



## OFFICIAL POLICY / PROCEDURE

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### AFFECTED PROGRAMS

Site Mitigation Program

### **Description:**

Identifies the required format and content of Remedial Action Plans (RAPs) for hazardous substance release sites, prepared pursuant to Health and Safety Code section 25356.1. Describes the overall process for the development and adoption of RAPs, as well as the organizational roles and responsibilities.

**APPROVED BY:** \_\_\_\_\_  
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**DATE:** \_\_\_\_\_

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**REMEDIAL ACTION PLAN (RAP) POLICY**

## 1. PURPOSE

The purpose of this document is to identify the required format and content of Remedial Action Plans (RAPs) for hazardous substance release sites, prepared pursuant to Health and Safety Code section 25356.1. All references are to the Health and Safety Code unless otherwise stated. This policy also describes the overall process for the development and adoption of RAPs, as well as the organizational roles and responsibilities. (See Appendix I, RAP Process Flow Chart.)

## 2. BACKGROUND

The RAP is the Department of Toxic Substances Control's (DTSC's) remedy selection document for hazardous substance release sites addressed pursuant to Health and Safety Code section 25356.1. A RAP must clearly and concisely reflect the remedial action decision reached by: identifying the preferred alternative for a remedial action and explaining the reasons for the preference; describing the other remedial alternatives considered; and soliciting public review and comments on all the alternatives described. The public is encouraged to submit comments and participate in the remedy selection process.

The RAP contains a brief summary of the Remedial Investigation/Feasibility Study (RI/FS) findings and presents the key components of the conceptual plan for site remediation. RAPs do not contain the specific engineering design details of the proposed remedial actions, but they must clearly set out specific remedial action objectives, including cleanup levels, and timeframes for completion of the remedial actions.

RAPs (both Draft and Final) may be prepared by DTSC or its contractors, by the State Water Resources Control Board/Regional Water Quality Control Boards (SWRCB/RWQCBs), or by Responsible Parties (RPs) or project proponents (with DTSC/RWQCB oversight). Only DTSC or RWQCBs may approve RAPs. Refer to the Statutory Authority Section (below) for further information on RAP requirements and exemptions.

## 3. STATUTORY AUTHORITY -- RAP CRITERIA/CONTENT AND PROCESS REQUIREMENTS

Section 25356.1(b) requires DTSC, or if appropriate, RWQCBs to prepare or approve RAPs for sites that are listed pursuant to section 25356.

Section 25356.1(c) provides that DTSC or RWQCBs may, upon request of the RP, prepare or approve RAPs for sites that are not listed pursuant to section 25356.

Section 25356.1(d) requires that all RAPs be based upon section 25350, the National Oil and Hazardous Substances Pollution

Contingency Plan (NCP) (40 Code of Federal Regulations, 300.400 et seq.), and upon all the factors contained in section 25356.1(d)(1) through (6). The NCP identifies nine criteria to be employed when selecting among remedial actions identified in the feasibility study, and section 25356.1(d)(1)(6) identifies six additional State factors.

Section 25356.1(e) outlines the requirement for a Statement of Reason (SOR), which sets forth the basis for the removal/remedial actions selected. The SOR must contain an evaluation of each alternative considered for the site. The SOR must include a statement regarding consistency of the proposed removal/remedial actions with the NCP and factors specified in section 25356.1(d), and shall set forth the reasons for rejecting alternative removal and remedial actions. The SOR must also include a Nonbinding Preliminary Allocation of Responsibility (NBAR) among all identifiable PRPs for a site. Section 25356.1(e) also defines the requirements for public notice and dissemination during the RAP review process. (See Appendix II.)

Section 25356.1(f) requires DTSC or RWQCBs to review and consider any public comments and revise the draft RAP, as appropriate.

Section 25356.1(g)(1), (2), and (3) provide Potentially Responsible Parties (PRPs) and others who have a right to seek judicial review with legal requirements for seeking judicial review of the final RAP. The filing of a petition for writ of mandate to review the final RAP shall not stay any removal or remedial action specified in the final RAP, and for purposes of the judicial review, the court shall uphold the final RAP if the plan is based upon substantial evidence in the administrative record. This subdivision does not prohibit the court from granting relief within its jurisdiction.

Section 25358.7 requires DTSC or RWQCBs to provide the public an opportunity to participate in the DTSC's/RWQCBs' decision-making process through specified actions.

Although the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.) is not a specific requirement of the RAP process, it may require a separate analysis of the proposed remedial action as a project if the Department is the lead agency. The objective of the CEQA analysis is to determine if remedial actions may cause a significant adverse impact on the environment and, if so, to propose feasible mitigation measures. Such findings must be fully disclosed to the public. The public review of the CEQA documents and the RAP should be done concurrently.

#### Exemptions to the RAP Requirements:

Section 25356.1(h)(1) provides exemptions to the requirement for preparing and approving a RAP if: The site presents an imminent or substantial endangerment to the public health and safety or to the environment (refer to sections 25355.5 (b)(3) and 25358.3(a)(1), (2), (3) and the "Imminent and/or Substantial Endangerment Policy," #EO-93-009-PP); or with DTSC/RWQCB

oversight the RP takes a removal action at a site and the estimated cost of the removal is less than \$1 million. (See "Removal Action Workplans -- Senate Bill 1706" memo, dated March 14, 1995, from Barbara Coler to Statewide Cleanup Operations Branch Chiefs, Site Mitigation Program.)

For sites where a nonemergency removal action is proposed and where a RAP is not required (because the projected cost is less than \$1 million), DTSC or RWQCBs are required to prepare a Removal Action Workplan and make the community aware of the site by preparing or directing the RP to prepare a community profile report. Based on the level of community interest, DTSC will take appropriate public participation actions, which may include conducting a public meeting on proposed removal actions.

NOTE: This exemption was created by Senate Bill 1706 (Stats. 1994, Ch. 441)

Section 25356.1(h)(2) provides an exemption from preparing a RAP if the site is listed on the National Priority List (NPL) and DTSC or RWQCB concurs with the remedy selected by the United States Environmental Protection Agency's (U.S. EPA's) record of decision.

Section 25356.1(h)(3) allows DTSC to waive the requirement that a RAP meet the requirements specified in section 25356.1(d) if the RAP equivalent meets **ALL** the criteria in subdivision 25356.1(h)(3)(A) through (D). The total cost of the removal action must be less than \$2 million.

#### 4. POLICY STATEMENT

As stated in the Background Section, the RAP is the remedy selection document for a hazardous substance release site. Also, the RAP review process is the means by which the public may provide input into DTSC's decision-making process, and is a critical component of the remedy selection process. Therefore, in order to insure public involvement, and considering the exemptions above, it is DTSC policy to prepare a RAP for all sites/operable units except under the following situations: 1) conditions at the site require implementation of a time-critical removal, such as an imminent or substantial endangerment condition or an emergency situation that must be immediately abated, or 2) a removal or remedial action costing less than \$1 million will be implemented and DTSC will be preparing or approving a Removal Action Workplan.

It is also DTSC's policy that the RAP document be written in a clear and concise manner, typically no longer than 10 or 20 pages total length. Maps, figures, and tables should be included only as necessary and present information in a clear and concise manner. In some cases, DTSC may request that the RAP preparer provide the RAP document on a diskette. The Project Manager may then make the necessary revisions to finalize the document.

## 5. RAP PROCEDURE AND GUIDELINES

- 5.1 Preparation of the Draft RAP. Draft RAPs are prepared by either a RP, Project Proponent, DTSC staff or a DTSC contractor. Draft RAPs are reviewed and approved for public comment by Department staff.
- 5.2 Reviewing and Approving the Draft RAP. The Project Manager is responsible for reviewing the Draft RAP to ensure that it complies with the requirements specified in section 25356.1, and with DTSC guidance. After the Project Manager completes the review, he/she will either recommend approval or disapproval of the Draft RAP. If the Project Manager and Unit Chief do not approve the Draft RAP, the document will be sent back to the RAP preparer for corrections/changes. The Unit Chief may also determine that the Project Manager should revise the Draft RAP, and in that case, the Project Manager will request the Draft RAP preparer to provide the document on a diskette. If the Project Manager and Unit Chief recommend approval of the document, the Draft RAP will be forwarded to the Regional Branch Chief for review, approval, and issuance. Each reviewer shall sign-off on the "Draft RAP Approval Record" (see Appendix III.) The Project Manager will also send a form letter to the RPs regarding the Draft RAP, which includes standard language for the preliminary Nonbinding Allocation of Responsibility (NBAR). (See Appendix II-A, and Form Letter #1 in Appendix V.)
- 5.3 CEQA. All CEQA documents shall be prepared, noticed, and distributed concurrently with the Draft RAP. (See Form Letters #2, #3, and #4 in Appendix V.)
- 5.4 Administrative Record List. The Administrative Record List shall be included in the Executive Summary or as an appendix to the Executive Summary. Refer to Management Memo #EO-94-004-MM, "Identification of the Administrative Record."
- 5.5 Notice Requirements. The Draft RAP shall be available for public comment for at least 30 days in accordance with section 25356.1(e). The following actions must be accomplished to initiate the public comment period:
- A notice (display ad) shall be published in newspaper(s) of general circulation in the area affected by the Draft RAP, and shall be posted at the location where the proposed removal or remedial action would be taken. (See Appendix IV.)
  - The notice shall state that DTSC is seeking public input on the Draft RAP and on the CEQA documents, and shall provide notification of the public meeting, the beginning and ending dates of the comment period, a brief description of the removal/remedial action, and

the location(s) where the Draft RAP can be reviewed (information repository and DTSC's Regional Office).

- The RP, project proponent, or DTSC's staff or contractor shall prepare a draft fact sheet for DTSC's review and approval. This fact sheet must provide the major details on the contents of the RAP, include the notice of the public meeting, and state the beginning and ending dates of the 30-day public comment period.
- The Project Manager, Unit Chief, and the Public Participation Specialist shall be responsible for reviewing the draft fact sheet. After the fact sheet is approved, it must then be mailed to local and state agencies, the owners of property contiguous to the site, and any other known interested parties as indicated in the site's Public Participation Plan (PPP) and on the site's mailing list.
- The fact sheet shall be provided to all interested parties prior to the beginning of the public comment period.
- The Draft RAP shall be provided to all PRPs simultaneously, as identified in the Draft RAP. (See Section 7, "RAP Outline" and Form Letter #1 in Appendix V.)
- The Draft RAP shall be available in the information repository (usually the local library). (See Form Letter #3 in Appendix V.)

5.6 Public Meeting. At least one public meeting shall be held around the middle of the 30-day comment period. There must be an accurate record of the meeting, either a tape recording or transcription. The purpose of this public meeting is to present:

- An assessment of the degree of contamination (i.e., the findings of the RI).
- The risks to human health and the environment posed by site conditions.
- A discussion of all alternatives considered, including those rejected.
- A description of the proposed removal or remedial actions.
- An estimate of the time required to perform the removal or remedial actions.
- The rationale for selection of the proposed removal or remedial action.



5.7 Responsiveness Summary. The Responsiveness Summary responds to all oral and written public comments received during the public comment period. The Responsiveness Summary shall be incorporated as an appendix to the Final RAP. In accordance with section 25356.1(f), the Final RAP will reflect any changes which DTSC determines are appropriate in response to the public comments.

- All parties who commented during the public comment period must receive a copy of the Responsiveness Summary (or portions of the Summary), and the address of the information repository where a copy of the Final RAP can be reviewed. (See Form Letter #5 in Appendix V.)

5.8 Final RAP. After the Final RAP has been reviewed by the Project Manager, the Final RAP shall be forwarded to the Unit Chief for review and approval, and then forwarded to the Regional Branch Chief for review and approval. Each reviewer shall sign-off on the "Final RAP Approval Record" (see Appendix VI.) A copy of the Final RAP Executive Summary, along with a copy of the "Final RAP Approval Record" shall be forwarded to Headquarters, Site Mitigation Program.

A copy of the Final RAP shall be distributed as follows:

- To the information repository.
- To all PRPs identified in the Final RAP, along with a transmittal letter stating that the PRPs may seek judicial review of the Final RAP within 30 days from the date of the letter. The PRPs may also dispute allocation of financial responsibility specified in the Final RAP by requesting arbitration within 15 days of date of the letter. (See Form Letter #7 in Appendix V.)

Send form letter to PRPs on the required submittal of the Remedial Design Phase and Implementation Plan. (See Form Letter #8 in Appendix V.)

A notice (display ad) must also be published stating that a Final RAP has been adopted. This notice must be placed in newspaper(s) of general circulation in the area affected by the Final RAP. (See Appendix IV.)

## 6. ROLES AND RESPONSIBILITIES

### 6.1 Site Mitigation Project Manager

- Ensures that the RAP has met all state and federal statutory and regulatory requirements.

- Prepares all transmittal letters on the Draft/Final RAP and NBAR using standard language. (See Form Letters in Appendix V.)
- Ensures coordination of public participation and CEQA requirements.
- Distributes or delegates distribution of Draft/Final RAP as specified in this policy.
- Ensures publication of notice of public meeting.
- Reviews, approves, and ensures distribution of the Fact Sheet.
- Generally makes presentation at public meeting.
- Prepares CEQA documentation.
- Prepares Responsiveness Summary.
- Signs-off on all draft and final RAPs.
- Ensures publication of draft and final RAP (including the Administrative Record) approval notice.
- Sends copy of Executive Summary and RAP sign-off to Headquarters, Site Mitigation Planning and Management Branch.

#### 6.2 Site Mitigation Unit Chief

- Ensures that the Project Manager has completed and conducted all steps shown above.
- Reviews and approves Fact Sheets.
- Reviews all Draft/Final RAPs.
- Signs-off on all Draft/Final RAPs.

#### 6.3 Site Mitigation Branch Chief

- Reviews and approves all Draft/Final RAPs.
- Signs-off on all Draft/Final RAPs.

#### 6.4 Office of Legal Counsel (OLC)

At the request of the Unit Chief, OLC will do the following:

- Review and provide consultation on the NBAR.
- Review Responsiveness Summary or components of Responsiveness Summary.

- Provide consultation on any other legal issues (such as identification of appropriate requirements).

#### 6.5 Public Participation

The Public Participation Specialist will do the following:

- Review and approve fact sheets or public notices.
- Facilitate the public meeting.
- At the request of the Unit Chief, review the Responsiveness Summary or components of the summary.

#### 6.6 Site Mitigation Planning and Management Branch (Headquarters)

- Maintains copy of Executive Summary and RAP Sign-off.

### 7. RAP OUTLINE

The RAP is a public document that should be written in a clear and concise manner (avoid using technical language if possible). It presents DTSC's preliminary decisions and/or DTSC's (or RP's) preliminary recommendations for a site, but should not make definitive findings or statements concerning the alternatives that would later be difficult to revise after public comments or additional data are received. The RAP will also make reference to specific documents where more detailed information is available. Ideally, the RAP text should be between 10 to 20 pages in length.

#### 7.1 Executive Summary

Briefly summarize the following:

- State the purpose of the RAP, which is to comply with the provisions of section 25356.1.
- Provide site name and location;
- Describe the site (the physical features, buildings, brief site history of ownership and site operations, and include a description of the scope and role of the remediation or operable unit;
- Identify the contaminants and chemicals involved within each environmental medium (soil, groundwater, surface water, and air);
- Identify the proposed alternative, and the reasons for proposing that alternative;
- Describe other remedial alternatives that were considered in the RI/FS Report;

- Provide information on how the public can be involved in the remedy selection process.
- In the text, refer to the Administrative Record List (Appendix VII to the Executive Summary. See "Identification of the Administrative Record Management Memo, "EO-94-004-MM, for guidance.)

## 7.2 Site Background

- a) Briefly describe the site's known chemical use, and documented releases (include site map).
  - b) Briefly describe the Department's involvement (oversight) at the site.
  - c) For operable unit RAPs: Briefly describe the scope and role of the operable unit (if appropriate).
- 1) If the RAP does not address the entire site, this optional section should be tailored to the operable unit by describing the scope of the problem addressed by this RAP, and its role within the overall site cleanup strategy. The purpose of each operable unit and its sequence should also be described. All subsequent RAP sections should focus on this operable unit.
    - Describe the scope of problem that the RAP for the operable unit will address.
    - Identify how the RAP for the operable unit addresses principal threat(s).
  - 2) The following example describes operable units, and can be adapted for use at other sites:

"DTSC divided the site into two principal Operable Units (OUs) in June of 1992. Operable Unit A (OU-A) encompasses soils at the site while Operable Unit B (OU-B) encompasses sediments, surface water (in particular Refugio Creek and the San Pablo Bay intertidal mud flat areas), and the groundwater at the site. The purpose of this division into major operable units was to allow the remedial actions for site soils OU-A to proceed while additional investigations of sediments, surface water, and groundwater continued. OU-A is further divided into six OUs, OU-1 through OU-6. This RAP addresses remedial action for OU-A only. OU-B investigations are proceeding separately."

## 7.3 Remedial Investigation

Briefly describe the Remedial Investigation (RI) activities and the scope of the RI. Include map(s) and

figure(s) with location of soil borings and wells; plume maps; and/or soil contamination map(s) as applicable.

#### 7.4 Summary of Removal Actions

Briefly describe the removal actions that were taken prior to the RAP. Removal actions may include, but are not limited to: fencing and posting; drainage control; interim capping; chemical stabilization; removal of contaminated soil; containerized waste removal; setting up alternative water supply; interim groundwater extraction, etc.

#### 7.5 Summary of Site Risks

This section should briefly summarize the extent of contamination at the site and the risks to human health and/or to the environment using information developed during the RI.

- a) Provide an overview of the baseline risk assessment, by describing:
  - 1) Chemicals of concern;
  - 2) Exposure pathways and populations (e.g., routes of exposure, current and future reasonable maximum exposure assumptions, including land-use);
  - 3) Current and potential future site risks (including both carcinogenic and noncarcinogenic threats);
- b) Discuss environmental risks(s), as appropriate, i.e., ecological receptors, potential receptors, potential exposures, and potential effects of exposures; and
- c) Discuss determination of cleanup levels (including appropriate state/federal requirements).

#### 7.6 Summary and Evaluation of Alternatives. Briefly describe the alternatives evaluated in the detailed analysis of the Feasibility Study to include: Engineering components, treatment components, estimated present worth cost, capital and operation and maintenance costs, implementation time, and the major regulatory requirements associated with the alternative(s).

- a) Introduce the nine evaluation criteria. (See Appendix VIII.)
- b) Briefly discuss and evaluate each alternative(s) against the nine evaluation criteria. (See Appendix VIII for a sample text and matrix table(s).)
- c) Identify the proposed alternative.

- d) Provide the rationale for the proposed alternative by highlighting how it compares with the other alternatives (major advantages and disadvantages). Regulatory and community acceptance should be addressed to the extent adequate information is available at the time.

#### 7.7 Appendices to the RAP

- a) Sample Administrative Record List (See the sample provided in Appendix VII.) The Administrative Record List is updated for the Final RAP.
- b) Statement of Reasons, including the Nonbinding Allocation of Responsibility (NBAR), and the evaluation criteria from section 25356.1(d)(1) through (6). (See Appendixes II and II-A for standard language.)
- c) Responsiveness Summary (for Final RAP only). (See Form Letter #5 in Appendix V.)
- d) Final CEQA documents (for Final RAP only).

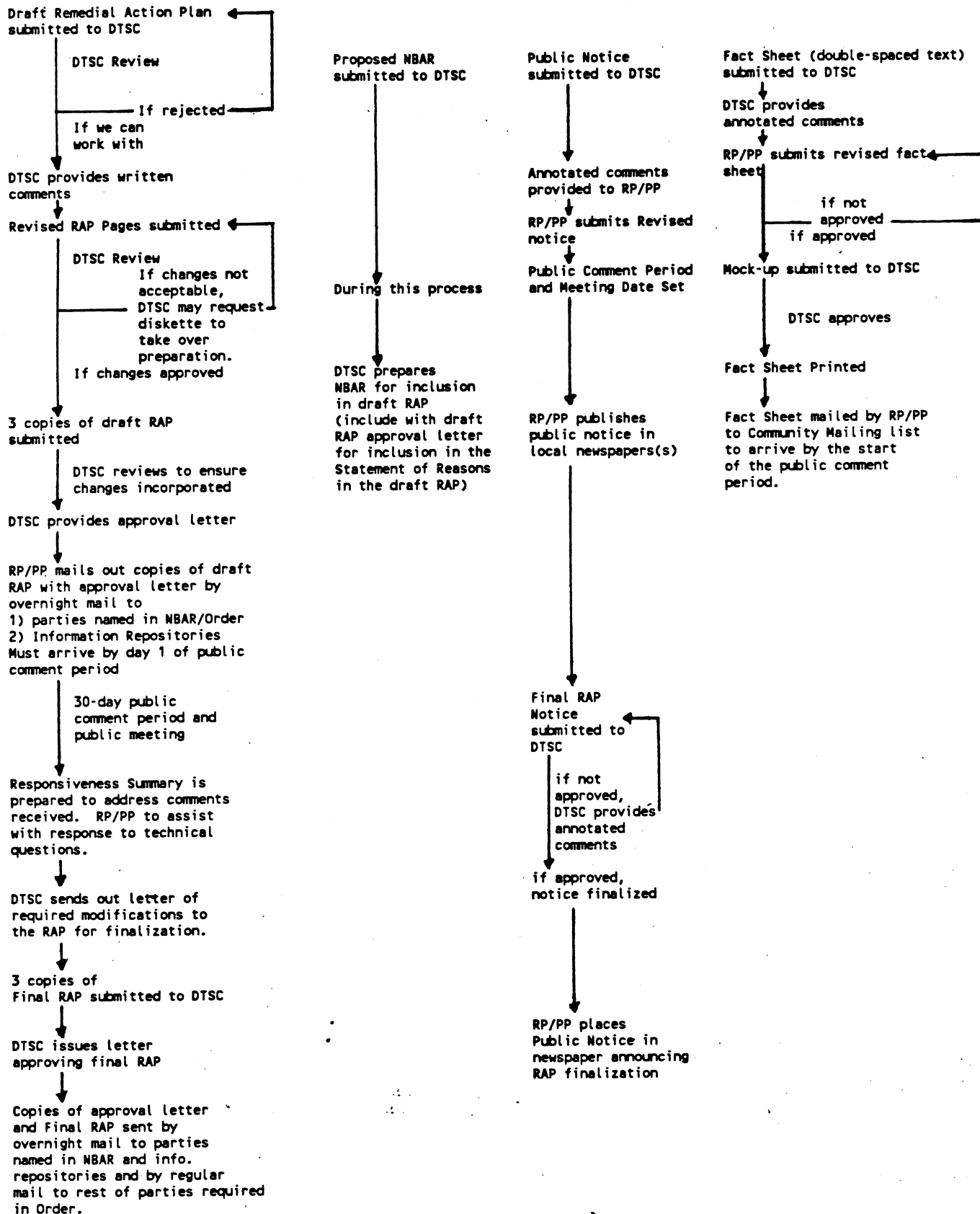
#### 8. OUTLINE FOR RAP (WITH WAIVER OF SECTION 25356.1(d) REQUIREMENTS).

Section 25356.1 requires that all RAPs be prepared pursuant to section 25350, the NCP, and be based upon all of the factors contained in section 25356.1(d)(1) through (6). However, DTSC may waive these requirements if the RP prepares a RAP "equivalent" document that meets all the requirements of section 25356.1(h)(3). DTSC may waive the requirements for a listed site where all of the following apply:

- a) An adequate characterization by the RP of the hazardous substance conditions at the site.
- b) The RP must submit, in a format acceptable to DTSC, all of the following information:
- A description of the techniques and methods to be used in excavating, storing, handling, transporting, treating and disposing of material from the site.
  - A list of the alternative remedial measures which the RP considered when selecting the proposed removal action.
  - A description of methods that will be employed during the removal action to ensure the health and safety of workers and the public during the removal action.

- A description of prior removal actions with similar hazardous substances and with similar public safety and environmental considerations.
- c) DTSC determines whether or not the RAP equivalent provides protection to public health and safety at a level that is consistent with a RAP prepared in accordance with section 25356.1(d).
- d) The total cost of the subject removal action must be less than \$2 million. The cost of a removal action includes the cleanup or removal of hazardous substance releases or the taking of other actions which are necessary to prevent, minimize, or mitigate damage which may result from a release or threatened release, as further defined by section 9601(23) of Title 42 the United States Code.
- e) The exemption contained in section 25356.1(h)(2) does not apply to a removal action that was paid from the Hazardous Substance Cleanup Fund.
- f) A RAP equivalent must include an NBAR, in accordance with section 25356.1(e). (See Appendix II-A.)

REMEDIAL ACTION PLAN PROCESS\*



\*A Negative Declaration, if appropriate, for the proposed remedial action is submitted to DTSC within 45 days of the approval date of the Feasibility Study, together with a copy of the document on diskette. DTSC will then take over the preparation and finalization of the Negative Declaration. RP may be required to assist with technical information.



**APPENDIX II**STATEMENT OF REASONS FOR  
[SITE NAME]  
REMEDIAL ACTION PLAN

Pursuant to California Health and Safety Code (HSC), section 25356.1(d), the California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC) has prepared this Statement of Reasons as part of the attached Remedial Action Plan (RAP) for the [site name] at [site address: street, city, county and State].

The RAP presents a summary of the Remedial Investigation (RI) to address [list types of chemicals contaminants, compounds found] that have been detected in [list media, e.g. soil, groundwater, surface water] at and near the [site name]. The RAP summarizes the results of a Baseline Risk Assessment performed to determine the potential risks to public health and the environment associated with the [list types of chemical contaminants, compounds found]. The RAP also provides a discussion of the feasible remedial alternatives that were evaluated in the Feasibility Study (FS). The RAP recommends a remedial alternative that will meet the objectives of protecting public health and the environment. The RAP proposes remediation of [list media to be cleaned up] by [describe proposed remedial measures].

The DTSC believes that the attached RAP complies with the law as specified in California Health and Safety Code, section 25356.1. Section 25356.1(e) requires that RAPs "shall include a statement of reasons setting forth the basis for the removal and remedial actions selected." The statement of reasons "shall also include an evaluation of the consistency of the removal and remedial actions proposed by the plan with the federal regulations and factors specified in subdivision (d)..." Subdivision (d) specifies six factors against which the remedial alternatives in the RAP must be evaluated. The proposed remedial action is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (the National Contingency Plan, "NCP"), the federal Superfund regulations. The attached RAP has addressed all these factors in detail. A brief summary of each factor follows. The statement of reasons also includes the preliminary Nonbinding Allocation of Responsibility (NBAR) as required by HSC section 25356.1(e).

**APPENDIX II**1. Health and Safety Risks - Section 25356.1(d)(1)

The chemicals of concern identified for this site are [list chemicals of concern by media].

The risk assessment evaluated potential exposures for [list scenarios considered, e.g., residential, worker, etc.]. [Discuss those pathways which represent a possible health risk].

2. Beneficial Uses of the Site Resources - Section 25356.1(d)(2)

[Discuss beneficial uses of surface water, groundwater, land].

3. Effect of the Remedial Actions on Groundwater Resources

Available technologies were evaluated to meet remedial action objectives for soil and groundwater. A variety of scientific engineering approaches and technologies were considered. [For sites with soil and groundwater problems, it may be appropriate to say: "The primary remedial action objectives are to reduce chemical concentrations in groundwater, limit the migration of chemicals from the soil into groundwater, and restrict further downgradient movement of contaminated groundwater."] [Describe beneficial uses of groundwater]. The proposed remedial alternative will result in [describe impact on groundwater].

4. Site-Specific Characteristics - Section 25356.1(d)(4)

Chemicals in soil and groundwater beneath the site have been extensively characterized. [Describe the following: 1) Potential for offsite migration; 2) Commingling, if present, with other contamination; and 3) Site-specific soil/hydrogeological conditions which may affect contaminant movement].

5. Cost-Effectiveness of Alternative Remedial Action Measures - Section 25356.1(d)(5)

The proposed remedial action alternative [describe alternative] was the most cost-effective alternative to meet the cleanup objectives.

**APPENDIX II**6. Potential Environmental Impacts of Remedial Actions - Section 25356.1(d)(6)

All potential impacts will be mitigated under the proposed remedial alternative. The proposed remedial alternative will not create any significant environmental impacts. Because of this, a Negative Declaration was proposed pursuant to the California Environmental Quality Act (CEQA) for the recommended remedial alternative. An Environmental Study Checklist was completed for the [site name] which discussed potential environmental impacts of the recommended remedial alternative, as well as actions that will be taken to reduce or eliminate these potential environmental impacts during implementation. The CEQA Environmental Study Checklist and proposed Negative Declaration are being distributed (under separate cover) for a 30-day public comment period. [For the Final RAP, revise the last sentence to indicate that CEQA documents were distributed]

7. Preliminary Nonbinding Allocation of Financial Responsibility - Section 25356.1(e)

The RAP must include a "nonbinding preliminary allocation of responsibility (NBAR) among all identifiable potentially responsible parties at a particular site, including those parties which may have been released, or may otherwise be immune, from liability..." (HSC section 25356.1(e)). The current NBAR for the [site name], as issued by the DTSC, is presented on the next page. [The NBAR should be printed on DTSC letterhead]

**APPENDIX II-A**

## PRELIMINARY NONBINDING ALLOCATION OF RESPONSIBILITY

Health and Safety Code (HSC) section 25356.1(e) requires the Department of Toxic Substances Control (DTSC) to prepare a preliminary nonbinding allocation of responsibility (the "NBAR") among all identifiable potentially responsible parties (PRPs). HSC section 25356.3(a) allows PRPs with an aggregate allocation in excess of 50% to convene an arbitration proceeding by submitting to binding arbitration before an arbitration panel. If PRPs with over 50% of the allocation convene arbitration, then any other PRP wishing to do so may also submit to binding arbitration.

The sole purpose of the NBAR is to establish which PRPs will have an aggregate allocation in excess of 50% and can therefore convene arbitration if they so choose. The NBAR, which is based on the evidence available to the DTSC, is not binding on anyone, including PRPs, DTSC, or the arbitration panel. If a panel is convened, its proceedings are de novo and do not constitute a review of the provisional allocation. The arbitration panel's allocation will be based on the panel's application of the criteria spelled out in HSC section 25356.3(c) to the evidence produced at the arbitration hearing. Once arbitration is convened, or waived, the NBAR has no further effect, in arbitration, litigation or any other proceeding, except that both the NBAR and the arbitration panel's allocation are admissible in a court of law, pursuant to HSC section 25356.7 for the sole purpose of showing the good faith of the parties who have discharged the arbitration panel's decision.

DTSC sets forth the following preliminary nonbinding allocation of responsibility for the [name] site:

[Name of RP] is allocated [percentage] responsibility; [name of RP] is allocated [percentage] responsibility [name of RP] is allocated [name of RP]; etc.

APPENDIX III

DRAFT REMEDIAL ACTION PLAN APPROVAL RECORD  
SIGN-OFF SHEET

\_\_\_\_\_  
Site Name

\_\_\_\_\_  
Project Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Unit Chief

\_\_\_\_\_  
Date

\_\_\_\_\_  
Site Mitigation Branch Chief

\_\_\_\_\_  
Date

\_\_\_\_\_  
Division Chief/Deputy Director

\_\_\_\_\_  
Date

[Signature authority has been delegated to specific Branch Chiefs; however on a site-specific basis either the Division Chief or Deputy Director may elect to sign.]

**APPENDIX IV**

**"S A M P L E"  
PUBLIC NOTICE DISPLAY ADVERTISEMENT  
(DRAFT RAP)**

**CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL  
PUBLIC MEETING NOTICE  
TELEDYNE-SINGER SITE**

Librascope Corporation, with the cooperation and oversight of the California Department of Toxic Substances Control (DTSC), has been investigating soil and groundwater at the Teledyne-Singer Site in the Hillview-Porter Region of the Stanford Research Park in Palo Alto. The investigation is one of nine separate investigations within a larger regional investigation. Results of investigations have been incorporated into a Draft Remedial Action Plan which outlines the preferred method of mitigating chemicals at the Site.

Following a thorough remedial investigation of the Site and completion of an exposure assessment and feasibility study, Librascope Corporation proposes to expand the existing groundwater extraction and treatment system to remediate chemicals in the groundwater. This extraction and treatment system will provide effective remediation of the groundwater for the Site and thereby protect human health and the environment. DTSC has determined that these activities will not have any significant environmental impact. Pursuant to the California Environmental Quality Act of 1970, DTSC is proposing a "Negative Declaration" for the remedial activities recommended in the Draft Remedial Action Plan.

A public meeting will be held to provide information about the Draft Remedial Action Plan and the Negative Declaration. DTSC representatives will be present at the meeting to discuss these documents, answer questions, and receive comments from the public.

Interested citizens are encouraged to attend:

Saturday, November 14, 1992 - 1 p.m.  
Hoover Elementary School  
800 Barron Avenue  
Palo Alto, California

The public is invited to comment on both the Draft Remedial Action Plan and the Negative Declaration. A 30-day comment period will be open November 6, 1992 through December 7, 1992. Copies of both documents are available for review at:

<b>U.S.G.S. Library</b> (415) 329-5027 345 Middlefield Road Menlo Park, CA 94025 Hours: M-F, 8 am - 5 pm	<b>Palo Alto Public Library</b> (415) 329-2436 1213 Newell Road Palo Alto, CA Hours: M-F, 10 am - 9 pm Sat. 10 am - 5 pm Sun. 1 pm - 5 pm	<b>Barron Park Neighborhood Information Repository</b> Contact Dr. Inge Harding-Barlow for an appointment (415) 493-8146
----------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------

Interested citizens may submit comments to the DTSC at the public meeting or directly to the Department of Toxic Substances Control, 700 Heinz Avenue, Suite 200, Berkeley, CA 94710.

Janet Naito Project Officer (510) 540-3833	Carol Northrup Public Participation Specialist (510) 540-3928
--------------------------------------------------	---------------------------------------------------------------------

**"S A M P L E"**  
**PUBLIC NOTICE DISPLAY ADVERTISEMENT**  
**(FINAL RAP)**

**CALIFORNIA DEPARTMENT**  
**OF TOXIC SUBSTANCES CONTROL**  
**PUBLIC NOTICE**  
**MANSION GROVE SITE**

The California Environmental Protection Agency; Department of Toxic Substances Control (DTSC) announces the finalization of the Remedial Action Plan (RAP) for the Mansion Grove Site at 4101 Lick Mill Boulevard, Santa Clara, California. A public meeting was held on October 6, 1994, to discuss the draft Remedial Action Plan.

Test results show that VOCs and paraldehyde are present in groundwater and VOCs are also present in the soil in two areas of the Site. Final remediation of chemically-affected soils will involve the continued operation of the existing soil vapor extraction and granular activated carbon treatment system. Final remediation of the chemically-affected groundwater will involve groundwater extraction and treatment using a combination of air stripping and granular activated carbon treatment. The extraction and treatment systems will provide effective remediation of groundwater beneath and near the site and thereby protect human health and the environment.

The remedial activities will be conducted with oversight by DTSC. It is anticipated that the final remedial action for groundwater will be completed by August 1995. DTSC encourages the exchange of information with interested and concerned citizens. If you would like more information or have questions or comments on the Final RAP, please call or write:

**[Project Manager Name]**, Project Manager  
**[Telephone Number]**  
California Environmental Protection Agency  
Department of Toxic Substances Control  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710

**APPENDIX V**

Letter 1  
Page 1

[ Date ]

[RP Contact]  
[Address]

Dear \_\_\_\_\_:

SITE NAME, ORDER NO. HSA \_\_\_\_\_  
SITE ADDRESS - DRAFT REMEDIAL ACTION PLAN

The Department of Toxic Substance Control (DTSC) has completed review of the Draft Remedial Action Plan (draft RAP) submitted [date]. The draft RAP is approved for public comment. DTSC's preliminary nonbinding allocation of responsibility (NBAR) is enclosed. As discussed previously, the NBAR should be inserted at the end of Appendix [\_\_\_] and a copy of the draft RAP must be sent to each of the potentially responsible parties named in the NBAR via overnight mail. A copy of the enclosed letter should be mailed with the copy of the draft RAP.

If you have any questions or comments, please contact [Project Manager] at [phone number].

Sincerely,

Site Mitigation Branch Chief

Enclosures



**APPENDIX V**

Letter 1  
Enclosure 1

[ Date ]

SAME LETTER SENT TO ATTACHED LIST

Dear Sir or Madam:

[SITE NAME], ORDER NO. HSA [\_\_\_\_\_]  
[SITE ADDRESS] - DRAFT REMEDIAL ACTION PLAN

The Department of Toxic Substance Control (DTSC) has completed review of the Draft Remedial Action Plan (draft RAP) submitted [date]. The draft RAP for the subject site is approved for public comment. As your company has been named as a potentially responsible party in the Department's preliminary nonbinding allocation of responsibility (see Appendix [\_\_\_] of the draft RAP), you are being sent a copy of the draft RAP. The public comment period for this document will be from [insert beginning date] through [insert ending date].

If you have any questions or comments, please contact [Project Manager] at [phone number].

Sincerely,

Site Mitigation Branch Chief

Enclosures

**APPENDIX V**Letter 1  
Enclosure 2

## PRELIMINARY NONBINDING ALLOCATION OF RESPONSIBILITY

Health and Safety Code (HSC) section 25356.1(e) requires the Department of Toxic Substances Control (DTSC) to prepare a preliminary nonbinding allocation of responsibility (the "NBAR") among all identifiable potentially responsible parties (PRPs). HSC section 25356.3(a) allows PRPs with an aggregate allocation in excess of 50% to convene an arbitration proceeding by submitting to binding arbitration before an arbitration panel. If PRPs with over 50% of the allocation convene arbitration, then any other PRP wishing to do so may also submit to binding arbitration.

The sole purpose of the NBAR is to establish which PRPs will have an aggregate allocation in excess of 50% and can therefore convene arbitration if they so choose. The NBAR, which is based on the evidence available to the DTSC, is not binding on anyone, including PRPs, DTSC, or the arbitration panel. If a panel is convened, its proceedings are de novo and do not constitute a review of the provisional allocation. The arbitration panel's allocation will be based on the panel's application of the criteria spelled out in HSC section 25356.3(c) to the evidence produced at the arbitration hearing. Once arbitration is convened, or waived, the NBAR has no further effect, in arbitration, litigation or any other proceeding, except that both the NBAR and the arbitration panel's allocation are admissible in a court of law, pursuant to HSC section 25356.7 for the sole purpose of showing the good faith of the parties who have discharged the arbitration panel's decision.

DTSC sets forth the following preliminary nonbinding allocation of responsibility for the [name] site:

[Name of RP] is allocated [percentage] responsibility; [name of RP] is allocated [percentage] responsibility [name of RP] is allocated [name of RP]; etc.

**APPENDIX V**

Letter 2

[ Date ]

VIA OVERNIGHT MAIL

Office of Planning and Research  
1400 Tenth Street, Room 121  
Sacramento, California 95814

To Whom It May Concern:

SITE NAME, SITE ADDRESS - PROPOSED NEGATIVE DECLARATION FOR THE  
REMEDIAL ACTION PLAN

Enclosed please find ten copies of our Proposed Negative Declaration and supporting documentation (Appendix \_\_\_\_, Checklist and Initial Assessment) for implementation of the remedial action plan at the [Site Name].

Please arrange for the distribution of the Proposed Negative Declaration to all appropriate agencies.

Thank you for your assistance in this matter. If you have any questions, please contact [Project Manager] at [phone number].

Sincerely,

Site Mitigation Branch Chief

Enclosures

**APPENDIX V**

Letter 3

[ Date ]

[Letter to Librarians/Repository]

Dear Librarians:

[SITE NAME], [SITE ADDRESS] - PROPOSED NEGATIVE DECLARATION FOR THE  
REMEDIAL ACTION PLAN

Enclosed is a copy of the Proposed Negative Declaration for the Remedial Action Plan. This document was prepared to meet the requirements of the California Environmental Quality Act. The public review and comment period is scheduled for [insert beginning date] through [insert last day]. Your assistance in ensuring that this document is available for public review is appreciated.

If you have any questions, please contact [Project Manager] at [phone number].

Sincerely,

Unit Chief  
Site Mitigation Branch

Enclosure

**APPENDIX V**

Letter 4

[ Date ]

[ INTERESTED PARTIES ]  
[ Address ]

Dear \_\_\_\_\_:

[ SITE NAME ], [ ORDER NO. HSA \_\_\_\_\_ ]  
[ SITE ADDRESS ] - PROPOSED NEGATIVE DECLARATION FOR THE REMEDIAL ACTION  
PLAN

Enclosed please find a copy of the proposed Negative Declaration for implementation of the remedial measures proposed in the draft Remedial Action Plan for the [ Site Name ]. This document was prepared to meet the requirements of the California Environmental Quality Act. The public review and comment period is scheduled for [ beginning date ] through [ ending date ].

If you have any questions or would like to provide comments on the proposed Negative Declaration, please contact [ Project Manager ] at [ phone number ].

Sincerely,

Unit Chief  
Site Mitigation Branch

Enclosure

**APPENDIX V**

Letter 5  
Page 1 of 3

[ Date ]

[Letter to Interested Parties]  
[Address]

Dear \_\_\_\_\_:

[SITE NAME], [ADDRESS] RESPONSIVENESS SUMMARY FOR PUBLIC COMMENTS  
RECEIVED ON THE DRAFT REMEDIAL ACTION PLAN DATED [\_\_\_\_\_]

On [public meeting date], the Department of Toxic Substances Control (DTSC) of the California Environmental Protection Agency held a public meeting for the draft Remedial Action Plan (draft RAP) for the [Site Name], located at [Site address, city, county] California.

The purpose of the meeting was to provide information regarding the draft RAP and to solicit public comments on the adequacy of the plans. In addition, comments on the draft RAP were submitted to the DTSC during the 30-day public comment period.

The 30-day public comment period ran from [beginning date] through [ending date]. Notices of the comment period were placed in the [repository] and the [newspaper]. The Fact Sheet [insert title of Fact Sheet], which discusses the draft RAP and the proposed site cleanup methods, was mailed out on [date]. Copies of the Fact Sheet and Display Advertisements are included in Attachment [\_\_\_\_\_].

The draft RAP proposed [briefly summarize].

The verbal and written comments received during the meeting and comment period are compiled and included in this Responsiveness Summary. The purpose of this document is to present a written response by DTSC to these comments. The Responsiveness Summary and the public meeting transcript are included in the Final RAP.

This Responsiveness Summary is organized as follows:

- Section I is the Introduction.

**APPENDIX V**

Letter 5  
Page 2 of 3

- Section II lists the comments received and provides responses to those comments:
  - Section II.A provides responses to comments received in the Community Questionnaires which were mailed with the Fact Sheet [title];
  - Section II.B provides responses to comments made to DTSC over the telephone;
  - Section II.C provides responses to verbal comments received at the public meeting;
  - Section II.D provides responses to written comments received during the public comment period.
- Attachment A provides copies of the Fact Sheet and Display Advertisements.
- Attachment B provides copies of the Community Questionnaires that were returned.
- Attachment C provides a map showing the location of the site.
- Attachment D provides copies of the written comments received.
- Attachment E includes a copy of the transcript for the community meeting held on [date].

A copy of the Final RAP and other site-related documents are available for review at:

Department of Toxic Substances Control  
[Address]  
[Phone number]  
Hours: [Insert hours of operation including days of the week]  
[Name of Repository]  
[Address]  
[Phone number]  
Hours: [Insert hours of operation including days of the week]

**APPENDIX V**

Letter 5  
Page 3 of 3

If you have any questions or comments, please contact [Project Manager] at [phone number].

Sincerely,

Site Mitigation Branch Chief

Attachments



**APPENDIX V**

Letter 6  
Page 1 of 2

[ Date ]

[RP Contact]  
[Address]

Dear \_\_\_\_\_:

[SITE NAME], [ORDER NO. HSA \_\_\_\_\_]  
[SITE ADDRESS] - DRAFT REMEDIAL ACTION PLAN (RAP)

The public comment period for the draft Remedial Action Plan (RAP ended [date]. The following changes must be made to the draft RAP prior to finalization.

[EXAMPLES OF CHANGES ARE LISTED BELOW. PLEASE INSERT THE REQUIRED CHANGES AND CITE APPROPRIATE PAGE NUMBER(S) AND SECTION(S) OF THE RAP]

1. Title Page/Cover Page. The document title should be modified to:  

FINAL REMEDIAL ACTION PLAN
2. Table of Contents. The Responsiveness Summary and the Negative Declaration should be included as Appendices \_\_\_\_ and \_\_\_\_.
3. Text. All references to a "draft RAP" or "draft Remedial Action Plan" should be revised to "Final Remedial Action Plan" or "Final RAP."
4. Change any references to the draft Negative Declaration.
5. The approval date for the Final RAP should be revised to the actual date the Final RAP is approved.
6. Statement of Reasons, Item #6. Please revise this section to note that the Environmental Study Checklist and the Negative Declaration were prepared and have undergone a 30-day public comment period.

**APPENDIX V**

Letter 6  
Page 2 of 2

A Final RAP, incorporating the above changes and including the Responsiveness Summary and the California Environmental Quality Act (CEQA) Negative Declaration, should be submitted no later than [insert date and time]. After a brief review to ensure that the above mentioned comments have been incorporated into the document, it is anticipated that a letter approving the Final RAP will be telecopied to you and to your consultant.

Once you receive this letter, copies of the approved Final RAP and the approval letter must be sent (by overnight mail) to each of the Information Repositories and to each of the potentially responsible parties named in the NBAR. A public notice announcing the finalization of the RAP must be published in the [newspaper]. Copies of the tear sheets from the notice must be forwarded to the Department of Toxic Substances Control for our files. Please send these to my attention.

I have discussed the above with [RP or Consultant Name]. All affected pages from the RAP (with changes highlighted) should be submitted no later than [insert date] for pre-approval.

We look forward to the implementation of the RAP and appreciate your cooperation in achieving our mutual cleanup objectives. If you have any questions, please contact [Project Manager] at [phone number].

Sincerely,

Unit Chief  
Site Mitigation Branch

**APPENDIX V**

Letter 7  
Page 1 of 1

[ Date ]

[LETTER TO RESPONSIBLE PARTIES]

Dear [Responsible Parties]:

[SITE NAME], [ADDRESS]  
[ORDER NO. \_\_\_\_\_] - FINAL REMEDIAL ACTION PLAN

This letter is to notify you that the Final Remedial Action Plan (RAP) has been adopted for the [Site Name]. The Department of Toxic Substances Control (DTSC) has determined that the RAP satisfactorily addresses all applicable state and federal statutes and regulations.

Enclosed is a copy of the Final RAP. You have the option to seek judicial review of the RAP (within 30 days of the date that the RAP was issued). Based upon the percentage of financial responsibility assigned, you may also be eligible to dispute the preliminary allocation of financial responsibility, as specified in the RAP, by convening an arbitration proceeding (within 15 days of the date of the issuance of the Final RAP) and agreeing to binding arbitration by the arbitration panel. To exercise the arbitration option, it is necessary that the party or parties making the request be assigned a greater than 50% of the responsibility for the site.

You should also be aware that neither filing for judicial review or requesting arbitration will stay implementation of the cleanup actions specified in the final RAP.

If you have any questions or comments, please contact [Project Manager] at [phone number].

Sincerely,

Site Mitigation Branch Chief

Enclosure

cc: See next page.

**APPENDIX V**

Letter 8  
Page 1 of 2

[ Date ]

[LETTER TO RESPONSIBLE PARTIES]

[RP Contact]  
[Address]

Dear [\_\_\_\_\_]:

[SITE NAME], [ADDRESS]  
[ORDER NO. HSA \_\_\_\_\_] - REMEDIAL DESIGN PHASE

Congratulations on completion of the Final Remedial Action Plan (FRAP) for this Site. Pursuant to Section [\_\_\_\_\_] of Order No. HSA [\_\_\_\_\_], submittal of a Remedial Design and Implementation Plan (RDIP) will be required on or before [insert date]. The RDIP should contain technical/operational plans and engineering designs for implementation of the approved remedial alternative, and a schedule for implementing the construction phase. The Workplan shall also describe:

- the nature and design of the construction equipment to be employed;
- a site-specific hazardous waste transportation plan;
- a traffic control plan;
- the identity of any contractors, transporters and other persons conducting the remedial activities for the Site;
- post remedial sampling and monitoring procedures for air, soil, surface water and groundwater;
- operation and maintenance procedures and schedules; and
- all elements required by the Order, Exhibit [ ], paragraphs [cite specific paragraphs] as they pertain to the remedial and operation and maintenance activities. As previously discussed, the Department of Toxic Substances Control will also require the following submittals no later than [insert date].

**APPENDIX V**

Letter 8  
Page 2 of 2

- Schedule for submitting all permit applications; and
- Identification of all potential access requirements.

Thank you for your continued cooperation. If you have any questions, please contact [Project Manager] at [phone number].

Sincerely,

Unit Chief  
Site Mitigation Branch

cc: See next page.

APPENDIX VI

FINAL REMEDIAL ACTION PLAN APPROVAL RECORD  
SIGN-OFF SHEET

---

Site Name

---

Project Manager      Date

---

Unit Chief      Date

---

Site Mitigation Branch Chief      Date

---

Division Chief/Deputy Director      Date

[Signature authority has been delegated to specific Branch Chiefs; however on a site-specific basis either the Division Chief or Deputy Director may elect to sign.]

**"SAMPLE" ADMINISTRATIVE RECORD LIST****APPENDIX VII**

Date	Author	Receiver	Title of Document
06/23/94	Bojan Gustincic (Varian)	Barbara Coler (DTSC)	REVISED SOIL OPERABLE UNIT RI/FS
06/15/94	Bojan Gustincic (Varian)	Barbara Coler (DTSC)	MAY 1994 MONTHLY PROGRESS REPORT
06/03/94	Bojan Gustincic (Varian)	Barbara Coler (DTSC)	RESPONSE TO DTSC COMMENTS ON RI/FS
05/25/94	Gary Kern (Varian)	Susan Gladstone (CRWQCB)	DRAFT GENERAL NPDES PERMIT FOR DISCHARGE OR REUSE OF EXTRACTED AND TREATED GROUNDWATER RESULTING FROM CLEANUP OF GROUNDWATER POLLUTED BY VOLATILE ORGANIC COMPOUNDS
05/18/94	Barbara Coler (DTSC)	Gary Kern (Varian)	NOTICE OF COMPLETED REVIEW OF RI/FS SOIL OPERABLE UNIT AND REQUEST FOR RESUBMITTAL
05/17/94	Barbara Coler (DTSC)	Gary Kern (Varian)	DISCUSSING CHANGE OF PROJECT MANAGEMENT FROM MS. BONNIE ARTHUR TO ALFRED WANGER
05/13/94	Bojan Gustincic (Varian)	Barbara Coler (DTSC)	APRIL 1994 MONTHLY PROGRESS REPORT
05/06/94	Barbara Coler (DTSC)	Gary Kern (Varian)	DISCUSSING CHANGE OF CONTACT FROM BARBARA COOK TO BARBARA COLER
04/25/94	Steve Morse (CRWQCB)	Varian	TENTATIVE ORDER FOR GENERAL NPDES PERMIT FOR DISCHARGE OR REUSE OF EXTRACTED AND TREATED GROUNDWATER RESULTS FROM THE CLEANUP OF GROUNDWATER POLLUTED BY VOCs
04/20/94	Bojan Gustincic (Varian)	Barbara Cook (DTSC)	SOIL OPERABLE UNIT RI/FS
04/14/94	Bojan Gustincic (Varian)	Barbara Cook (DTSC)	REQUEST FOR EXTENSION OF SUBMITTAL DATE FOR SOIL OPERABLE UNIT RI/FS
04/11/94	Bojan Gustincic (Varian)	Barbara Cook (DTSC)	MARCH 1994 MONTHLY PROGRESS REPORT
03/31/94	Barbara Coler (DTSC)	Bojan Gustincic (Varian)	DISCUSSING NOTICE OF COMPLETE REVIEW OF REVISED "REGULATORY AND COMMUNITY ACCEPTANCE" SECTION OF "REVISED FEASIBILITY STUDY (FS), GROUNDWATER OPERABLE UNIT"
03/21/94	Bojan Gustincic (Varian)	Barbara Cook (DTSC)	REVISED PAGE 4-5 OF REVISED FEASIBILITY STUDY REPORT. GROUNDWATER OPERABLE UNIT
03/21/94	Barbara Coler (DTSC)	Bojan Gustincic (Varian)	COMPLETED REVIEW AND REQUESTED MODIFICATION OF "REVISED FEASIBILITY STUDY (FS), GROUNDWATER OPERABLE UNIT"

## THE NINE EVALUATION CRITERIA

Health and Safety Code section 25356.1(d) requires that RAPs be based on the NCP. The NCP identifies the nine criteria, or standards, to evaluate alternatives for cleaning up a hazardous substance release site. The nine criteria, as modified for the State of California, are summarized below:

1. Overall Protection of Human Health and the Environment

Addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

2. Compliance with State and Federal Requirements

Addresses whether or not a remedy will meet all appropriate federal, state, and local environmental laws and regulations.

3. Long-term Effectiveness and Permanence

Refers to the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met.

4. Reduction of Toxicity, Mobility and Volume (TMV) through Treatment

Refers to the ability of a remedy to reduce the toxicity, mobility, and volume of the hazardous substances or constituents present at the site.

5. Cost - 30 - Year Present Worth

Evaluates the estimated capital, operation and maintenance costs of each alternative.

6. Short-Term Effectiveness

Addresses the period of time needed to complete the remedy, and any adverse impact on human health and the environment that may be posed during the construction and implementation period, until the cleanup standards are achieved.

7. Implementability

Refers to the technical and administrative feasibility of a remedy, including the availability of materials and services needed to carry out a particular option.



8. Regulatory Agency Acceptance

Indicates whether, based on its review of the information, the applicable regulatory agencies would agree with the preferred alternative.

9. Community Acceptance

Indicates whether community concerns are addressed by the remedy, and whether or not the community has a preference for a remedy.

In order for an alternative to be eligible for selection, it must meet the first two criteria described above, called "threshold criteria." Criteria 3 through 7 are the "primary balancing criteria," and criteria 8 and 9 are "modifying criteria." See the NCP (40 CFR 300.430(e)) for a discussion on the use of these criteria.

## APPENDIX VIII

TABLE 5

Alternative	Project Cost	Capital Cost	Annual Operation and Maintenance Cost	Estimated Cleanup Time in Years
#2 RCRA Equiv. Cap	\$24,686,000	\$ 8,016,000	\$736,000	2
#3 SVE & RCRA Equiv. Cap	\$36,254,000	\$17,023,000	\$741,000	9.4
#4 Incineration 0-14 feet SVE, Cap	\$74,756,000	\$57,780,000	\$ 60,000	7.5
#5 Solidification 0-10 feet SVE, Cap	\$41,918,000	\$31,992,000	\$ 60,000	9.6
#6 Solidification 0-14 feet SVE, Cap	\$53,073,000	\$40,752,000	\$ 60,000	7.6
#7 Solidification 500 ppm, lead SVE, Cap	\$55,861,000	\$42,942,000	\$ 60,000	7.8
#8 Off-site Treatment & Disposal, 0-14 feet, SVE, Cap	\$63,659,000	\$49,066,000	\$ 60,000	6.5

## APPENDIX VIII

**EXAMPLE OF THE USES OF THE  
REMEDY SELECTION CRITERIA**

The example below is provided to demonstrate how the nine criteria can be utilized when evaluating remedial alternatives. This example is for a soil operable unit in a draft RAP.

**SUMMARY ANALYSIS OF ALTERNATIVES AGAINST THE NINE CRITERIA**

An evaluation of the eight alternatives in relation to the nine decision making criteria is summarized below.

1. Overall Protection of Human Health and the Environment

All of the alternatives, with the exception of the "no action" alternative, meet this criterion by minimizing or eliminating the risks from direct contact with soils and by minimizing or eliminating the source of groundwater contamination.

2. Compliance with Applicable Requirements

All of the alternatives, with the exception of the "no action" alternative, meet this criterion. Applicable requirements are not applied to the "no action" alternative since no activity is taking place.

Since the "no action" alternative is not protective of human health and the environment, it will not be discussed further in the criteria analysis.

3. Long-Term Effectiveness and Permanence

The alternatives involving treatment or removal of the upper layers of soil as well as treatment of the lower layers of soil, provide the highest degree of long-term effectiveness.

The selected alternative, Alternative #3, would leave waste in place in the upper layers. However, the waste will be isolated by the cap and slurry walls, thus eliminating direct contact with the waste material and minimizing leaching to groundwater. The selected alternative will undergo a review every 5 years to insure protection of human health and the environment as required by EPA when waste is left in place.

**APPENDIX VIII**4. Reduction of Toxicity, Mobility and Volume through Treatment

All alternatives with the exception of Alternative #2, RCRA cap, would remove approximately 24,387 pounds of VOCs from soil below 14 feet through the action of the SVE system.

Alternative #3 assumes that 25% or 17,950 pounds of VOCs in the upper layers would move into the lower layers and be treated. The mobility of contaminants in all soil layers would be reduced by the cap and slurry walls.

The solidification Alternative #5 - #7, would reduce the toxicity, mobility and volume of both volatile organic and inorganic contaminants by heating the excavated waste to remove VOCs and then stabilizing the soil to encapsulate the inorganics, including lead.

Approximately 99.99% of the VOCs in the upper layers of soil would be destroyed through incineration, Alternative #4. The incineration ash would be stabilized, thereby encapsulating the lead.

5. Cost

See Table 5. The total project cost is the present value of capital costs and operation and maintenance costs.

6. Short-term Effectiveness

Alternative #2 would have the least short-term impacts on site workers and nearby residents and workers because there would be no excavation of the waste. All of the alternatives that have excavation components (Alternative #3 - #7) would have short-term impacts on the community and workers due to air emissions generated during excavation. Air emissions would be controlled.

See Table 5 for estimated clean-up times.

7. Implementability

All of the alternatives employ treatment technologies that have been proven effective in the field. Additionally, treatability studies performed on site waste showed that incineration and stabilization were effective in treating the contaminated soil.

8. Regulatory Acceptance

The Regional Water Quality Control Board has provided input during the investigations at the site and supports the preferred alternative. The Air Pollution Control District has permit authority over emissions from the SVE treatment system and their requirements will be met. (If this is the Final RAP with public comments received, the acceptance of the selected alternatives should be generally described.)

9. Community Acceptance

The community has been involved through the Public Participation Plan. One community meeting has been held so far, and the community expressed the desire to take remedial actions that will stop the spread of contamination. The community will have the opportunity to comment on the draft RAP through the 30-day comment period and at the public meeting.

Table 6 provides a comparative analysis of the eight alternatives in relation to the nine criteria.

10. The Proposed Remedy (or Selected Remedy if this is a Final RAP)

Based upon consideration of the requirements of Health and Safety Code section 25356.1, the detailed analysis of the alternatives using the nine criteria, DTSC has determined that Alternative #3 (Soil Vapor Extraction and RCRA Equivalent Cap with Slurry Walls) is the proposed remedy for the site.

The first step in implementing this alternative, will be to construct a slurry wall along the site boundaries to minimize the migration of contaminants. The wall will be constructed by excavating a trench approximately 25 feet deep and 2 to 4 feet wide around the perimeter of the site. The trench will be filled with a slurry of soil mixed with bentonite clay. Rubble uncovered during excavation of the trench will depending on the level of contamination be transported off-site to an appropriate RCRA facility or disposed onsite. Foam will be applied as necessary to control emissions during construction of the slurry wall.

**APPENDIX VIII**

Following construction of the slurry wall, the site will be graded and all contaminated canal sediments will be excavated and spread over the site. It is estimated that approximately 500 cubic yards of sediment will require excavation. The western 2/3 of the site is 3 to 5 feet above the surrounding land due to the rubble used to fill the former waste pits. Approximately 8,600 cubic yards of imported soil will be used as fill material for the eastern 1/3 of the site. Foam will be applied during excavation and spreading of the canal sediment to control emissions. The entire length of the canal along the southern boundary of the site will then be enclosed in a reinforced concrete pipe.

The 6.8 acre site will then be covered with a cap capable of satisfying the requirements under RCRA Subtitle C for closure of a hazardous waste landfill. The cap should consist of a one foot foundation layer containing a gas collection system, two feet of bentonite/clay mix, a high density polyethylene (HDPE) liner, 1/12 feet of sand containing a drainage collection system, followed by two feet of top soil.

The gas collection system will deliver gases to a treatment system. The system will include a scrubber to remove sulfur dioxide (SO<sub>2</sub>) and a carbon absorber to remove VOCs.

For SO<sub>2</sub> removal, the treatment system will be designed for one scrubber to achieve a 95 percent SO<sub>2</sub> removal efficiency. Scrubber blowdown, generated at an estimated rate of 16 gallons per day, will be shipped offsite for disposal.

## APPENDIX VIII

TABLE 6  
NINE CRITERIA LEVEL OF CONFIDENCE ANALYSIS

	ALT. 1	ALT. 2	ALT. 3	ALT. 4	ALT. 5	ALT. 6	ALT. 7	ALT. 8
PPHE	LOW	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
AR	N/A	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM	MEDIUM	HIGH
LTE&P	N/A	LOW	MEDIUM	HIGH	LOW	HIGH	HIGH	HIGH
STE	N/A	HIGH	HIGH	LOW	MEDIUM	MEDIUM	MEDIUM	MEDIUM
COST	N/A	\$25	\$36	\$75	\$42	\$53	\$56	\$64
IMP.	N/A	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM	MEDIUM	HIGH
RTMVT	N/A	LOW	MEDIUM	HIGH	LOW	HIGH	HIGH	HIGH
RAA	N/A	LOW	HIGH	LOW	LOW	LOW	LOW	MEDIUM
CA	N/A	LOW	HIGH	LOW	MEDIUM	MEDIUM	MEDIUM	HIGH

- PPHE - Protection of Human Health and the Environment  
AR - Compliance with Applicable Requirements  
LTE&P - Long Term Effectiveness and Permanence  
STE - Short Term Effectiveness  
COST - Total 30-year Present Worth Cost in 1995 dollars - in millions  
IMP. - Implementability  
RTMVT - Reduction in Toxicity Mobility Volume through Treatment  
RAA - Regulatory Agency Acceptance  
CA - Community Acceptance  
ALT. 1 - No Action  
ALT. 2 - RCRA Equivalent CAP  
ALT. 3 - RCRA Equivalent CAP, Slurry Walls, Retaining Walls, SVE  
ALT. 4 - Excavation, On-Site Incineration (0-14 feet), SVE, CLAY CAP  
ALT. 5 - Excavation, On-Site Solidification (29,000 Cubic Yards), SVE, CLAY CAP  
ALT. 6 - Excavation, On-Site Solidification (55,000 Cubic Yards), SVE, CLAY CAP  
ALT. 7 - Excavation, On-Site Solidification (69,680 Cubic Yards), SVE, CLAY CAP  
ALT. 8 - Excavation, Off-Site Solidification (55,000 Cubic Yards), SVE, CLAY CAP
- HIGH - High level of confidence that criterion will be achieved  
MEDIUM - Moderate level of confidence that criterion will be achieved  
LOW - Low level of confidence that criterion will be achieved  
N/A - Not applicable