

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

OFFICIAL POLICY

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PROGRAM MANAGEMENT MANUAL

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DESCRIPTION: This document establishes standardized policies and procedures for overseeing and supervising the investigation and removal and remedial actions taken at hazardous substance release sites, as required by Health and Safety Code Section 25355.7 (Assembly Bill 189).

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**DEPARTMENT OF TOXIC SUBSTANCES CONTROL
SITE MITIGATION PROGRAM**

**OVERSIGHT AND SUPERVISION OF INVESTIGATIONS AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

BACKGROUND

Effective July 17, 1991, the California Environmental Protection Agency (Cal/EPA) was established unifying the State's environmental programs under a single, cabinet-level agency. The Department of Toxic Substances Control (Department) is one of the six boards/departments/offices that reports directly to Cal/EPA. It is the Department's policy to encourage responsible party (RP) and potentially responsible party (PRP) participation in site cleanups and to make sound economics a key part of environmental protection. The Department advocates the early completion of cleanup activities presenting the greatest risk to public health and the environment and uses an iterative process when conducting remedial investigations to ensure that work ordered by the Department is both necessary and protective of the public health and the environment. Implementing Assembly Bill (AB) 189, now Health and Safety Code Section 25355.7 (all references are to the Health and Safety Code unless otherwise stated), will clarify the Department's policies and procedures for overseeing the investigation and remedial actions at hazardous substance sites.

Below is the text of AB 189.

"25355.7. (a) On or before July 1, 1992, the department shall establish policies and procedures consistent with this chapter that its representatives shall follow in overseeing and supervising the activities of responsible parties who are carrying out the investigation of, and taking removal or remedial actions at, hazardous substance release sites. The policies and procedures shall include, but are not limited to, all of the following:

- (a) The procedures the department will follow in making decisions as to when a potentially responsible party may be required to undertake an investigation to determine if a hazardous substance release has occurred.
- (b) Policies for carrying out a phased, step-by-step investigation to determine the nature and extent of possible soil and groundwater contamination at a site.
- (c) Procedures for identifying and utilizing the most cost-effective methods for detecting contamination and carrying out removal or remedial actions.
- (d) Policies for determining reasonable schedules for investigation and removal or remedial action at a site. The policies shall recognize the dangers to public health and the

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

environment posed by a release and the need to mitigate those dangers while at the same time taking into account, to the extent possible, the resources, both financial and technical, available to a responsible party. (Added by Stats. 1991, Ch. 292)"

**POLICIES AND PROCEDURES FOR OVERSEEING AND SUPERVISING RP
INVESTIGATIONS AND REMOVAL AND REMEDIAL ACTIONS AT HAZARDOUS
SUBSTANCE SITES.**

The Department has established the following policies and procedures for its staff and representatives to follow when overseeing and supervising site investigations and remedial actions:

- I. "Procedures the Department will follow in making decisions as to when a RP/PRP may be required to undertake an investigation to determine if a hazardous substance release has occurred."
 - a. Section 25323.5 (a), defines "responsible party" or "liable person," as those persons described in Section 107 (a) of the federal act (42 U.S.C. Sec. 9607 (a)).
 - (b) For the purposes of this chapter, the defenses available to a responsible party or liable person shall be those defenses specified in Sections 101 (35) and 107 (b) of the federal act (42 U.S.C. Secs. 9601 (35) and 9607 (b))."
 - b. Section 25319.5 defines preliminary endangerment assessment (PEA) as: ". . .an activity which is performed to determine whether current or past waste management practices have resulted in the release or threatened release of hazardous substances which pose a threat to public health or the environment."
 - c. The PEA process is designed as a standard approach for evaluating sites contaminated or potentially contaminated with hazardous substances/wastes to determine if a removal or remedial action is required. It is the initial step in the overall site cleanup process. The "Interim Guidance for Preparation of a Preliminary Endangerment Assessment Report," (the PEA Manual) dated June 22, 1990, describes the PEA process in detail and provides instructions for preparing a PEA report. The PEA

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

process has two stages: the first stage consists of the initial site evaluation and preparation of a PEA report. The RP/PRP is responsible for the first stage unless a PRP has not been identified or is recalcitrant. If this happens, DTSC will conduct the study and seek cost recovery. The second stage involves the Department's evaluation and approval of the PEA report. If the Department determines that a PEA report is incomplete, an outline of information needed to complete the PEA will be provided to the PRP.

The overall roles and responsibilities of Department staff include:

- Conducting an initial screening to determine if completing a PEA is appropriate. This may include conducting a review of various government agency records and a "drive by" or "walk through" inspection of the site.
 - Meeting with the RP/PRP to explain the PEA report requirements and providing guidance to the RP/PRP relative to preparation of the PEA report.
 - Initiating the billing of the RP/PRP by the State Board of Equalization for the PEA oversight fee.
 - Overseeing PEA work conducted at the site by the RP/PRP.
 - Reviewing the PEA report for completeness; determining whether or not the PEA is adequate; and determining if the PEA recommendation is appropriate.
- d. At the completion of a PEA activity, a site will be evaluated to determine:
- If a finding of "no further action" due to no contamination or insignificant contamination at the site is appropriate, or
 - If a removal action to mitigate immediate threats to public health or the environment is needed, or
 - If initiation of further investigation and removal/remedial action is required.

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

- e. If the Department finds after a PEA is completed that contamination at a site poses a significant threat to public health or the environment, it will typically determine whether it is appropriate to conduct a PRP search to identify other RPs/PRPs, take additional samples as necessary to link those additional PRPs to the source of contamination, and order PRPs to participate in the site investigation and cleanup.
 - f. The Department ordinarily attempts to gain the agreement of the RPs to comply with a Consent Order. Consent Orders are the same as unilateral orders except that RPs agree to Department oversight of the cleanup process, payment of Department oversight costs, and usually provide financial assurance that the work will be completed. If the RPs will not agree to comply with a Consent Order, the Department will issue a unilateral order called an Imminent and Substantial Endangerment Determination and Order (I and SE Order -- Section 25358.3(a) and 25355.5(b)(3) or an Imminent or Substantial Endangerment and Remedial Action Order (I or SE Order -- Section 25358.3(a) and 25355.5(a)(1)(B)). The Department enforces the law vigorously.
- II. "Policies for carrying out a phased, step-by-step investigation to determine the nature and extent of possible soil and groundwater contamination at a site."
- a. Section 25322.2 defines Remedial Investigation (RI) as: ". . . those actions deemed necessary by the department to determine the full extent of a hazardous substance release at a site, identify the public health and environment threat posed by the release, collect data on possible remedies, and otherwise evaluate the site for purposes of developing a remedial action plan."
 - b. Section 25314 defines Feasibility Study (FS) as: ". . . the identification and evaluation of technically feasible and effective remedial action alternatives to protect public health and the environment, at a hazardous substance release site, or other activities deemed necessary by the department for the development of a remedial action plan."

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

- c. Section 25323(a) defines remove or removal action as:
". . . the cleanup or removal of released hazardous substances from the environment or the taking of other actions as may be necessary to prevent, minimize, or mitigate damage which may otherwise result from a release or threatened release, as further defined by Section 101(23) of the federal act (42 U.S.C. 9601(23))."
- d. Section 25322 defines "remedy" or "remedial action" as: "(a) Those actions which are consistent with a permanent remedy, that are taken instead of, or in addition to, removal actions in the event of a release or threatened release of a hazardous substance into the environment . . . (b) Those actions which are necessary to monitor, assess, and evaluate a release or a threatened release of a hazardous substance. (c) Site operation and maintenance."

The Final Remedial Action (FRA) includes the development of the actual design of the selected remedy and the full implementation of the remedy through construction.

- e. Title 42, United States Code (U.S.C.), section 9601(25) defines "response" as: ". . . remove, removal, remedy, and remedial action, all such terms (including the terms 'removal' and remedial action') include the enforcement activities related thereto." ("Response" is not defined in the Health and Safety Code (H&SC). H&SC Section 25310 provides that words not defined in the Hazardous Substance Account Act are defined pursuant to the definitions in 42 U.S.C., section 9601).
- f. The Department follows the National Contingency Plan (NCP), which is the major framework regulation for the federal hazardous substances response program (42 U.S.C., section 9605 as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), P.L. 99-499). H&SC Section 25356.1 requires that Remedial Action Plans (RAPs) prepared under state law must comply with the part of the NCP which deals with hazardous substance response actions. The NCP includes procedures and standards for how the United States Environmental Protection Agency, other federal agencies, states, and private parties respond under

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

CERCLA to releases of hazardous substances
(40 C.F.R., section 300.400 et. seq.).

- g. It is the Department's policy to encourage RPs to pay for removal and remedial activities and to apply the Department's resources toward those hazardous substance release sites presenting the greatest risk to public health and the environment. Section 25355.5 requires that in most cases, the Department must provide identified RPs an opportunity to undertake cleanup at hazardous substance sites in lieu of State-funded cleanups.
- h. Site management strategy identifies the study boundary areas and the best sequence of site activities, including whether the site should be remediated as separate operable units. "'Operable unit' means a discrete action that comprises an incremental step toward comprehensively addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of a release, or pathway of exposure. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site. (40 C.F.R., section 300.5)." By dividing a site into separate operable units, emphasis is placed on addressing critical public health and environmental problems first. The operable unit approach focuses the investigative phase towards specific cleanup activities. The focused RI/FS approach may save money because a specific investigation and remediation goal is set initially and carried through to implementation.

Site cleanup objectives are typically developed early in the process to determine and guide the site investigation activities to be conducted, including any interim removal actions that may be necessary. The site objectives are developed based on existing site information and updated or amended as more information becomes available. Objectives must also consider contaminant-specific Applicable or Relevant

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

and Appropriate Requirements (ARARs), and risk-related factors.

The RI and FS are interactive and are conducted concurrently, so that the data collected in the RI phase influences the development of remedial alternatives in the FS, which in turn affects the data needs and the scope of treatability studies. A focused RI/FS is an abbreviated version of a RI/FS. It focuses on one media (air, water, or soil) or one area of a site. For a groundwater problem, groundwater sampling and monitoring would be conducted as a focused RI/FS before performing a groundwater cleanup action. The results of a focused RI/FS are used to evaluate whether or not a removal action is necessary or what type of removal action is appropriate. Dividing a site into separate operable units is action oriented, fosters earlier implementation of priority removal actions, and focuses investigation activities on solvable problems.

In the case of small, less complex sites where the goal of a site investigation is obvious at the outset, conducting one overall RI/FS is appropriate. Larger, more complex sites require an iterative investigation process based on the site strategy. With an iterative process, investigative work is typically conducted in phases based on the site information available at the outset of each phase. Each succeeding phase of activity should be designed to fill in data gaps and answer questions raised or left unanswered by the preceding phase. The goal of this process is to adequately define the horizontal and vertical depth of contamination and the movement of the contamination through the soil, water and air media. Iterative RI phases minimize unnecessary sampling and analysis when looking for the outer boundary of contamination. By conducting site investigations in this manner, the Department ensures that both private and public funds are spent wisely and efficiently.

- i. There is an overlap in the areas of responsibility of the Department and of the responsibility of State Water Resource Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs). The Department is the primary State agency responsible

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

for the abatement of all hazardous substance release sites. However, as protectors of State water quality, the SWRCB and the RWQCBs have jurisdiction over sites that include, or potentially include, surface and groundwater contamination. These sites may be hazardous substance release sites. It is the policy of the Department, SWRCB, and the RWQCBs to avoid the overlapping of staff efforts with respect to specific site abatement activities. The Department has entered into a Memorandum of Agreement (MOA) with the SWRCB and RWQCBs, which specifies respective roles, sets a protocol for determining which agency will have lead responsibility, and ensures that site abatement actions administered by the respective agencies are generally consistent and comparable on a Statewide basis.

- j. It is the responsibility of the Project Manager, assigned by the Department to oversee response actions at a site, to assure good communication with the RPs/PRPs. This is accomplished by: effective long-range planning through the development of a site strategy; meetings to discuss the Department's expectations before each major phase workplan is developed and initiated; oversight of field work; and review and comment on each deliverable required in the order. Early involvement by the Project Manager in the development of major phase workplans will reduce staff review time and multiple submissions of the workplan and subsequent deliverables. Early involvement of the Project Manager and good communication with the RPs/PRPs will save both the Department and the RPs/PRPs time and money.

III. "Procedures for identifying and utilizing the most cost-effective methods for detecting contamination and carrying out removal or remedial actions."

- a. The work required to perform a RI/FS or focused RI/FS is dependent upon the complexity of a site. The RI provides information to assess the risks to human health and the environment and to support the development, evaluation, and selection of appropriate response alternatives. The primary objective of the FS is to ensure that appropriate remedial alternatives are developed and evaluated, so that

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

relevant information concerning the remedial action options can be presented and an appropriate remedy selected (40 C.F.R., section 300.430 (d) and (e)). Because of the iterative nature of the RI/FS, additional data requirements and analyses may be identified throughout the process. The RP/PRP is responsible for fulfilling additional data and analysis needs identified by the Department. An iterative RI/FS is intended to prevent the over collection of data, because the identification of additional data and analysis needs will be consistent with the scope and complexities of the site. The iterative approach ultimately saves time and money.

- b. Sampling and Analysis Plans and other types of site investigation workplans must provide a process for obtaining data of sufficient quality and quantity to satisfy the Department's data needs. If a dispute arises between RPs/PRPs and the Department over the number of monitoring wells, soil sampling tests, etc., necessary to effectively detect contamination, the Department will take into account potential public health and environmental impacts, site-specific needs, RP/PRP financial resources, and all other pertinent data. In balancing these factors, however, the Department cannot compromise protection of public health and the environment. In some cases, disputes may be resolved through the phased/iterative data collection process. In other cases, the Informal Dispute Resolution process described in Section V of this document may be invoked.
- c. The Department uses a combination of methods to achieve protection of human health and the environment. Toxic substances removal or treatment is generally preferred to address the principal threats posed by a site, wherever practicable. Engineering controls, such as containment, may be used for hazardous substances that pose a relatively low, long-term threat or where treatment or removal is not feasible or not appropriate under the site specific circumstances. A complete analysis of all possible alternatives is done in the FS (See 40 C.F.R., section 300.430 (a), (e), and (f)).
- d. Remedial Action Plans (RAPs) must meet the requirements set forth in Section 25356.1. Integral

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

to this process, is the statement of reasons which includes an evaluation of each alternative; consistency of the alternatives with federal regulations; and the reasons for rejecting alternative removal and remedial actions. The statement of reasons also includes a Nonbinding Preliminary Allocation of Responsibility (NBAR) among all identifiable PRPs. The draft RAP must be circulated for public review and comments, and may be combined with any documents required by the California Environmental Quality Act (CEQA). A RAP must be prepared and approved in accordance with the requirements of Section 25356.1(c), (d), and (e) unless one of the bases for exemption in Section 25356.1(g) is determined by the Department to apply to the response action to be taken at the site.

In the remedy selection process, a range of alternatives is developed, representing distinct, viable approaches to managing the site problem. When selecting the preferred approach, the following nine criteria from the NCP are used to compare relative advantages and disadvantages of the alternatives under consideration:

Threshold Criteria:

1. Overall protection of human health and the environment.
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) (or invoke a waiver).

Balancing Criteria:

1. Long-term effectiveness and permanence.
2. Reduction of toxicity, mobility, or volume through treatment.
3. Short-term effectiveness (e.g., environmental impacts of the cleanup itself).

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

4. Implementability (e.g., whether technology being considered is available within the necessary timeframe).
5. Cost.

Modifying Criteria:

1. State acceptance.
 2. Community acceptance.
- e. The NCP specifies that each alternative approach to remediation of the site should be evaluated using these nine criteria. (40 C.F.R., section 300.430(e)). The FS process requires a complete analysis of alternatives using the nine criteria, and the Department takes into consideration both construction costs and any long-term operation and maintenance costs of each alternative. This process ensures that the lowest cost alternative which is protective of human health and the environment and meets ARARs is selected. The Department will make sound economics a key part of environmental protection.
 - f. Any alternative that does not provide adequate protection of human health and the environment and comply with ARARs must be eliminated from consideration at the selection of the remedy step in the process. (40 C.F.R., section 300.430 (f)).
 - g. By evaluating and comparing the alternatives by means of the "balancing" and "modifying" criteria, the project management team can make the site-specific judgments necessary to select the most appropriate alternative.
 - h. The Department will consider using innovative technology when it offers the potential for comparable or superior treatment performance or implementability, fewer or lesser adverse impacts than conventional approaches, or lower costs for similar levels of performance than established techniques. Alternatives must be both technically and administratively feasible. The Department has a remedial technology demonstration program which assists the Project Manager in identifying alternative technologies that should be considered for specific sites. This program also works with the private industry to evaluate new technologies.

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

- i. The Department uses institutional controls such as deed restrictions to supplement engineering controls as appropriate for short-term and long-term management to prevent or limit exposure to hazardous substances. Deed restrictions are not be used as a sole remedy, unless treatment and/or containment of source material are determined to be inappropriate or impracticable. The Department takes into consideration the future land use of the site to ensure that remedial action objectives for soil are protective of public health and the environment.

IV. "Policies for determining reasonable schedules for investigation and removal or remedial action at a site. The policies shall recognize the dangers to public health and the environment posed by a release and the need to mitigate those dangers while at the same time taking into account, to the extent possible, the resources both financial and technical, available to a responsible party."

- a. In order to protect the public health and the environment, the Department's site mitigation policy revolves around the concept of applying resources towards the remediation of those sites posing the greatest risks. RPs and PRPs are encouraged to work cooperatively with the Department and to finance site cleanups. The Department recognizes that it can proceed with site cleanups only as fast as good technology and prudent expenditures of money will allow.
- b. The Department sets its priorities and directs its resources in a risk based manner which addresses the most serious public health and environmental problems first and then starts the iterative RI/FS process. Site-specific considerations play a key role in setting schedules for each phase of site investigation and remediation. The Department negotiates schedules as appropriate. For example, the Department will consider extension requests if the RP/PRP is unable to perform an activity due to financial and/or technical problems, or as unforeseen problems develop during site remediation. When considering these requests for extension, the Department also takes into consideration the threat to public health and the environment posed by the site, the timeliness of the request, and the prior

**OVERSIGHT AND SUPERVISION OF INVESTIGATION AND REMOVAL
AND REMEDIAL ACTIONS AT HAZARDOUS SUBSTANCE SITES**

history of timely/late submittals by the requesting party, if such a history exists.

V. DISPUTE RESOLUTION PROCESS.

Decisions concerning the investigation and remediation of a site are made by the Department's project management team. The project management team consists of the Project Manager, first line supervisor (Senior), the Branch Chief, and technical assistance staff. The Project Manager is responsible for fostering good communication with the RPs/PRPs in order to insure that the Department's expectations are understood and met. Good communication is a key to saving time and money. However, disagreements occasionally arise between the Project Manager and RPs/PRPs.

The dispute resolution process is an informal mechanism for resolving disputes arising between a RP or PRP and Department staff. The purpose of this process is to resolve disagreements quickly and informally. The process below should be used by RPs/PRPs if a dispute arises between them and the Department's Project Manager.

- a. Contact the Department's first-line Supervisor (Senior) who supervises the Project Manager, and then if the issue is not resolved, contact the second-line manager, the Branch Chief, who is responsible for overseeing site cleanup investigations or remedial actions for the region where the site is located. If the issue is not resolved at the Branch Chief level, the RP/PRP may contact the next level of management, the Deputy Director for the Site Mitigation Program.
- b. If the issue is not resolved at the Deputy Director level, the RP/PRP may contact the Office of the Director of the Department of Toxic Substances Control. The Director will review the issues and render the Department's final decision in this informal process.