1820.14

NAS7.000757
NASA - JPL
SSIC No. 9661

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105-3901

August 30, 1994

Peter Robles Jr.
Project Manager
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, California 91109-8099

Dear Mr. Robles,

Enclosed is an EPA Quick Reference Fact Sheet entitled A Guide to Developing Superfund Proposed Plan which should be followed when preparing the proposed plans for NASA JPL. The proposed plan is a public participation document and is expected to be widely read and should therefore be written in a clear and concise manner using non-technical language. Also included is the portion of the NCP which describes the requirements for the proposed plan and community relations associated with selection of the remedy.

There are two options available for issuing the proposed plan to the public. The first option is to issue the proposed plan to the public in a fact sheet format. This fact sheet would outline the major points of the plan and provide a contact where the public can obtain a copy of the full proposed plan. The second option is to issue the plan directly to the public. For this option the proposed plan must be prepared in such a way that it is short, concise and easily read by the public. This matter can be resolved at future RPM meetings.

In addition, I have included a current listing of Superfund fact sheets available at the EPA library. These fact sheets can be obtained by contacting Deborra Samuel, the Superfund librarian.

If you have any questions please contact me at (415) 744-1488.

Sincerely,

Brian Swarthout
Remedial Project Manager

cc: Gale Madyun, RWQCB
Penny Nakashima, DTSC
Dan Melchoir, Ebasco
Mark Cutler, Ebasco
Stephen Niou, URS

United States Environmental Protection Agency | Office of Solid Waste and Emergency Response | Directive: 9335.3-02FS-2 May 1990

EPA

A Guide to Developing Superfund Proposed Plans

Office of Emergency and Remedial Response
Hazardous Site Control Division

Quick Reference Fact Sheet

Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, requires preparation of Proposed Plans as part of the site remediation process. The Proposed Plan is prepared after the Remedial Investigation/Feasibility Study (RI/FS) is completed and is made available with the RI/FS to the public for comment. The Proposed Plan highlights key aspects of the RI/FS, provides a brief analysis of remedial alternatives under consideration, identifies the preferred alternative, and provides members of the public with information on how they can participate in the remedy selection process. A notice and brief analysis of the Proposed Plan is published in a major local newspaper of general circulation. In addition, the Proposed Plan, the RI/FS, and the other contents of the Administrative Record are available at an information repository near the site.

This guide outlines the major components of the Proposed Plan and suggests effective ways in which the various sections can be presented. EPA recommends issuing the Proposed Plan in a fact sheet format. For some highly complex sites or remedies, more detailed Plans may be appropriate. All Proposed Plans should be written in a style that makes the material easy for the public to understand and should emphasize that the preferred alternative identified in the Proposed Plan is a preliminary determination, and that the Agency is requesting comments on all of the alternatives.

Detailed guidance on the preparation of the Proposed Plan is provided in Chapters 2, 3, and 9 of the "Interim Final Guidance on Preparing Superfund Decision Documents" (the "ROD Guidance") (OSWER Directive 9335.3-02, November 1989, EPA/540/G-89/007).

Introduction

Begin with a statement of the document's purpose. This introduction should state the site name and location, identify the lead and support agencies, and state that the Proposed Plan:

- Fulfills the requirements of CERCLA section 117(a);
- Describes the remedial alternatives analyzed for the site or operable unit;
- Identifies the preferred alternative and explains the rationale for the preference;
- Highlights key information in the RI/FS and administrative record, to which the reader is referred for further details;
- Solicits community involvement in the selection of a remedy; and
- Invites public comment on all alternatives.

Site Background

Provide a brief description of the site, including:

- History of site activities that led to current problems at the site; and
- The site area or media to be addressed by the selected remedy.

Figure 1 is an example of a site map that could be included.

Scope and Role of Operable Unit or Response Action

- Identify the principal threats posed by conditions at the site; and
- Describe the scope of the problems addressed by the preferred alternative and its role within the overall site clean-up strategy.

Summary of Site Risks

- Provide a brief overview of the baseline risk assessment, including the contaminated media, contaminants of concern, exposure pathways and populations, and potential or actual risks;
- Describe how current risks compare with remediation goals; and
- Discuss environmental risks, as appropriate.

Summary of Alternatives

Describe briefly each of the alternatives evaluated in the detailed analysis of the FS. Highlight the following:

- Treatment components;
- Engineering controls (noting the type of containment controls); and
- Institutional controls.

Quantities of waste and implementation requirements related to each component should be noted, as well as major applicable or relevant and appropriate requirements (ARARs), the estimated construction, and operation and maintenance (O&M) costs (also expressed in present worth), and the implementation time of each alternative. Emphasize that these latter two evaluations are estimates. An example is presented in Highlight 1.

- **Implementability** is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.
- **Cost** includes estimated capital and O&M costs, also expressed as net present worth-costs.

Modifying Criteria:

- **State/Support Agency Acceptance** reflects aspects of the preferred alternative and other alternatives that the support agency favors or objects to, and any specific comments regarding State ARARs or the proposed use of waivers. The Proposed Plan should address views known at the time the plan is issued but should not speculate. The assessment of State concerns may not be complete until after the public comment period on the RI/FS and Proposed Plan is held.
- **Community Acceptance** summarizes the public's general response to the alternatives described in the Proposed Plan and in the RI/FS, based on public comments received. Like State Acceptance, evaluations under this criterion usually will not be completed until after the public comment period is held.

Present the lead agency's preliminary determination that the preferred alternative provides the best balance of tradeoffs with respect to the nine criteria. Sample text is presented in **Highlight 4**. The preferred alternative is anticipated to meet the following statutory requirements to:

- Protect human health and the environment;
- Comply with ARARs (or justify a waiver);
- Be cost-effective;
- Utilize permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable; and
- Satisfy the statutory preference for treatment as a principal element, or justify not meeting the preference.

Highlight 4: Summarizing the Statutory Findings

In summary, the preferred alternative is believed to provide the best balance of trade-offs among alternatives with respect to the criteria used to evaluate remedies. Based on the information available at this time, therefore, EPA and the State of Tennessee believe the preferred alternative would protect human health and the environment, would comply with ARARs, would be cost-effective, and would utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The preferred alternative should/will not satisfy the preference for treatment as a principal element.

Community Participation

The Proposed Plan is a public participation decision document. It should include information that helps the public understand how they can be involved. To this end, the Plan should:

- Provide notice of the dates of the public comment period;
- Note the date, time, and location of public meeting(s) planned to be held;
- Identify names, phone numbers, and addresses of lead and support agency contact people to whom comments should be sent;
- State whether a special notice has been issued to the potentially responsible parties (PRPs), if applicable; and
- List the location of the Administrative Record and other information repositories.

MONTROSE CHEMICAL CORPORATION SUPERFUND SITE

EPA

EPA's Proposed Cleanup of Contaminated Sediments

Los Angeles County, CA **June 1991**

The U.S. Environmental Protection Agency (EPA) is requesting public comments on its proposal to clean up sediments from a section of the Los Angeles County sanitary sewers. The sewers are contaminated with dichloro-diphenyl-trichloroethane (DDT), an insecticide, from the Montrose Chemical Corporation Superfund site. EPA's preferred cleanup alternative involves diverting sewage around the contaminated section using underground sewer lines, removing contaminated sediments, and transporting them to a permitted hazardous waste facility where they will be incinerated. This alternative, along with other alternatives evaluated by EPA, is described in detail in the Engineering Evaluation/Cost Analysis (EE/CA), now available at the two information repositories listed on page 6.

The purpose of this Proposed Plan fact sheet is to identify EPA's preferred cleanup option, to summarize the alternatives evaluated in the EE/CA, and to request your comments on all the alternatives considered.

EPA will make a final decision regarding the cleanup of contaminated sediments based on [illegible] the comments received during the public comment period.

SITE BACKGROUND

The Montrose Chemical Corporation (Montrose) Superfund site is located in western Los Angeles County between the cities of Torrance and Gardena. Montrose manufactured DDT, an insecticide, at its 13-acre facility from 1947 to 1982. Between approximately 1953 and 1970, Montrose discharged process wastewater containing DDT into two parallel sewer lines operated by the Los Angeles County Sanitation Districts. These sewer lines carry sewage to the Los Angeles County Joint Water Pollution Control Plant (JWPCP), located in the City of Carson. This facility treats incoming sewage and, after treatment, discharges it to the ocean at White Point (see Figure 1).

Originally, EPA intended to [illegible] sanitary sewers as part of its overall site [illegible]

OPPORTUNITY FOR COMMUNITY INVOLVEMENT

[illegible]

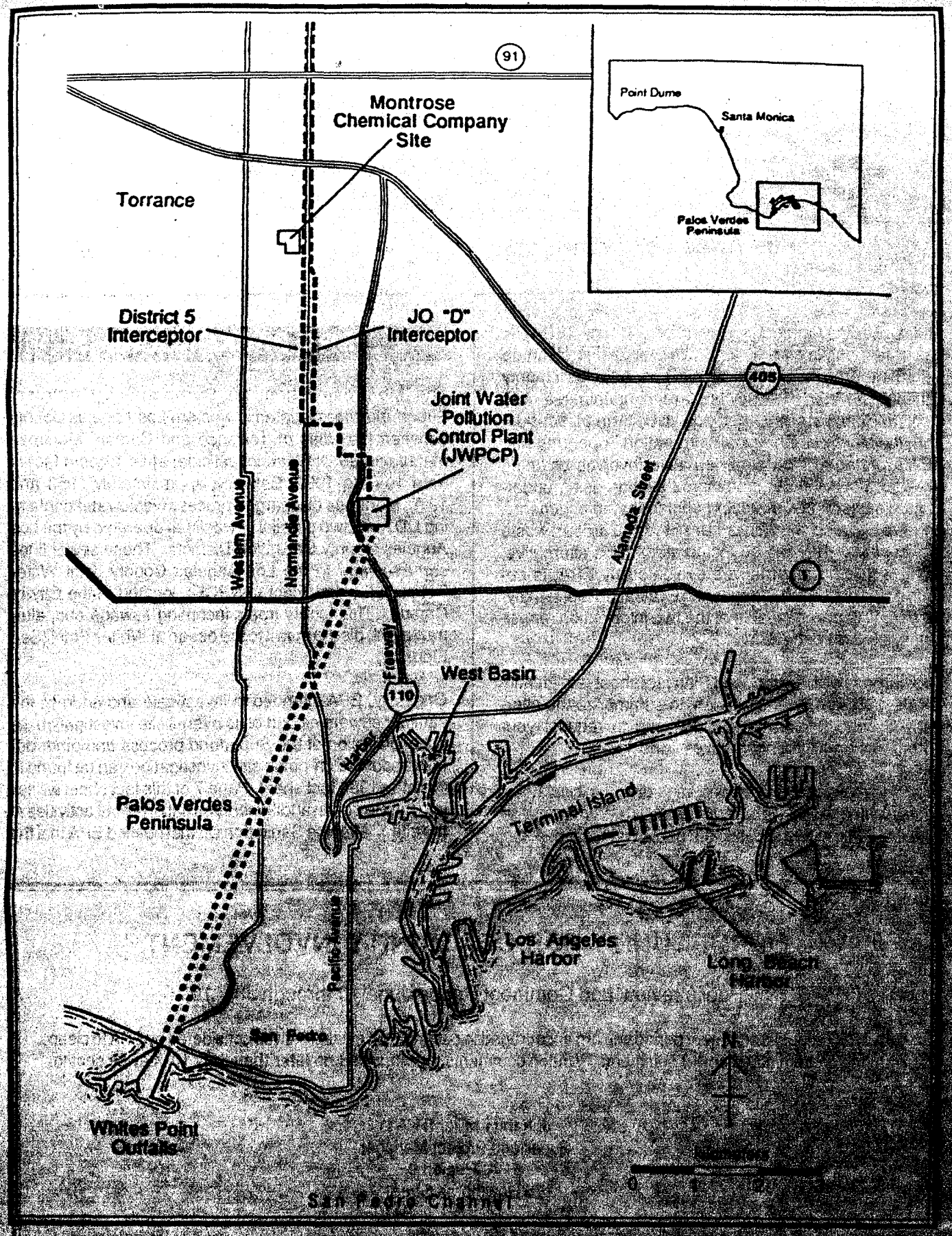

Figure 1: Location of Montrose site, sewer lines, sewage treatment plant, and ocean outfalls.

sewer lines were corroding and in need of repair, EPA concluded that an accelerated study of potential DDT contamination needed to occur. EPA was concerned that the corrosion of the pipes or the necessary repairs would cause unacceptable levels of DDT to be released into the environment through the sewage treatment plant.

In July 1989, EPA and Montrose entered into a legally binding agreement which required Montrose to sample sediments located in the sanitary sewers between the site and the JWPCP. EPA also required Montrose to prepare an Engineering Evaluation/Cost Analysis (EE/CA) evaluating potential cleanup alternatives. EPA's preferred option is based on the evaluation presented in the EE/CA report.

RESULTS OF THE SEDIMENT INVESTIGATION

In September 1988, Montrose measured sediment depth and analyzed sediment samples for DDT from 17 manholes located between the Montrose site and the JWPCP wastewater treatment plant. Of the 40,000 feet of sewer lines investigated, significant amounts of sediment were detected in an approximately 3,500 foot section of what is referred to as the J.O. "D" line (See Figure 2). The evaluation of cleanup options, was therefore, focused on this section. In March 1990, five additional samples were collected from manholes in the J.O. "D" line to improve estimates of sediment volume and DDT concentration. DDT concentrations ranged from 364 parts per million (ppm) to 207,000 ppm. (A part per million is a common form of environmental measurement that represents one part in a million parts, such as one drop of food coloring in one million drops of water.) The total estimated weight of sediment is approximately 243,000 pounds containing an estimated 27,000 to 42,000 pounds of DDT.

Monthly water monitoring at the sewage treatment plant shows that DDT is not currently moving downstream in significant quantities. However, activities associated with repairing the corroding sewer line would potentially release levels of DDT. The Los Angeles County Sanitation District believes the section of line covered by this study would need to be repaired in five to ten years.

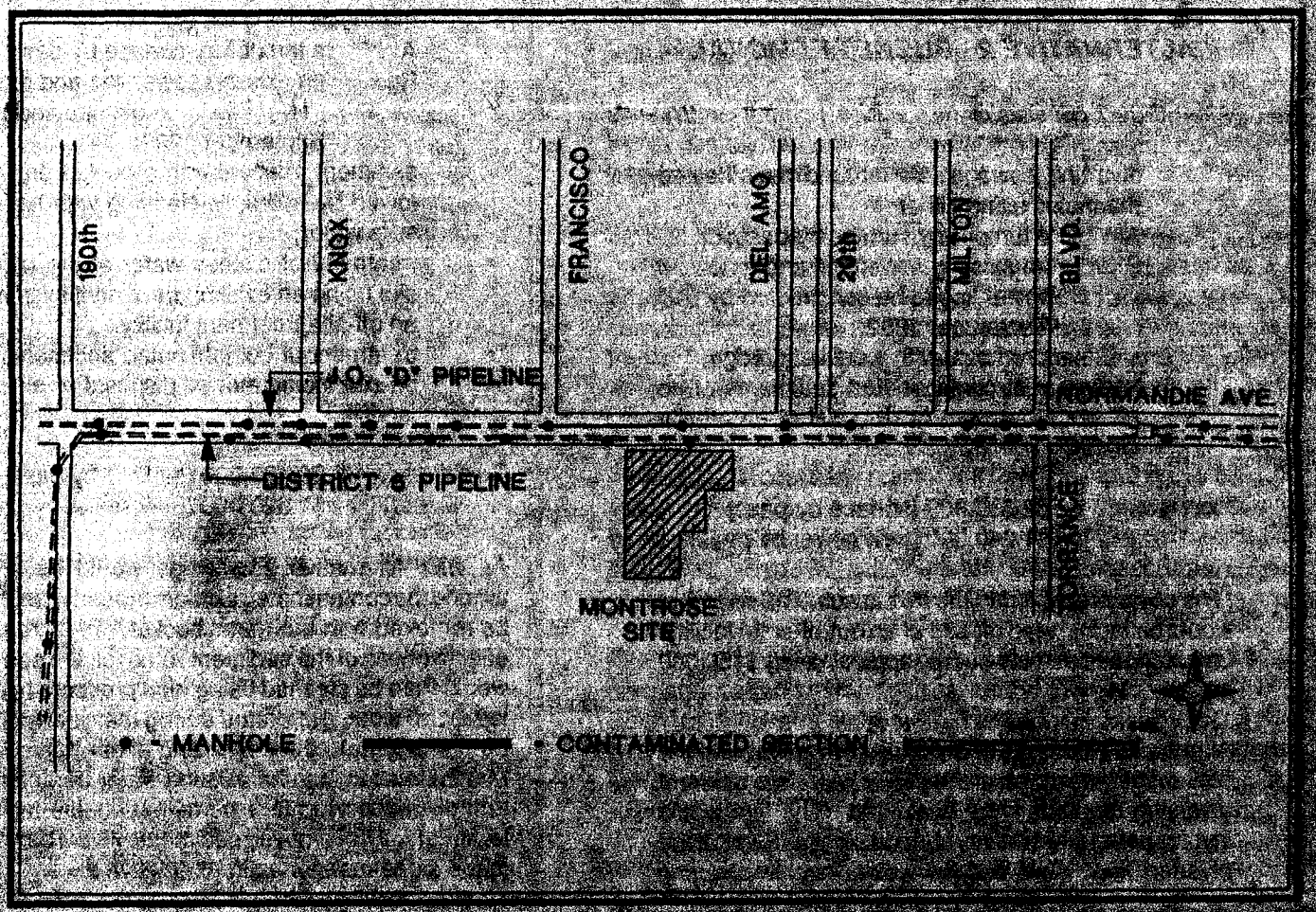

Figure 2: Location of Contaminated Section of J.O. "D" Pipeline (Shown in Red)

DDT CLEANUP ALTERNATIVES

The purpose of the Engineering Evaluation/Cost Analysis (EE/CA) is to evaluate cleanup alternatives based on the findings of the sampling. The alternatives are summarized in this fact sheet. A detailed description of these alternatives is provided in the EE/CA.

ALTERNATIVE 1 - NO ACTION

The no-action alternative serves as a "baseline" against which other alternatives are compared. Only monitoring of sediment movement would be included in this alternative. The no-action alternative is not protective of human health and the environment because it does not prevent the release of DDT during sewer repair. Therefore, no action is an unacceptable alternative. The cost of this alternative would be $230,000 for monitoring for the next 20 years.

ALTERNATIVE 2 - BUCKET REMOVAL

Alternative 2 consists of:

- diverting sewage flow around the affected manholes using either
  - A: a temporary surface by-pass, or
  - B: an existing sewer line and a new sewer line to be constructed by September 1992;
- sediment removal with a bucket dredge;
- treatment of contaminated sediments at an offsite incinerator or disposal at an off-site landfill.

Cost = $2,[illegible] (surface by-pass)
[illegible] (new sewer by-pass)

(The costs presented in the text assume all sediment would be incinerated off-site at an [illegible] facility. Landfilling sediments would be approximately $[illegible] less.)

Alternative 2 consists of diverting sewage around the contaminated section of the sewer line. Two different diversion methods were evaluated. The first method involves using a temporary surface pipeline to [illegible] diverted flow. The second would [illegible] most of the flow into a new sewer line to be constructed by Los Angeles County Sanitation District by September 1992. Remaining flow would be diverted into an existing line which parallels the contaminated section. (Due to some corrosion of this existing line, a smaller diameter pipe may temporarily be placed inside this line prior to the diversion.) After diversion, sediments would be removed using a metal bucket that would be dragged through the sewer line. Removed sediments would then be transported to a permitted hazardous waste facility to be landfilled or incinerated.

ALTERNATIVE 3 - BUCKET REMOVAL AND HYDRAULIC CLEANING

Alternative 3 consists of:

- diverting sewage flow around the affected manholes using either
  - A: a temporary surface by-pass, or
  - B: an existing sewer line and a new sewer line to be constructed by September 1992;
- sediment removal with a bucket dredge followed by hydraulic cleaning with high pressure water;
- treatment of excess water at the Montrose site using an existing treatment system or at an off-site treatment facility;
- treatment of contaminated sediments at an off-site incinerator or disposal at an off-site landfill.

Cost = $[illegible] (surface by-pass)
$1,[illegible] (new sewer by-pass)

As with Alternative 2, sewage would be diverted around the contaminated section and sediments would be removed with the metal bucket. To increase the effectiveness of the sediment removal, the sewer line would then be cleaned using high pressure water [illegible]. The water generated during [illegible] would be [illegible] [illegible]

ALTERNATIVE 4 - BUCKET REMOVAL AND PROTECTIVE LINING

Alternative 4 consists of:

- diverting sewage flow around the affected manholes using either
  - A: a temporary surface by-pass; or
  - B: an existing sewer line and a new sewer line to be constructed by Fall 1992;
- sediment removal with a bucket dredge followed by placement of a protective synthetic liner;
- treatment of contaminated sediments at an off-site incinerator or disposal at an off-site landfill.

Cost = $3,370,000 (surface by-pass)
$2,270,000 (new sewer by-pass)

As with Alternative 2, sewage would be diverted around the contaminated section and sediments would be removed with the metal bucket. Any remaining sediments would then be covered with a synthetic liner which would be inserted into the sewer line. Removed sediments would be handled in the same manner as in Alternatives 2 and 3.

ALTERNATIVE 5 - LINE ABANDONMENT

Alternative 5 consists of:

- permanently diverting sewage flow around the affected manholes using an existing sewer line and a line to be constructed by Fall 1992;
- abandoning the sewer line by filling the line with concrete grout.

Cost = $2,800,000

Alternative 5 involves permanently abandoning the contaminated portion of the J.O. "D" line. Sewage would first be diverted to the new line and the existing line. The contaminated section would then be filled with cement to encapsulate the DDT and to prevent the sewer line from collapsing in the future.

EVALUATION OF ALTERNATIVES

All the alternatives were evaluated using the three criteria highlighted in Figure 3. The evaluation of alternatives is summarized here and outlined in Figure 4.

Alternative 2 could be more easily implemented using the below-ground diversion. Use of temporary, above-ground pipelines would be difficult to implement because the temporary pipelines would cross several roads and nearby railroad tracks. The below-ground diversion would be conducted after the Los Angeles County Sanitation District constructs a larger capacity sewer line in the vicinity of the Montrose site. This line is scheduled to be completed by the Fall 1992. Waiting to conduct the sediment cleanup until the new line has been constructed will be protective because the contaminated sediments are not expected to move downstream in this timeframe. Diverting flow into the new sewer line would be easier to implement and is less costly than using the above-ground pipelines.

The metal bucket may not remove enough contaminated sediment to prevent unacceptable levels of DDT from entering the sewage treatment plant during sewer repair. Therefore, it may not adequately protect the environment, and may not comply with federal and state regulations.

Off-site incineration of the removed sediment would permanently destroy the contaminants (which EPA prefers), but is more expensive than off-site landfilling.

Similar to Alternative 2, Alternative 3 could be readily implemented using the below-ground diversion. It would likely be very effective in removing contaminated sediments because it uses a combination of technologies — mechanical and hydraulic removal. This alternative would be protective of human health and the environment and would comply with federal and state regulations.

Alternative 4 could be readily implemented using the below-ground diversion. It may be less protective than Alternative 3 because it relies on encapsulating some of the contaminated sediments with a synthetic liner rather than [illegible]. This alternative also would cost more than Alternative [illegible].

Alternative 5 may be difficult to implement because [illegible] permanent abandonment of a sewer line [illegible] County. The alternative would be effective [illegible] DDT and preventing future exposure [illegible] the contaminants. This [illegible] Alternative 3.

EPA'S PREFERRED ALTERNATIVE

ALTERNATIVE 3B (Bucket Removal and Hydraulic Cleaning)

EPA's preferred alternative involves diverting flow around the contaminated section of the sewer into a parallel existing sewer line and a new sewer line to be constructed by September 1992. Using the new sewer line will simplify [illegible] hydraulic cleaning, the contaminated sediments would be effectively removed from the sewer line. EPA's preferred alternative also includes use of hand shovels or other techniques to ensure adequate sediment removal. Using these simplified methods may also reduce the need for hydraulic removal. Once started, this action will take about two months to complete and will involve removal of approximately 10 to 20 truckloads of sediment. Once completed, sewer repair can proceed without interference and will not cause unacceptable levels of DDT to be discharged into the environment through the sewage treatment plant. Incineration of the removed sediments will permanently destroy the DDT. Sediments will most likely be incinerated at an out-of-state facility.

Effectiveness:

[illegible]

Does the alternative comply with [illegible] and local regulations?

[illegible]

Implementability:

[illegible]

WHAT COMES NEXT?

After the completion of the public comment period, EPA will take your comments into consideration in selecting the final Removal Action. EPA's decision and response to comments will be formalized in a document called a Removal Action Memorandum. Once the Action Memorandum is signed, EPA will enter into negotiations with the potentially responsible parties (PRPs) for implementation of the selected removal action. Under the Superfund law, PRPs are parties who may have disposed of the hazardous substances or who owned or operated the Montrose [illegible] is reached, EPA and the PRPs will [illegible] agreement under which the [illegible] with EPA's supervision. [illegible] EPA has several legal options, including issuing an order to perform the work. Construction will not begin until the Los Angeles County Sanitation District has completed the new sewer line, which is currently scheduled for September 1992.

INFORMATION REPOSITORIES

Copies of the Engineering Evaluation/Cost Analysis and other site-related documents are available at the information repositories located at:

Carson Public Library
[illegible] East Carson Street
Carson, CA 90745
[illegible] 830-0901

Civic Center Library
[illegible] Boulevard
[illegible], CA 90503
[illegible]

	Alternative 1 No Action	Alternative 2 Bucket Removal	Alternative 3 Bucket Removal & Hydraulic Cleaning	Alternative 4 Bucket Removal & Protective Lining	Alternative 5 Line Abandonment
Effectiveness	Provides adequate short-term protection. Will not be protective in the long-term due to anticipated sewer corrosion.	Provides adequate short-term protection. May not provide long-term protection due to residual left in line.	Provides adequate short-term protection. Provides adequate long-term protection and is reliable.	Provides adequate short-term protection. Provides less long-term protection and reliability than Alternative 3.	Provides slightly less long-term protection and reliability than Alternative 3.
Implementability	Technically and administratively feasible. Resources readily available.	Technically and administratively feasible. Resources readily available. Surface by-pass would be difficult to implement.	Technically and administratively feasible. Resources readily available. Surface by-pass would be difficult to implement.	Technically and administratively feasible. Resources readily available. Surface by-pass would be difficult to implement.	Technically easier to implement than Alternatives 2, 3, and 4. May be difficult to administratively implement. Resources readily available. [illegible]
Costs $ (1000's): No Action	$230				
Costs $ (1000's): Surface by-pass		2,330 / 2,180	2,430 / 2,270	3,370 / 3,220	
Costs $ (1000's): New Sewer by-pass		1,248 / 1,090	1,220 / 1,160	2,270 / 2,120	2,5[illegible]

Bold type indicates incineration of sediments. Plain type indicates land disposal of sediments.

Figure 4: Evaluation of Removal Alternatives

FOR MORE INFORMATION

EPA encourages community involvement in the hazardous waste cleanup process at Superfund sites. If you have any questions or concerns about the cleanup activities at the Montrose Chemical site, please direct them to the following EPA personnel.

If you have general questions or concerns about the site, contact:

Norman Calero
Community Relations Coordinator
U.S. EPA, Region 9
75 Hawthorne St. (H-1-1)
San Francisco, CA 94105
(415) 744-2183

If you have technical questions about site activities, contact:

Johanna Miller
Remedial Project Manager
U.S. EPA, Region 9
75 Hawthorne St. (H-7-1)
San Francisco, CA 94105
(415) 744-2404

EPA's Media Contact is:

Terry Wilson
Office of Public Affairs
U.S. EPA, Region 9
[illegible]
San Francisco, CA [illegible]
[illegible]

EPA's Superfund Toll-Free Message Line
1-800-231-3075

[redacted]

[redacted] Information on the Montrose Superfund Site

[redacted]

- Public Comment Period: June 10 - July 10, 1991

United States
Environmental Protection Agency Region IX
Office of Community Relations
75 Hawthorne Street (H-1-7)
San Francisco, CA 94105
Attn: Norman Calero

Official Business
Penalty for Private Use, $300

[redacted]

[redacted]

SUBJECT: CURRENT LIST OF SUPERFUND FACT SHEETS

FROM: Deborra Samuels, (LAI), Superfund Librarian
(415) 744-1513

TO: Superfund Staff

DATE: May 25, 1994

Superfund Administrative Improvements: Reinventing Superfund. 11/93. 9200.0-15FS.

An Overview of the Outyear Liability Model (OLM). 3/93. 9200.2-15FS.

Quality Assurance for Superfund Environmental Data Collection Activities. 2/93. 9200.2-16FS.

* An Overview of the Outyear Liability Model (OLM). 12/93 9200.2-20FS

Environmental Fact Sheet: Superfund Progress: Environmental Indicators. 11/90. 9200.5-007/FS.

Debarment and Suspension. 11/91. 9200.5-208FSa. (Revised).

Innovative Technology Soil Washing. 11/89. 9200.5-250FS.

Innovative Technology In-Situ Vitrification. 11/89. 9200.5-251FS.

Innovative Technology Slurry-Phase Biodegradation. 11/89. 9200.5-252FS.

Innovative Technology BEST Solvent Extraction Process. 11/89. 9200.5-253FS.

Innovative Technology Glycolate Dehalogenation. 11/89. 9200.5-254FS.

Contract Laboratory Program Analytical Results Database (CARD). 4/90. 9200.5-321/FS.

KEY: * = NEWLY RECEIVED FACTSHEET

CERCLA Compliance with Other Laws Manual: CERCLA Compliance with State Requirements. 12/89. 9234.2-05FS.

CERCLA Compliance with Other Laws Manual: CERCLA Compliance with the CWA and SDWA. 2/90. 9234.2-06/FS.

CERCLA Compliance with Other Laws Manual: Summary of Part II, CAA, TSCA, and Other Statutes. 4/90. 9234.2-07/FS.

ARARs Q's & A's: Compliance with the Toxicity Characteristics Rule: Part I. 5/90. 9234.2-08/FS.

ARARs Q's & A's: Compliance with Federal Water Quality Criteria. 6/90. 9234.2-09/FS.

ARARs Q's & A's: State Ground-water Antidegradation Issues. 7/90. 9234.2-11/FS.

ARARs Q's & A's: The Fund-Balancing Waiver. 1/91. 9234.2-13/FS.

ARARs Q's & A's: Compliance with New SDWA National Primary Drinking Water Regulations for Organic and Inorganic Chemicals. 8/91. 9234.2-15FS.

ARARs-Assist System: Availability of CELDS Computerized Database for the Identification of ARARs. 11/91. 9234.2-19FS.

Availability of Computerized NCP. 11/91. 9234.2-20FS.

ARARs Fact Sheet: Compliance with the Clean Air Act and Associated Air Quality Requirements. 9/92. 9234.2-22FS.

ARARs Short Guidance Quarterly Report. 12/89. Volume 1 Number 1. 9234.3-00I.

ARARs Short Guidance Quarterly Report. 3/90. Volume 1 Number 2. 9234.3-00I.

ARARs Short Guidance Quarterly Report. 7/90. Volume 1 Number 3. 9234.3-00I.

Long Term Contracting Strategy for Superfund. 9/90. 9242.6-07/FS.

A Guide on Remedial Actions For Contaminated Ground Water. 4/89. 9283.1-2FS.

Health and Safety Roles and Responsibilities at Remedial Sites. 7/91. 9285.1-02.

A Guide to Developing Superfund Records of Decision. 11/89. 9335.3-02FS-1.

A Guide to Developing Superfund Proposed Plans. 5/90. 9335.3-02FS-2. (Revised).

Site Inspection Prioritization Guidance. 8/93. 9345.1-15FS.

Integrating Removal and Remedial Site Assessment Investigations. 9/93. 9345.1-16FS

Guide to Management of Investigation-Derived Wastes. 4/92. 9345.3-03FS.

Superfund LDR Guide #1: Overview of RCRA Land Disposal Restrictions (LDRs). 7/89. 9347.3-01FS.

Superfund LDR Guide #2: Complying With the California List Restrictions Under Land Disposal Restrictions (LDRs). 7/89. 9347.3-02FS.

Superfund LDR Guide #3: Treatment Standards and Minimum Technology Requirements Under Land Disposal Restrictions (LDRs). 7/89. 9347.3-03FS.

Superfund LDR Guide #4: Complying With the Hammer Restrictions Under Land Disposal Restrictions (LDRs). 7/89. 9347.3-04FS.

Superfund LDR Guide #5: Determining When Land Disposal Restrictions (LDRs) Are Applicable to CERCLA Response Actions. 7/89. 9347.3-05FS.

Superfund LDR Guide #6A (2nd Edition): Obtaining a Soil and Debris Treatability Variance for Remedial Actions. 9/90. 9347.3-06FS (Revised).

Superfund LDR Guide #6B: Obtaining a Soil and Debris Treatability Variance for Removal Actions. 9/90. 9347.3-06BFS. (Revised).

Superfund LDR Guide #7: Determining When Land Disposal Restrictions (LDRs) Are Relevant and Appropriate to CERCLA Response Actions. 12/89. 9347.3-08FS. (Duplicate Number Problem).

Superfund LDR Guide #8: Compliance with Third Third Requirements Under the LDRs. 10/90. 9347.3-08FS. (Duplicate Number Problem).

A Guide to Delisting of RCRA Wastes for Superfund Remedial Responses. 9/90. 9347.3-09FS.

Guide to Obtaining No Migration Variances for CERCLA Remedial Actions. 4/91. 9347.3-10FS.

Estimating Potential Occurrence of DNAPL at Superfund Sites. 1/92. 9355.4-07FS.

Three City Urban Soil Lead Abatement Demonstration Project. 10/92. 9355.4-10FSa.

Draft Soil Screening Level Guidance. 9/93. 9355.4-14FS.

EPA Oversight of Remedial Designs and Remedial Actions Performed by PRPs. 2/90. 9355.5-01/FS.

Expediting Remedial Construction. 10/89. 9355.5-02FS.

USACE Preplaced and Rapid Response Contracts. 12/89. 9355.5-05/FS.

Real Estate Acquisitions Procedures for USACE Projects. 2/90. 9355.5-07FS.

EPA/USACE Payment Process: Direct Cite/Revised Reimbursement Methods. 5/90. 9355.5-14FS.

EPA Oversite of Remedial Designs and Remedial Actions Performed by PRPs. 2/90. 9355.5-16FS.

Structure and Components of Five-Year Reviews. 8/91. 9355.7-02FS1.

* Data Quality Objectives Process for Supefund. 9/93 9355.9-01FS.

U.S. Bureau of Reclamation Assistance to the Superfund Program. 12/90. 9355.15FS.

Exemptions From the Statutory Limits on Removal Actions. 11/90. 9360.0-12FS.

Oil Notifications: Emergency Response Notification System (ERNS) Fact Sheet. 4/92. 9360.0-22FS.

CERCLA Notifications: Emergency Response Notification System (ERNS) Fact Sheet. 4/92. 9360.0-23FS.

An Overview of ERNS: Emergency Response Notification Systems (ERNS) Fact Sheet. 4/92. 9360.0-29FS.

The Effect of OSHA's Bloodborne Pathogens Standard on Hazardous Waste Cleanup Activities. 8/93. 9360.0-31FS.

Technology Selection Guide for Wood Treater Sites. 5/93 9360.0-46FS.

A Guide to Principle Threat and Low Level Threat Wastes. 11/91. 9380.3-06FS.

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Regional Guide: Issuing Site-Specific Treatability Variances For Contaminated Soils and Debris From Land Disposal Restrictions (LDRs). 1/92. 9380.3-08FS.

Conducting Treatability Studies Under RCRA. 7/92. 9380.3-09FS.

Summary of "Guidance on Documenting Decisions not to Take Cost Recovery Actions." 5/91. 9832.11FS.

Summary of "Guidance on CERCLA Section 106(a) UAOs for RD/RA." 5/91. 9833.0-1aFS.

Summary of "PRP Search Supplemental Guidance for Sites in the Superfund Remedial Program." 5/91. 9834.3-2aFS.

Summary of "Methodologies for Implementation of CERCLA Section 122(g)(1)(a) DeMinimis Waste Contributor Settlements. 5/91. 9834.7-1bFS.

Summary of "Guidance on Landowner Liability under Section 107(a)1 of CERCLA, DeMinimis Settlements under Section 122(g)(1)(b) of CERCLA, and Settlements with Prospective Purchasers of Contaminated Property." 5/91. 9835.9FS.

Summary of "Interim Policy on CERCLA Settlements Involving Municipalities and Municipal Wastes." 5/91. 9834.13FS.

Summary of "Interim Guidance: Streamlining the CERCLA Settlement Decision Process." 5/91. 9835.4FS.

Summary of "Releasing Information to Potentially Responsible Parties at CERCLA Sites." 5/91. 9835.12FS.

Summary of "Interim Guidelines for Preparing NBARs." 5/91. 9839.1FS.

RCRA Comprehensive Ground Water Monitoring Evaluations (CME) and Operation & Maintenance (O&M) Inspections. 10/91. 9950.3FS.

extent practicable. This requirement shall be fulfilled by selecting the alternative that satisfies paragraph (f)(1)(ii) (A) and (B) of this section and provides the best balance of trade-offs among alternatives in terms of the five primary balancing criteria noted in paragraph (f)(1)(i)(B) of this section. The balancing shall emphasize long-term effectiveness and reduction of toxicity, mobility, or volume through treatment. The balancing shall also consider the preference for treatment as a principal element and the bias against off-site land disposal of untreated waste. In making the determination under this paragraph, the modifying criteria of state acceptance and community acceptance described in paragraph (f)(1)(i)(C) of this section shall also be considered.

(2) *The proposed plan.* In the first step in the remedy selection process, the lead agency shall identify the alternative that best meets the requirements in § 300.430(f)(1), above, and shall present that alternative to the public in a proposed plan. The lead agency, in conjunction with the support agency and consistent with § 300.515(e), shall prepare a proposed plan that briefly describes the remedial alternatives analyzed by the lead agency, proposes a preferred remedial action alternative, and summarizes the information relied upon to select the preferred alternative. The selection of remedy process for an operable unit may be initiated at any time during the remedial action process. The purpose of the proposed plan is to supplement the RI/FS and provide the public with a reasonable opportunity to comment on the preferred alternative for remedial action, as well as alternative plans under consideration, and to participate in the selection of remedial action at a site. At a minimum, the proposed plan shall:

(i) Provide a brief summary description of the remedial alternatives evaluated in the detailed analysis established under paragraph (e)(9) of this section;

(ii) Identify and provide a discussion of the rationale that supports the preferred alternative;

(iii) Provide a summary of any formal comments received from the support agency; and

(iv) Provide a summary explanation of any proposed waiver identified under paragraph (f)(1)(ii)(C) of this section from an ARAR.

(3) *Community relations to support the selection of remedy.* (i) The lead agency, after preparation of the proposed plan and review by the support agency, shall conduct the following activities:

(A) Publish a notice of availability and brief analysis of the proposed plan in a major local newspaper of general circulation;

(B) Make the proposed plan and supporting analysis and information available in the administrative record required under subpart I of this part;

(C) Provide a reasonable opportunity, not less than 30 calendar days, for submission of written and oral comments on the proposed plan and the supporting analysis and information located in the information repository, including the RI/FS. Upon timely request, the lead agency will extend the public comment period by a minimum of 30 additional days;

(D) Provide the opportunity for a public meeting to be held during the public comment period at or near the site at issue regarding the proposed plan and the supporting analysis and information;

(E) Keep a transcript of the public meeting held during the public comment period pursuant to CERCLA section 117(a) and make such transcript available to the public; and

(F) Prepare a written summary of significant comments, criticisms, and new relevant information submitted during the public comment period and the lead agency response to each issue. This responsiveness summary shall be made available with the record of decision.

(ii) After publication of the proposed plan and prior to adoption of the selected remedy in the record of decision, if new information is made available that significantly changes the basic features of the remedy with respect to scope, performance, or cost, such that the remedy significantly differs from the original proposal in the proposed plan and the supporting analysis and information, the lead agency shall:

(A) Include a discussion in the record of decision of the significant changes and reasons for such changes, if the lead agency determines such changes could be reasonably anticipated by the public based on the alternatives and other information available in the proposed plan or the supporting analysis and information in the administrative record; or

(B) Seek additional public comment on a revised proposed plan, when the lead agency determines the change could not have been reasonably anticipated by the public based on the information available in the proposed plan or the supporting analysis and information in the administrative record. The lead agency shall, prior to adoption of the selected remedy in the ROD, issue a revised proposed plan, which shall include a discussion of the significant changes and the reasons for such changes, in accordance with the public participation requirements described in paragraph (f)(3)(i) of this section.

(4) *Final remedy selection.* (i) In the second and final step in the remedy selection process, the lead agency shall reassess its initial determination that the preferred alternative provides the best balance of trade-offs, now factoring in any new information or points of view expressed by the state (or support agency) and community during the public comment period. The lead agency shall consider state (or support agency) and community comments regarding the lead agency's evaluation of alternatives with respect to the other criteria. These comments may prompt the lead agency to modify aspects of the preferred alternative or decide that another alternative provides a more appropriate balance. The lead agency, as specified in § 300.515(e), shall make the final remedy selection decision and document that decision in the ROD.

(ii) If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after initiation of the selected remedial action.

(iii) The process for selection of a remedial action at a federal facility on the NPL, pursuant to CERCLA section 120, shall entail:

(A) Joint selection of remedial action by the head of the relevant department, agency, or instrumentality and EPA; or

(B) If mutual agreement on the remedy is not reached, selection of the remedy is made by EPA.

(5) *Documenting the decision.* (i) To support the selection of a remedial action, all facts, analyses of facts, and site-specific policy determinations considered in the course of carrying out activities in this section shall be documented, as appropriate, in a record of decision, in a level of detail appropriate to the site situation, for inclusion in the administrative record required under subpart I of this part. Documentation shall explain how the evaluation criteria in paragraph (e)(9)(iii) of this section were used to select the remedy.

(ii) The ROD shall describe the following statutory requirements as they relate to the scope and objectives of the action:

(A) How the selected remedy is protective of human health and the