and inorganic analyses. Dr. Bruce has been actively involved with the Interstate Technology and Regulatory Council (ITRC) teams for incremental sampling methodology. He coauthored the sections for sample collection and sample processing for both the 2012 and 2020 guidance documents.

As Senior Technical Advisor, Dr. Bruce's duties include mentoring younger technical staff in areas of leadership development, personal and professional growth. He also assists with special projects in many areas.

Michele Zych
Assistant Vice President, Geologist
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Michele Zych, P.G., has worked for the environmental consulting industry in southern California since 1992. She is currently with WSP USA Earth and Environment in San Diego, California as an Assistant Vice President managing and providing technical oversight for environmental restoration projects in California and Arizona under CERCLA and RCRA.

Ms. Zych served as a principal writer on the Interstate Technology and Regulatory Council (ITRC) Incremental Sampling Methodology update between 2018 and 2020 and participated as an online trainer having executed several ISM sampling designs at former DOD range sites and facilities with historical use of arsenic-based herbicides.