California Environmental Protection Agency
Department of Toxic Substances Control

FACT SHEET
Shellmound Properties Site

4650, 5500 and 5600 Shellmound Street, Emeryville California

FACT SHEET 2 February 1999

INTRODUCTION

The California Environmental Protection Agency, **Department of Toxic Substances Control (DTSC)** has prepared this fact sheet to inform you of the proposed cleanup for the Shellmound Properties (Site) located on Shellmound Street in Emeryville, California. *The proposed cleanup is being conducted by the Emeryville Redevelopment Agency under the oversight of DTSC.*

This fact sheet summarizes the history of the Site, the **Remedial Investigation/Feasibility Study, the Health Risk Assessment** and the draft **Remedial Action Plan (RAP).** DTSC has, in accordance with the **California Environmental Quality Act (CEQA).** Prepared a Notice of Determination which evaluated this project and determined that it would improve environmental quality and would have no impacts on the environment that could not be mitigated to a level of insignificance.

Figure 1: Site location

(Terms in **bold print** are defined in the Glossary)

DTSC ANNOUNCES PUBLIC MEETING
Wednesday, March 24, 1999
6:30pm - doors open
7:00pm - meeting begins
Emeryville Senior Center
4321 Salem Street
Emeryville, CA

DTSC INVITES PUBLIC COMMENT

DTSC is inviting the public to comment on these documents during the public comment period which runs from March 2, 1999 to March 31, 1999. Written comments must be postmarked by March 31 and should be sent to DTSC to the attention of Ted Park, Project Manager 700 Heinz Avenue, Suite 200, Berkeley, CA 94710. Both oral and written comments will be accepted at the public meeting.

DTSC encourages the public to participate in the decision making process. A draft Public Participation Plan has been prepared in conjunction with the draft RAP. This draft Public Participation Plan is based on concerns and needs expressed during 16 community interviews conducted in October 1998.

DTSC is inviting public comments on these documents during the public comment period. (see Public Comment on this page). The following documents are available for public review at the information repositories (see Additional Information Box on page 8):

- *Draft Remedial Action Plan (RAP)* for the Shellmound properties. This document describes proposed remediation activities for the Site.

- *Feasibility Study* for the Shellmound Properties. This document evaluates remedial alternatives for the Site.

- *Remedial Investigation* for the Shellmound Properties. This document summarizes the results of subsurface environmental investigations at the Site.

- *Fact Sheets.* These documents present brief summaries of specific past and future remediation activities at the Site.

- *Public Participation Plan.* This document presents information regarding the community where the Site is located and presents the public participation activities planned for the Site.

Final approval of the draft RAP by DTSC will not occur until after the public comment period ends on March 31, 1999.

Although the draft RAP indicates a preferred remedial alternative, DTSC has not yet made a decision in regard to the preferred alternative and encourages public comments on all alternatives.

SITE HISTORY AND BACKGROUND

The Site is located east of Interstate I-80 and west of the Southern Pacific railroad tracks. (See Figure 1). The Site is located within the City of Emeryville's 1976 and Shellmound Park Redevelopment Project Areas.

The Emeryville Redevelopment Agency is assembling six South Bayfront properties for future redevelopment. Four of these properties are in need of remediation and comprise the Site. The Emeryville Redevelopment Agency will conduct the cleanup under DTSC oversight. The four properties that comprise the Site are: the former Elementis Pigments, McKinley, Sepulveda and Old Shellmound Street parcels (as shown in Figure 2). The remedy described in the draft Remedial Action Plan addresses contamination at all four of these parcels.

The Site has been used primarily for industrial activities since the early 1920's. The industrial uses have included formulation and packaging of pesticides and insecticides, manufacturing of iron oxide pigments, reconditioning used drums, trucking operations, a machine shop, and offices. The Old Shellmound Street right of way was part of the San Francisco Bay that was filled in the 1930's.

REMEDIAL INVESTIGATIONS

Numerous remedial investigations were conducted at the Site by various consultants in 1997 and 1998 to determine the nature and extent of the chemical compounds in the soil and groundwater. More than 700 soil samples and 230 groundwater and surface water samples have been collected from soil borings and groundwater monitoring wells and analyzed for chemical compounds.

For the purpose of the Site remedial evaluations, the Site is divided into three areas (See Figure 2): The "Northern Area" includes the McKinley and Sepulveda parcels and the northern portion of the Elementis parcel; the "Southern Area" includes the southern portion of the Site which is the location of the historic Elementis parcel; the old Shellmound Street right of way defines the third area.

The results of chemical analyses indicate that soils in several locations are contaminated with elevated levels of various chemicals. Most of these locations are in the "Northern Area." The primary chemicals of concern (COCs) are **arsenic, lead, DDT residuals, volatile organic compounds** and **petroleum hydrocarbons**. Limited areas of soil within the "Southern Area" and the Old Shellmound Street right of way are impacted with lead and petroleum hydrocarbons.

Low concentrations of arsenic and volatile organic compounds are also detected in the shallow groundwater in the "Northern Area."

HEALTH RISK ASSESSMENT

The Human Health Risk Assessment evaluated the potential risk to public health and the environment posed by Site conditions before, during and after remediation or redevelopment. The risk evaluations took into consideration the future land use of the Site and determined cleanup goals for arsenic and other chemicals.

The remedial goal for arsenic, which is the primary chemical of concern, is 60 ppm (parts per million) for **unsaturated zone soil** and 500 ppm for **saturated zone soil.**

Arsenic is also the primary contaminant of concern in shallow groundwater. The risk evaluations concluded that groundwater at the Site does not present any significant risk to the public or the environment.

FEASIBILITY STUDY

A Feasibility Study was prepared to identify appropriate cleanup methods for remediation of the Site. The study evaluated eight remedial alternatives, which are summarized in Table1.

DRAFT REMEDIAL ACTION PLAN

Under DTSC oversight the Emeryville Redevelopment Agency is proposing to implement the draft Remedial Action Plan to ensure that potential exposure to arsenic, lead, DDT residuals, volatile organic compounds and petroleum hydrocarbons does not pose a threat to human health or the environment. This draft RAP includes the following remedial goals:

REMEDIAL GOALS

The remediation goals for the Site are as follows:

- Protect the health and safety of the public and construction workers during remediation activities.
- Eliminate the public's potential exposure to contaminated soil.
- Protect groundwater.
- Protect surface water

The Feasibility Study evaluated eight alternatives (See table 1). Alternative number four is being proposed as the preferred method for remediating the Site.

PROPOSED ALTERNATIVE

After evaluating the alternatives in Table 1, DTSC recommends remedial alternative #4, which is described in the draft RAP and includes the following:

- Excavating soils above the water table that exceed 60 ppm arsenic.
- Excavating soils below the water table that contain greater than 500 ppm arsenic.
- Disposing excavated soils at a permitted off-site facility.
- Backfilling the excavation with clean fill.
- Removing, treating and discharging contaminated groundwater.
- Groundwater monitoring for 5 years.
- Implementing deed restrictions
- Developing a soil management plan.
- Excavating and disposing the contaminated soil and backfilling with clean soil at the impacted areas in the Old Shellmound Street based on Myers Drum RAP approved by DTSC in 1996.
- Performing dust control measures during construction work on-site to protect nearby residents, businesses, and construction workers.

Alternative four is being recommended because it best meets the criteria of federal and state regulatory agencies, including overall protection of human health and the environment, limited effects on beneficial uses of resources, positive effects on groundwater resources, reduction of mobility of contaminants, cost effectiveness, and acceptance by the community.

In addition the draft RAP requires that steps will be taken during implementation to ensure the health and safety of people working on the project and living in the community.

COMPLIANCE WITH CEQA (California Environmental Quality Act)

In accordance with CEQA, the environmental consequences of the cleanup and redevelopment of the Site have been addressed on three occasions: an Environmental Impact Report prepared and approved in connection with the 1987 Shellmound Park Redevelopment Project, a December 1997 Notice of Determination prepared in connection with the Redevelopment Agency's determination to use its authority under the Polanco Redevelopment Act to bring about the cleanup, and an Environment Impact Report prepared and approved (on February 2, 1999) in connection with the proposed redevelopment of the Shellmound Properties into a retail and commercial district.

DTSC has prepared a CEQA Notice of Determination which evaluated and determined that the proposed draft RAP would not result in any significant environmental impacts. This document is also available for public review at the information repositories.

GLOSSARY OF TERMS

California Environmental Protection Agency, Department of Toxic Substances Control (DTSC)

The lead regulatory agency responsible for the investigation and cleanup of the Site.

Chemicals of Concern (COCs)

A list of chemicals specific to a particular Site that will be investigated and remediated.

DDT Residuals

The pesticide DDT (dichlorodiphenyltrichloroethane) and the related compounds DDD (dichlorodiphenyltrichloroethane) and DDE (dichlorodiphenyltrichloroethane).

Petroleum Hydrocarbons

A family of organic compounds derived from petroleum. Petroleum hydrocarbons are found in gasoline, oil, diesel, and jet fuels.

Remedial Action Plan (RAP)

A plan, approved by DTSC, that outlines a specific program leading to the remediation of a contaminated Site. After the draft RAP is prepared, DTSC holds a public meeting and solicits comments from the public for a period of at least 30 days. After the public comment period has ended, DTSC responds in writing to comments received and approves the final remedy for the Site (Final RAP).

Saturated Zone

The area below the ground surface where the soil contains water; the depth at which water is first encountered is called the water table. At the Site, the water table is at about 6 feet below the ground surface.

Volatile Organic Compounds (VOCs)

A group of compounds that readily evaporate at temperatures normally found at ground surface and at shallow depths. Several solvents are classified as VOCs. Examples of VOCs are benzene and trichloroethylene (TCE).

Unsaturated zone

The area between the ground surface and the water table (See saturated zone, above).

California Environmental Quality Act (CEQA)

The California law that establishes a framework for policy decisions regarding actions that may have significant effect on the environment. All state and local agencies are required to comply with CEQA prior to taking discretionary actions.

Remedial Investigation/Feasibility Study (RI/FS)

A series of investigations and studies to identify the types and extent of chemicals of concern in the environment (Remedial Investigation) and to provide an evaluation of the alternatives for remediating any identified soil or groundwater problems (Feasibility Study).

Arsenic

A crystalline gray, highly poisonous metal, most commonly brittle. It is used as an alloy for metals, especially lead and copper, and is used in insect-killing chemicals and weed killers. In its organic form, it is listed as a cancer-causing agent under Proposition 65.

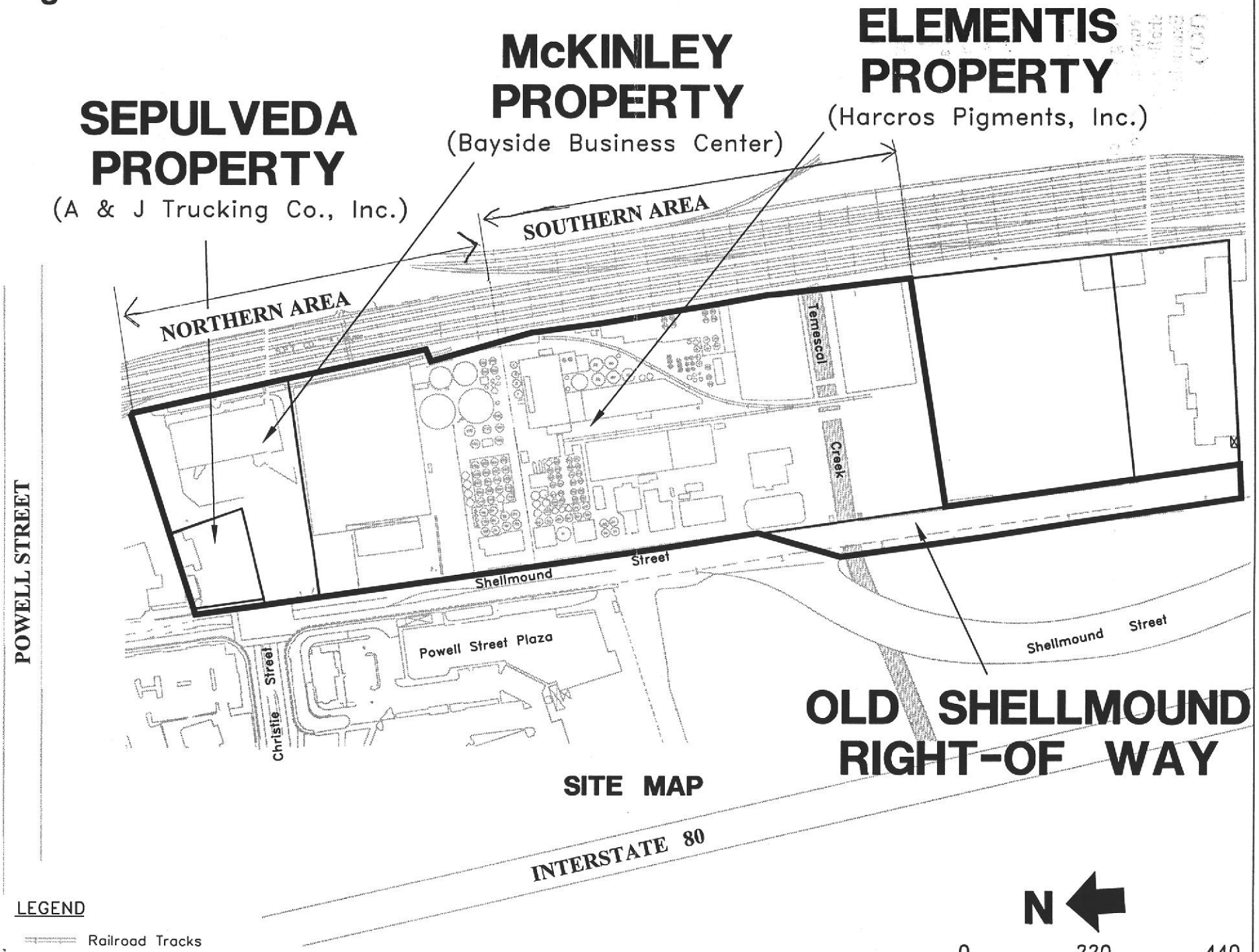
Lead

A heavy metal of a dull grayish color that is present in small amounts everywhere in the human environment. Lead can get into the body from drinking contaminated water, eating vegetables grown in contaminated soil, and breathing dust when children play or adults work in lead contaminated areas. Lead can cause damage to the nervous system or blood cells if present in the body. Children are at highest risk from exposure to lead contamination because their bodies are still developing. Lead is listed as a reproductive toxic substance for women and men under Proposition 15.

Health Risk Assessment

A study prepared to assess human health and environmental risks due to potential exposure to hazardous substances.

Figure 2



SITE MAP

Table 1: Summary of Remedial Alternatives for the Northern and Southern Areas

Alternative		Description of Remedial Activities [1]	
		Soil Remediation	Water Quality
No Action Alternative	1	None	None
Minimal Action Alternative	2	None	Groundwater monitoring
Excavation/ Off-Site Disposal Alternatives[2]	3	Excavate unsaturated zone soil containing greater than 60 mg/kg arsenic[3] and dispose off-site	Groundwater monitoring
	4*	Excavate unsaturated zone soil containing greater than 60 mg/kg arsenic[3] and dispose off-site *Recommended alternative	Groundwater monitoring Excavate soil containing greater than 500 mg/kg arsenic[4] and dispose off-site Remove contaminated groundwater and treat on-site
	5	Excavate unsaturated zone soil containing greater than 60 mg/kg arsenic[3] and dispose off-site	Groundwater monitoring Excavate soil containing greater than 60 mg/kg arsenic[4] and dispose off-site Remove contaminated groundwater and treat on-site
Excavation/ On-Site Stabilization Alternatives[2]	6	Excavate unsaturated zone soil containing greater than 1,000 mg/kg arsenic[3] and dispose off-site Chemically stabilize[6] unsaturated zone soil containing 60 to 1,000 mg/kg arsenic[3] and dispose on-site Designate a Corrective Action Management Unit[5]	Groundwater monitoring
	7	Excavate unsaturated zone soil containing greater than 1,000 mg/kg arsenic[3] and dispose off-site Excavate unsaturated zone soil containing 60 to 1,000 mg/kg arsenic[3] and chemically stabilize[6] in on-site treatment unit and return treated soil to the excavation Designate a Corrective Action Management Unit[5]	Groundwater monitoring Excavate soil containing greater than 500mg/kg arsenic[4] and dispose off-site
	8	Excavate unsaturated zone soil containing greater than 1,000 mg/kg arsenic[3] and dispose off-site Chemically stabilize[6] unsaturated zone soil containing 60 to 1,000 mg/kg arsenic[3] in place and without excavation and dispose on-site	Groundwater monitoring Chemically stabilize soil containing greater than 60mg/kg arsenic[3] in place and dispose on-site

Notes:

1. All alternatives include groundwater monitoring, a long-term Risk Management Plan, and **institutional controls**, except for Alternative 1.

2. Because arsenic is the primary COC at the Site, it is being used as the indicator COC for design purposes. However, testing will be performed at the Site to insure that residual concentrations of ALL COCs are below remedial goals.

3. The cumulative risk based soil remedial goal for arsenic in the unsaturated zone is 60 mg/kg.

4. The remediation goal for arsenic in the saturated zone is 500 mg/kg.

5. A Corrective Action Management Unit (CAMU) is a consolidation of contaminated materials into a self-contained unit.

6. Chemical stabilization techniques ideally prevent contaminants from migrating so that the treated soil can be disposed on-site. However, the long-term effectiveness of chemical stabilization technologies for arsenic-contaminated soil has not been established.

MAILING LIST

If you would like to be added to the Mailing List, please complete the coupon below and return it to Rachelle Maricq, Public Participation Specialist at the DTSC (address listed on the back page). DTSC mailing lists are solely for the purpose of keeping persons informed of DTSC activities. Mailing lists are not routinely released to outside parties. However, they are considered public records and, if requested, may be subject to release.

I WOULD LIKE TO BE ADDED TO THE SHELLMOUND PROPERTIES MAILING LIST.

Name _____

Address _____

City _____ State _____ Zip _____

FOR MORE INFORMATION
Information Repositories

Interested persons are encouraged to review available information about the draft Remedial Action Plan. Documents are available for public review at the following locations:

DTSC
700 Heinz Avenue
Berkeley, CA
(510) 540-3800
Call for an appointment

Emeryville
Redevelopment Agency
2200 Powell St., 12th floor
Emeryville, CA 94608
(510)596-4350

45th Street Artists'
Cooperative, Office
Emeryville, CA 94608

Emeryville Senior Center
4321 Salem Street
Emeryville, California
(510)596-3730

The full administrative record is available for public review at DTSC.

If you have any questions, please call either Ted Park, DTSC Project Manager at (510)540-3805 or Rachelle Maricq, DTSC Public Participation Specialist at (510)540-3910 or write them at the DTSC address above.

Any questions regarding Emeryville's Redevelopment project should be directed to

City of Emeryville
2200 Powell Street, 12th Floor
Emeryville, CA 94608
(510) 596-4350

California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, CA 94710-2721
Attn: Rachelle Maricq

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March 24, 1999
Emeryville
Senior Center
2449 Powell Street
Emeryville, California

Meeting time:
doors open 6:30pm
Meeting begins 7:00pm

NOTICE TO HEARING IMPAIRED INDIVIDUALS

TDD users can obtain additional information by using the California State Relay Service (1-888-877-5378) to reach Rachelle Maricq at (510)540-3910

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