

## VSP 4 Day Training Course (H-500)

[Each participant will have a laptop/computer with VSP on it and will work through the case studies together with the instructor and individually]

### DAY 1

- 8:00-8:25 Course Expectations, Prior Training, Schedule, Feedback, Load VSP, etc.
- 8:25-9:00 VSP Overview/Demo (Executive Summary)
- 9:00-9:30 Review of Systematic Planning, DQO Process, and DQA
- 9:30-9:45 Break
- 9:45-11:15 VSP Maneuvering and Procedures (Part 1)
- 11:15-12:00 Statistical Concept Review
- 12:00-1:00 Lunch (on your own)
- 1:15-2:00 VSP Maneuvering and Procedures (Part 2)
- 2:00-2:15 Non-Statistical and Hotspot Detection Sample Designs
- Judgment Sampling
  - Predetermined Number of Samples
  - Locate Hotspot Objective
  - Locate Hotspot with Existing Data
- 2:15-2:45 Average-Based Decision Rule Case Studies
- Comparison Against a Threshold (Design and Analysis)
- 2:45-3:00 Break
- 3:00-4:20 Average-Based Decision Rule Case Studies (Continued)
- Confidence Interval Objective
  - Comparison Against Background
  - Collaborative Sampling
  - Sequential Sampling
  - Stratified Sampling
- 4:15- 4:30 Questions, Issues, End of Day 1

## **Day 2**

- 8:00-8:15 Questions, Quick Review
- 8:15-10:00 Individual Observation or Percentile Decision Rule Case Studies
- X%/Y% Acceptance Sampling – No Exceedances Allowed
  - Discovery Sampling
  - X%/Y% Combined Judgment and Random Sampling
  - Stratified Compliance Sampling
  - X%/Y% Non-Parametric UTL
  - X%/Y% Parametric UTL
  - X%/Y% Acceptance Sampling – Exceedances Allowed (Optional)
- 10:00-10:15 Break
- 10:15-11:30 Group Case Study
- Introduce DQO Group Case Studies
  - Group Breakout on DQO Case Studies
- 11:30-12:00 Within Zoned Building Case Study
- Building 3-D Rendering
  - Setting up Zones – User-Defined Parameters
  - Sampling Designs by Zone
- 12:00-1:00 Lunch (on your own)
- 1:15-2:15 Within Zoned Building Case Study (Continued)
- 2:15-3:00 Spatial Analysis and Geostatistical Analysis Overview Presentation
- 3:00-3:15 Break
- 3:15-4:15 Spatial Analysis Case Studies
- Geostatistical Analysis
  - Remove Sample Locations (Spatial Redundancy Analysis)
  - Add Sample Locations
  - Other Interpolation Methods
- 4:15-4:30 Questions, Issues, End of Day 2

### **Day 3**

- 8:00-8:15 Questions, Quick Review
- 8:15-9:30 Temporal Designs and Analysis
- Trend Detection (Design and Analysis)
  - Temporal Redundancy Analysis
  - Change Detection: Statistical Process Control Charts
- 9:30-10:00 Radiological Transect Survey Design and Analysis
- 10:00-10:15 Break
- 10:15-10:30 Item Sampling
- 10:30-11:45 Finalize Group DQO Case Studies
- 12:00-1:00 Lunch (on your own)
- 1:00-1:45 Presentations of DQO Case Studies
- 1:45-2:15 Multiple Increment Sampling
- Average Based Decision Rules
  - Hotspot Detection
- 3:00-3:15 Break
- 3:15-4:15 Additional Data Analysis Modules / Features
- MQO Options and Retrospective Analysis
  - Analyte Redundancy (Correlation) Analysis
  - Handling Less Than Detects
- 4:15-4:30 Questions, Issues, End of Day 3

## **Day 4**

- 8:00-8:15 Questions, Issues
- 8:15-9:45 MARSSIM Advanced Case Studies
- Combined Background and Threshold Comparison
  - Compare Average to Fixed Threshold
- 9:45-10:00 Break
- 10:00-11:30 Demonstration and Discussion of VSP MARSSIM Features
- 11:30-11:45 VSP Future Developments
- 11:45-12:00 Wrap-up, Course Evaluation Forms, Questions.
- 12:00 Adjourn