

DTSC's Preliminary Endangerment Assessment (PEA) Process Quick Reference Guide

PEA Background Research

The purpose of the background research is to collect pertinent information about the following:

- a) Location, including legal description;
- b) Regulatory status;
- c) Physical/environmental characteristics;
- d) Zoning, including any potential zoning or general plan changes;
- e) Current and past property uses;
- f) Facility operations;
- g) Recorded environmental cleanup liens;
- h) Chain of title documents;
- i) Current and past cleanup actions;
- j) Engineering controls;
- k) Institutional controls;
- l) Current and past uses of hazardous substances/materials;
- m) Hazardous substance/waste/material management practices;
- n) Land use in the immediate area; and
- o) Environmental permits

The [PEA Guidance Manual](#) recommends the following to complete the Background Research:

- I. Records review –Regulatory agency files, county and local offices, fire department, public health records, owner/operator records, historical maps and photographs, etc.
- II. Site Inspection – Visual inspection of property and surroundings
- III. Interviews – Communication with current and former property owners, operators, employees, and neighbors

For detailed information, refer to the [2015 PEA Guidance Manual](#)

The PEA is defined in California Health and Safety Code Division 20, Chapter 6.8, Section 25319.5 (HSC §25319.5)

The Preliminary Endangerment Assessment (PEA) process determines if there has been a release of a hazardous substance that presents a risk to human health or the environment. The PEA provides basic information, includes a Work Plan that describes the work to be done and a Report of the results, and makes conclusions about the PEA data. The PEA Report may serve as a Phase I Environmental Assessment and may meet the "All Appropriate Inquiries" requirement to allow for liability protections under federal regulations. If the PEA work does not define the full nature and extent of contamination, the [Department of Toxic Substances Control \(DTSC\)](#) may determine that a Supplemental Site Investigation or Remedial Investigation is necessary. A PEA may also conclude that a Land Use Covenant is required, in which case, a public notification process is implemented.

The PEA includes:

- 1) **Introduction, Site Background, and Description:** The PEA includes a rigorous background evaluation. Refer to inset at left.
- 2) **Conceptual Site Model (CSM):** Information about property conditions and potential impacts to receptors, commonly in a graphic format. The CSM should include contaminant transport mechanisms and exposure pathways from air, soil, sediments, water, soil vapor, groundwater, and surface water.
- 3) **Data Quality Objectives (DQOs) and Rationale for Sampling Strategy:** An approach to collect data to support decision-making. The DQOs include the reason for choosing the locations, depths, types of sample matrices, number of samples (including quality assurance/quality control samples), and analytical parameters such as target analytes, detection limits, and field screening methods.
- 4) **Sampling & Analysis:** Description of sample collection, storage, record keeping and analytical methods. Identification of chemicals of potential concern.
- 5) **Human Health Screening Risk Evaluation:** Description of complete exposure pathways. Source of risk-based screening levels. Calculation of exposure point concentrations. Summary of cumulative screening risk and hazard.
- 6) **Ecological Screening Evaluation:** Site and biological characterization. Pathway assessment and qualitative summary.
- 7) **Conclusions and Recommendations**