

Interim
Final



Technical Guidance Manual for the Implementation of the Hawai`i State Contingency Plan

SECTION 4

SOIL SAMPLE COLLECTION APPROACHES



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ACRONYMS AND ABBREVIATIONS

ASTM	American Society for Testing and Materials
COPC	Chemicals (or Contaminants) of Potential Concern
DQO	Data Quality Objectives
DU	Decision Unit
HDOH	Hawai'i Department of Health
HEER Office	Hazard Evaluation and Emergency Response Office
µm	Micrometers
mg/kg	Milligrams per kilogram
mm	Millimeter
MIS	<i>Multi-increment</i> Sample(s)
MDL	Method Detection Limit
%	Percent
RSD	Relative standard deviation
SAP	Sampling and Analysis Plan
UCL	Upper Confidence Limit
USEPA	United States Environmental Protection Agency
VRP	HEER Office Voluntary Response Program
XRF	X-Ray Fluorescence



4.0 SOIL SAMPLE COLLECTION APPROACHES

This section provides an overview of *Multi-increment*¹, discrete, and judgmental soil sampling approaches and an introduction to the statistical evaluation of sample data. When designing a Sampling and Analysis Plan (SAP), it is important that the selected sampling approach will generate accurate (precise and unbiased) data that meets the objectives of the site investigation.

More than one sampling approach may be applicable at a given site. For example, *Multi-increment* samples may be collected to evaluate surface soils, excavation floors and walls, or stockpiles that may be contaminated. A grid of discrete samples could be used to help identify large spill areas and/or provide information to help select decision units (DUs) for *Multi-increment* sampling. A description of different sampling approaches and the advantages and disadvantages of each is provided in this Section. Section 5 presents additional guidance on sampling methods for soil and sediment, Section 6 presents guidance for sampling groundwater and surface water, and Section 7 presents guidance for soil vapor and indoor air sampling methods.

¹ *Multi-increment*[®] is a registered trademark of EnviroStat, Inc