



California Environmental Protection Agency
Department of Toxic Substances Control

**Palos Verdes Landfill
SITE INVESTIGATION COMPLETION**

Fact Sheet #7

August 1995

INTRODUCTION

This is the seventh fact sheet about the investigation of potential hazardous waste contamination from the Palos Verdes Landfill. This fact sheet announces the completion of the investigation, provides a summary of the investigation results, describes the site remediation recommended by the County Sanitation Districts of Los Angeles County (Sanitation Districts), and announces a community meeting to be held on August 15, 1995 (see box on this page).

The investigation at the landfill began in 1990 and was completed last year. This investigation, called a Remedial Investigation/Feasibility Study, was performed by the Sanitation Districts under the oversight of the Department of Toxic Substances Control (DTSC) of Cal/EPA. The results of the investigation, summarized in this fact sheet, will also be presented at the community meeting. The final reports on the investigation were approved by DTSC in June, and can be examined at the information repositories (see back page).

The purpose of the remedial investigation is to identify types, quantities, and locations of contaminants on site. The results of the investigation are reported in a Remedial Investigation Report. Based on the investigation, potential health and environmental concerns are identified. Alternatives for remedial measures to address these concerns are evaluated in a feasibility study. After this evaluation is reported in a Feasibility Study Report and approved, a draft Remedial Action Plan (RAP) is prepared that summarizes the results of the remedial investigation and the feasibility study and recommends remedial actions for the site.

The draft RAP is made available for a 30 day public review period prior to final approval. A public meeting is held during this review period. After

public comments are addressed and any modifications to the plan are made, remedial measures identified in the final RAP will be implemented.

REMEDIAL INVESTIGATION RESULTS

The remedial investigation confirmed that landfill gas is generated by the Palos Verdes Landfill. This is normal and is caused by the degradation of the

COMMUNITY MEETING

A community meeting will be held on Thursday, August 15, 1995, from 6:30 to 9:30 pm at the following location:

**South Coast Botanic Garden
26300 Crenshaw Boulevard
Palos Verdes Peninsula, CA**

DTSC and the Sanitation Districts will present summaries of the remedial investigation, health risk assessment, and feasibility study. We will also discuss future project activities. We encourage you to attend the meeting. We will have a question and answer session after the presentation to address any concerns or questions you may have. The community meetings are an important part of the Community Relations Plan for this project. They serve as a major avenue for keeping DTSC and the Sanitation Districts informed of your concerns.

waste material in the landfill. Ground water contamination was also confirmed and its extent defined. The risk estimates based on the investigation results do not exceed DTSC threshold levels and are not a cause for concern.

There are four possible pathways that can result in public exposure to contaminants. Over 2,000

samples of air, surface water, soil, and ground water were collected and analyzed during the remedial investigation to evaluate these pathways. A health risk assessment was then performed to determine potential impacts the landfill could have on human health and the environment.

Air. Monitoring was performed to determine whether contaminants were migrating to the air from the landfill. Sampling was conducted from 1990 through 1994.

The Palos Verdes Landfill accepted many organic wastes including food scraps, green wastes such as lawn clippings, and oily wastes from local refineries. Landfill gas is generated from the natural decomposition of these organic wastes. Landfill gas consists of approximately equal amounts of methane (natural gas) and carbon dioxide. There are also trace amounts (less than one-half of one percent) of other volatile organic compounds, such as benzene, toluene, trichloroethylene, and vinyl chloride in landfill gas.

Landfill gas is collected at the Palos Verdes Landfill from a series of wells and trenches, and is then burned in the gas-to-energy facility. The collection system controls and limits releases of landfill gas to the air.

During the remedial investigation, air samples from upwind and downwind of the landfill were collected. It was determined that landfill gas has no measureable impact on air quality.

Surface Water. Surface water runoff from irrigation or rainfall could transport contaminants from the landfill. Several possible pathways, including storm drains and the South Coast Botanic Garden lake and stream, were sampled as part of the surface water monitoring programs. Surface water sampling was performed from 1990 through 1994.

Eighteen runoff water locations were sampled, including five upgradient, or background, locations. In addition, eleven locations at the South Coast Botanic Garden lake and stream were sampled. The surface water was not found to be transporting any contamination off site.

Soils. Surface and subsurface soil samples were collected in 1990 and 1993. Surface soils were collected from 34 locations on the landfill to determine if contaminants exist at the soil surface, particularly in heavily used areas such as the equestrian center, the horse trail, and the South Coast Botanic Garden lake and stream area. Subsurface soils were collected at depths of five to 300 feet below the ground surface from 46 borings drilled near the landfill.

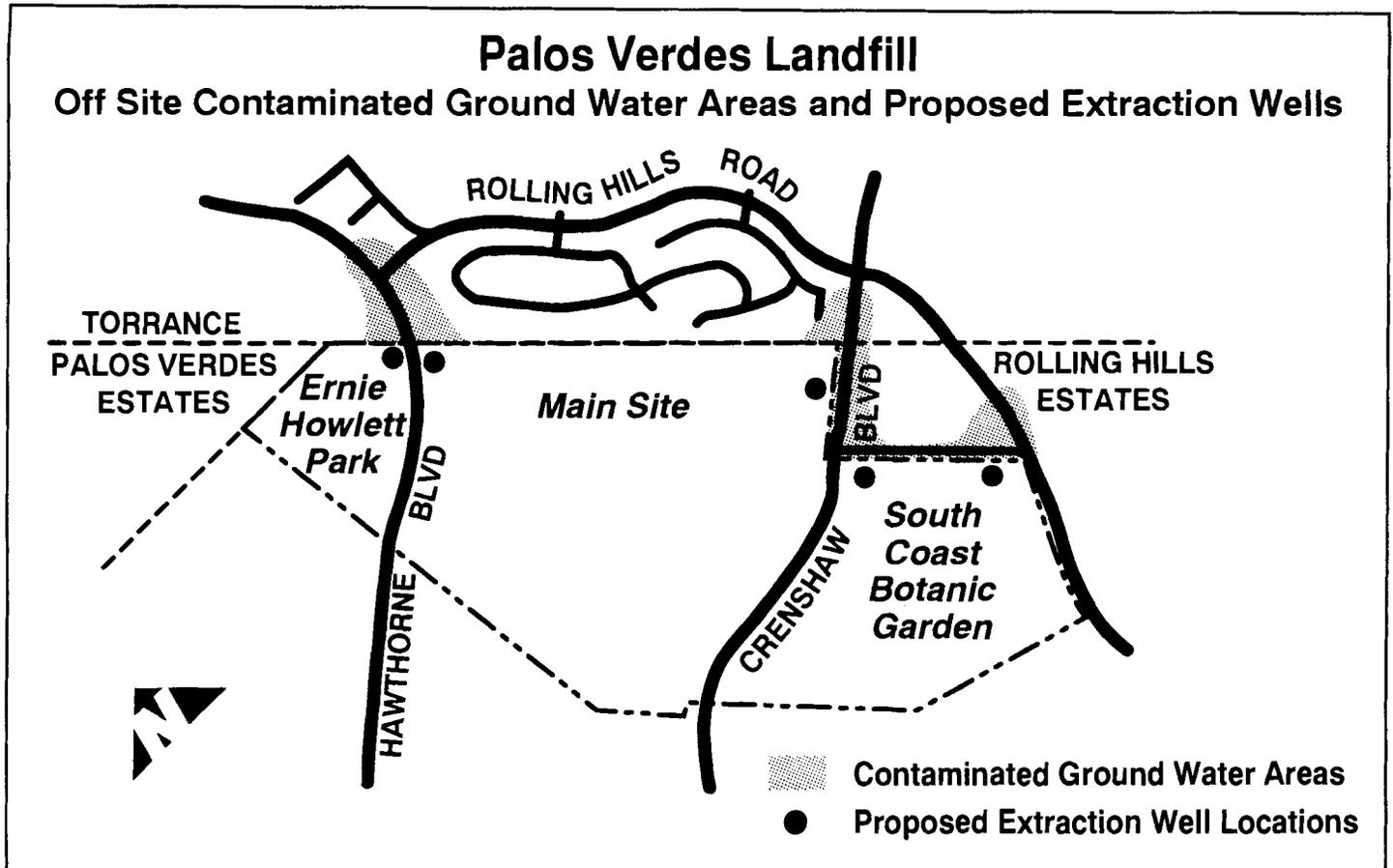
Surface soil samples collected from the service roads on the landfill contained polynuclear aromatic hydrocarbons (PAHs). These compounds are from the recycled asphalt which is crushed and spread out on these roads to provide a better driving surface and reduce dust generation. The levels of PAHs found on the landfill are comparable to those found in urban road dust.

Subsurface soil samples were collected both up-gradient and downgradient of the landfill. Based on these results, no subsurface soil contamination can be attributed to the Palos Verdes Landfill.

Ground Water. An additional 21 ground water monitoring wells were installed during the remedial investigation. The data from these wells supplement the quarterly results from the 29 wells that were installed before the investigation began. All quarterly ground water data collected since the beginning of 1987 were analyzed for the remedial investigation. The samples collected from the wells were analyzed for general parameters, such as pH and conductivity, metals, volatile organic compounds, and semi-volatile compounds.

Two different areas of ground water contamination, or plumes, were found at the Palos Verdes Landfill. The contamination affects ground water that lies approximately 20 to 70 feet below the ground surface. One plume occurs near Hawthorne Boulevard in Torrance and the other occurs to the northeast of the South Coast Botanic Garden at Crenshaw Boulevard and Rolling Hills Road. Both plumes extend off site, as shown on the map on the next page.

The Hawthorne Boulevard plume contains volatile organic compounds and arsenic. The Crenshaw



Boulevard plume contains volatile organic compounds. Contaminated ground water extends approximately 500 to 800 feet off site to the northeast as shown above. Contaminated ground water was not identified in monitoring wells beyond that.

The contaminated ground water does not affect any drinking water sources. The closest drinking water supply well is 3-1/4 miles to the northeast of the landfill, in the downtown Torrance area. The area under the landfill, and in the location of the contamination, is not a drinking water source.

Health Risk Assessment Results. The goal of the risk assessment study was to determine potential impacts the Palos Verdes Landfill could have on human health and the environment. The estimated risks are determined by evaluating the potential for exposure to contamination and by evaluating to what degree that exposure is considered a safe level. Health effects are evaluated for non-carcinogenic (not cancer causing) and carcinogenic (cancer causing) effects.

In the health risk assessment, current and possible future exposures from the Palos Verdes Landfill were considered under an assumption that no additional remedial measures would be taken. Possible risks to off site residents, on site workers, and recreational visitors to the landfill were evaluated. Based on the health risk assessment, the potential exposures and estimated risks do not exceed DTSC threshold levels; the exposures and risks should not be a cause for concern as long as conditions remain unchanged.

An environmental evaluation was also performed to determine possible impacts to ecological receptors, including horses. This evaluation indicated that the exposures of horses and other animals to contaminants are low, and the chances of any health effects are minimal.

FEASIBILITY STUDY RESULTS

The purpose of the feasibility study is to evaluate remedial measures to mitigate any health risks

COMMUNITY INVOLVEMENT

This fact sheet is a part of the public participation program for the Palos Verdes Landfill site. We encourage you to contact either DTSC or the Sanitation Districts with any questions you may have regarding the investigation and remediation of

the Palos Verdes Landfill. DTSC and the Sanitation Districts are available to meet with homeowner groups or other interested community members. The Remedial Investigation and Feasibility Study Reports and other significant documents are available for your review at the information repositories (see below).

For More Information

More information about the site history, current investigation, project schedule and community concerns can be obtained from DTSC or the Sanitation Districts. Contact numbers for DTSC and the Sanitation Districts are listed below.

DTSC Contacts: If at any time during the landfill investigation you have questions or comments, please contact our office.

Chris Fox Project Officer (310) 590-4954	Ed Schumacher Public Participation Specialist (310) 590-5539
--	--

California Environmental Protection Agency
Department of Toxic Substances Control
245 West Broadway, Suite 350
Long Beach, CA 90802

Sanitation Districts Contacts: Please feel free to contact the Sanitation Districts with any questions or comments also.

Mary Jacobs
Project Coordinator
(310) 699-7411 x 2413

County Sanitation Districts of Los Angeles County
1955 Workman Mill Road
Whittier, CA 90601-4998

Information Repositories: All finalized site work plans, the Community Relations Plan, and other significant reports can be reviewed at the reference desks of the following libraries.

Peninsula Center Library 650 Deep Valley Drive Rolling Hills Estates, CA 90274 (310) 377-9584	Torrance Civic Center Library 3301 Torrance Boulevard Torrance, CA 90503 (310) 618-5959
--	--

California Environmental Protection Agency
Department of Toxic Substances Control
245 West Broadway, Suite 350
Long Beach, CA 90802
Attention: Ed Schumacher

Inside

- Palos Verdes Landfill Site Investigation Completion