

**SANTA ROSA FIRE DEPARTMENT
FIRE PREVENTION BUREAU STANDARD**

July 1, 2010



**ENVIRONMENTAL SITE ASSESSMENT
PHASE II**

Purpose

A Phase II ESA shall be conducted to evaluate any recognized environmental conditions identified in a Phase I ESA as required by the City of Santa Rosa Fire Department. It shall provide sufficient information regarding the nature and extent of contamination. This information will be utilized to evaluate the results of the phase II in order to protect human health, safety and the environment.

This standard outlines the general requirements for the completion and application for a Phase II Environmental Site Assessment review. Information contained herein applies to typical instances and may not address all circumstances.

Code References

ASTM E1903 97(2002)

Permit(s) Required

A Phase II ESA permit application shall be submitted to the Fire Department for review and approval of all new commercial and residential developments with a Phase I indicating contamination.

Note: *If the site has known contamination or on site sampling has already been conducted, the phase II may include that work, however all areas of contamination must be addressed.*

Categories and fee amounts are found at:

<http://ci.santa-rosa.ca.us/doclib/Documents/IB%20018.pdf>

Attachments

- 1) Plan Review Checklist – Phase II ESA (ASTM E1903, 97(2002))

Required Inspections

Verification inspection may be required.

PERMIT

A Phase II Environmental Site Assessment (ESA) shall be developed and implemented in accordance with American Society of Testing and Materials (ASTM) Standard E1903 97 (2002).

A report shall be submitted for review and approval to the Santa Rosa Fire Department. A completed Permit and Plan Review Application Form and fee shall be submitted along with not less than to (2) copies of the report. A Santa Rosa Tax Certificate, current appropriate contractor's license and proof of worker's compensation insurance shall be provided or shall be on file at the time of application.

Plans for phase II ESA's shall include the information specified below. Failure to provide all of the required information may result in the plans being rejected. Rejected plans will be returned with a Plan Review Correction Form. Review the form and make the required additions/ changes. Allow ten (10) working days for review of submitted plans.

PLAN

Submittals shall conform to ASTM E1903 97 (2002). Plans shall be drawn to an indicated scale, on sheets of uniform size. Submittals shall cover the following components:

- Assessment of areas of concern identified under Phase I ESA and all fire department comments on the Phase I ESA.
- Method for conducting the site investigation
- Interpretation and evaluation of information gathered during the site investigation
- Submission of the written report

The Phase II ESA may include the following activities:

- Sampling of stored substances, and surface media (materials, soil, sediment or surface waters)
- Subsurface soil and/or groundwater investigations.
 - Borehole drilling and core sampling
 - Water well sampling
 - Ground probing radar (GPR)
 - Magnetics
- Soil Vapor Surveys
- Radon Surveys
- Comprehensive/Limited Asbestos Surveys
- Comprehensive/Limited Lead-Based Paint Surveys
- Operations & Maintenance Plans (Asbestos/Lead-Based Paint)

DATA QUALITY OBJECTIVES

- Sampling events including but not limited to sample location, quantity, and analytical procedures must be chosen to be consistent with the identified contaminants.
- The sampling design must be sufficient in scope to determine the "nature and extent" of the impact and characterize all relevant and applicable exposure pathways.
- Analytical methods, detection limits, QC/QA procedures and sampling plans must be included. Sampling plans that do not completely represent the site or lack sufficient data quality standards to ensure reliable results will be deemed incomplete.

Standard
Phase II ESA

- Sampling events shall include trip blanks, soil bore logs, laboratory QA/QC reports, and Chain of Custody documents.

SITE CHARACTERIZATION

- Adequate and appropriate site characterization is critical to all cleanups and necessary to support selection and implementation of remedial actions.
- Site characterization is intended to gather information necessary to make remediation decisions.
- Site characterization activities should be commensurate with the complexity of the site and/or release in question.

Based on the findings of the Phase II ESA, the applicant may be required to implement appropriate remedial actions and/or complete a risk assessment. See Fire Department standard on Soil and Groundwater Remediation.