California Department of Health Services
Toxic Substances Control Program

Palos Verdes Landfill

Response to Community Concerns

Fact Sheet #2

September 1990

Introduction

The State Department of Health Services (DHS) and County Sanitation Districts of Los Angeles County (Sanitation Districts) are currently conducting an investigation to evaluate potential hazardous waste contamination migrating from the now closed Palos Verdes Landfill. Prior to initiating the field investigation, a fact sheet was distributed and two community meetings were held to discuss the project. The purpose of this fact sheet is to respond to some of the more-frequently asked questions at the meetings and in letters to DHS. Should you have any further questions or concerns, please contact DHS at (213)590-4868.

Landfill Gas and the Gas-to-Energy Facility

Q: What exactly is landfill gas and what is currently being done to monitor for it?

A: Refuse placed in a landfill is biologically degraded by microorganisms. These microorganisms give off a mixture of nearly equal amounts of carbon dioxide and methane. This landfill gas is primarily a product of the natural decomposition of buried organic materials. Other trace gases that are found in landfill gas include hydrogen sulfide, mercaptans and volatile organic compounds such as benzene and toluene. Some of these materials can be found in familiar substances such as gasoline and paint thinner.

The Sanitation Districts operate an extensive landfill gas collection and monitoring system which is designed to control the landfill gas from migrating off the landfill property and creating a potential health hazard to nearby residents. The landfill gas is collected by a network of 445 gas collection wells and trenches through which it is brought to the Palos Verdes Landfill Gas-to-Energy Facility where it is burned to create electrical energy for the equivalent of 10,000 homes.

The Sanitation Districts have also installed 255 landfill gas monitoring probes around the perimeter of the landfill. These probes are monitored monthly and assess the effectiveness

For More Information

More information about the site history, current investigation and project schedule can be found in the initial site fact sheet, dated May 1990. To receive a copy of this fact sheet, please contact DHS at the numbers listed below or return the enclosed mailing list coupon and indicate that you would like to receive the May 1990 fact sheet.

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In addition, all of the detailed workplans and reports for this project can be reviewed at the two local information repositories listed below.

Information Repositories

Peninsula Center Library
650 Deep Valley Drive
Rolling Hills Estates, CA 90274
(213)377-9584

Torrance Civic Center Library
3301 Torrance Boulevard
Torrance, CA 90503
(213)618-5959

of the gas collection system in and around the landfill. Monitoring results have not indicated any landfill gas migration problems.

Q: What is the purpose of the Gas-to-Energy Plant and what is the spray that comes from it?

A: The Gas-to-Energy facility allows collected landfill gas to be utilized for the production of electricity. The collected landfill gas is brought into the plant where it is burned in boilers to produce steam which is then used to produce electrical energy. Cooling towers are utilized to dissipate heat into the atmosphere. The cooling towers produce a water vapor plume (i.e. spray) that may be seen by residents. A plume abatement system was installed in the towers to aid in reducing the size of the plume and help minimize the visual impact of the Gas-to-Energy Plant on the surrounding community.

Q: Is the plant in compliance with local noise and emission requirements?

A: The plant is regulated for both noise and air emissions. The South Coast Air Quality Management District has applied stringent air emission standards which have been met using the best available control technology. Noise studies have been performed to ensure that the plant meets the noise level requirements of the Conditional Use Permit issued by the City of Rolling Hills Estates. Should any residents have any immediate problems with the operations of the Gas-to-Energy facility, they should call the 24 hour facility telephone number (213) 378-1928.

Q: Why am I required to install methane barriers if I add on to my home?

A: Because methane gas is produced by landfills, the Los Angeles County Department of Public Works, Building and Safety Code requires all new construction within 1,000 feet of a landfill to include methane barriers. These barriers are intended to help prevent the build-up of methane in enclosed spaces and thereby reduce the potential for explosive situations. For further information on this requirement, please contact the county public works office at (818) 458-5100.

Soil and Groundwater Investigation

Q: What is the purpose of the current soil and groundwater investigation?

A: The purpose of the current field investigation is to collect data to better characterize the geology and groundwater flow patterns at and around the site. This investigation will aid in the evaluation of the nature of contaminants and the extent of potential offsite migration. This information will be used to develop a Remedial Investigation Report which will be available for public review once it has been completed.

Q: How were the soil boring locations selected?

A: Approximately 40 exploratory soil borings will be drilled as part of the remedial investigation. The boring locations were based on a review of historic aerial photos of the area and previous geologic studies. Information obtained will provide an indication of geologic and groundwater conditions underneath and surrounding the landfill.

Q: How will the soil borings affect the impacted neighborhoods?

A: Typically a boring will take 3 to 5 days to complete. In some instances, more extensive geologic studies will be conducted which will extend the activity up to 15 days. The majority of borings are located on public right of ways or streets. A few will be located on private property, city property, or undeveloped land. In areas where the borings are located in streets, only one lane of traffic will be blocked. Once field activities are completed, borings will be sealed with a cement type mixture with the exception of a few borings which will be converted to groundwater monitoring wells.

Groundwater Contamination

Q: Is there any groundwater contamination resulting from the Palos Verdes Landfill?

A: In the mid-1980's, groundwater contamination was detected beneath the landfill. Some of the contaminants found were trichloroethylene, tetrachloroethylene, vinyl chloride, benzene and toluene. In 1986 the Sanitation Districts constructed a subsurface barrier at the northern boundary of the main landfill to contain the migration of the contaminated groundwater. In addition, extraction and monitoring wells were installed to control the water that builds up behind the barrier and to monitor its effectiveness. The current investigation will further evaluate the groundwater contamination underneath the landfill.

Q: Has the groundwater beneath the landfill ever been used a drinking water source?

A: The groundwater in the Palos Verdes Hills is not used as a drinking water source, in part because the geologic material present yields very small amounts of water. The groundwater which is present contains elevated levels of natural sediments, and as a result, cannot be used for drinking or other purposes. Recent investigations into the historical use of water in the area of the landfill does not show any past domestic use.

Q: In what direction is the contaminated groundwater moving? Are any drinking water supplies in danger?

A: The purpose of the current investigation is to define the rate and direction of flow for the contaminants in the groundwater. Previous data indicates that the general direction of groundwater movement was toward the north at rates varying from one to 100 feet per year. This pattern may have changed over time due to development in the Palos Verdes Hills which has altered canyon drainage courses. Therefore, more specific information is needed to fully evaluate potential environmental impacts and identify possible remediation strategies.

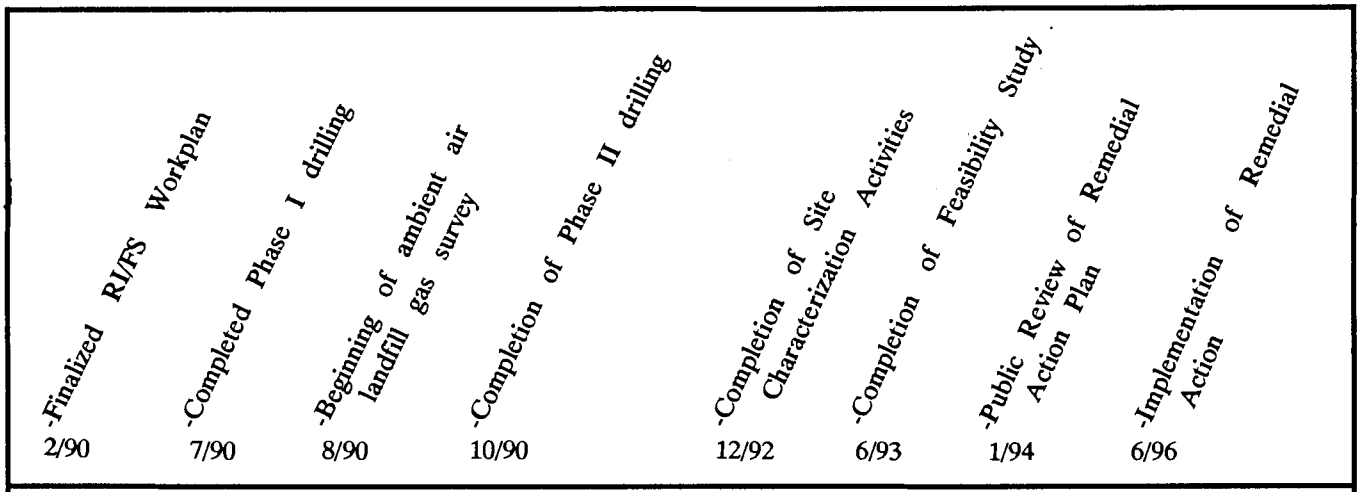
The groundwater from Palos Verdes Hills drains into and provides a small contribution to the West Coast Basin Aquifer System. The West Coast Basin, approximately one half mile from Palos Verdes Landfill, is of good water quality and is used extensively for domestic and industrial purposes. The Sanitation Districts have sampled existing wells within one mile of the site and have found no evidence of landfill related impacts. The nearest drinking water well is located approximately three miles northeast of the landfill. The nearest commercial or industrial water well is located one mile northeast of the landfill.

Q: If necessary, what are some possible ways that contaminated groundwater can be treated?

A: Should groundwater treatment prove necessary, there are a variety of treatment options available. Generally, the alternative chosen depends on the types, quantities and location of

Site Description and History

- The 291-acre site is located between Rolling Hills Road, Palos Verdes Drive North, and Hawthorne Boulevard and extends to include Ernie Howlett Park.
- A diatomite mining operation was active from the early 1900's to 1950's.
- BKK Corporation operated a landfill from 1952 to 1957.
- Hazardous waste accepted between 1964 and 1980 was deposited by the Districts in the main section of the site.
- The Sanitation Districts landfill operations began in 1957 and ended in 1980. Hazardous waste disposal methods included the use of injection wells, liquid disposal pits, and drum burial.
- The Sanitation District Gas-to-Energy facility and back-up flare stations were completed in 1988.
- The Remedial Investigation and Feasibility Study workplans were finalized in February, 1990.



PROJECT TIME LINE

contamination. Treatment methods available include the installation of subsurface barriers to contain the contaminated groundwater, extraction of contaminated groundwater for treatment and disposal, and bioremediation techniques through which microorganisms are used to attack the contaminants while still in the ground.

One treatment method currently being employed at the Palos Verdes Landfill is air-stripping. This method, used for volatile organic compounds, is utilized to treat the groundwater extracted from behind the subsurface barrier. Air stripping involves passing air through the contaminated water after it has been extracted from the ground. The volatile compounds in the water transfer to the air and the water is cleaned. The off-gases resulting from this process are then combusted in the Sanitation Districts' Gas-to-Energy facility boilers.

Settling and other offsite problems

Q: Is the subsurface barrier causing the settlement occurring on property along Moccasin Lane in Rolling Hills Estates?

A: In response to specific concerns about settlement problems at a local church and on three residential properties, representatives from DHS and the Sanitation Districts met with church officials and the homeowners experiencing the settlement problems. The settlement problems at the church occurred over 13 years ago, following a period of heavy rain, and seem to be unrelated to the landfill. The problems at the homes appear to be caused by the settlement of refuse fill placed in a small canyon along Moccasin Lane. This area was filled by the Sanitation Districts under contract to the City of Rolling Hills Estates and a local developer. This landfill was operated separately from the Palos Verdes Landfill.

Residents who live along this fill area have also experienced landfill gas migration problems. The Sanitation Districts will continue to work with the affected homeowners to rectify the problems. A meeting with the homeowners is planned to address these concerns.

Project Time Lines

Q: The time lines for this investigation seem very long. What will happen if problems are found at the site? Will we have to wait five years to see any action?

A: Although the proposed time line states that remedial activities will not be completed until 1996, health and safety concerns identified

during the course of the investigation will be addressed immediately. If at any time DHS and the Sanitation Districts perceive immediate health and safety hazards, local residents and involved agencies will be notified and remedial measures will be implemented at that time. More information about the project time line and the investigation process can be found in the initial fact sheet, dated May 1990.

Future Development Plans

Q: What are the future development plans for the landfill property?

A: In 1984, a general plan for the use of the Palos Verdes Landfill was developed by the Los Angeles County Department of Parks and Recreation with the cooperative effort of other county agencies, a technical advisory committee and a citizens advisory committee. This plan, called the South Coast General Development Plan, proposed the development of an 18 hole golf course and clubhouse facilities with a perimeter equestrian trail. More information about the plan can be obtained by calling Jim Park of the Los Angeles Parks and Recreation Department at (213) 738-2965.

No development can occur on the site until the Remedial Investigation and subsequent Feasibility Study have been completed and DHS determines that a) developing the property would not pose an environmental or public health risk, and b) that the property would not be needed to facilitate the cleanup of any areas requiring remediation.

Q: Can "tipping fees" from the landfill be used to help finance the golf course?

A: Tipping fees collected by the Sanitation Districts have been set aside for long term maintenance of the landfill and are not planned for use in golf course development.

If you have additional questions about the Palos Verdes Landfill that are not addressed in this fact sheet, or would like to comment on the information contained within this fact sheet, please complete this coupon and mail it to the address listed below.

Public Participation Unit
California Department of Health Services
Toxic Substances Control Program
234 W. Broadway, Suite 350
Long Beach, CA 90802

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