



JASCO SUPERFUND SITE

MOUNTAIN VIEW, CA

JANUARY 1991

Report on JASCO Groundwater Contamination Under EPA Review

INTRODUCTION

The U.S. Environmental Protection Agency (EPA), Region IX, is currently reviewing a report on the extent of groundwater and soil contamination at the JASCO Chemical Company Superfund site in Mountain View, CA.

The report, known as a Remedial Investigation (RI) will be on file for public review in mid-February 1991 in the Mountain View Public Library, 585 Franklin St., Mountain View. Other site-related materials will also be on file with the RI for interested parties to review.

Another report dealing with a Risk Assessment (RA) of potential health threats from exposure to contaminants at the site is being prepared and it, along with a report on cleanup alternatives known as a Feasibility Study (FS), is scheduled to be released in early 1991. Both the Risk Assessment and the Feasibility Study will be the subject of a future fact sheet which will be mailed to the community. The reports will also be on file in the library repository.

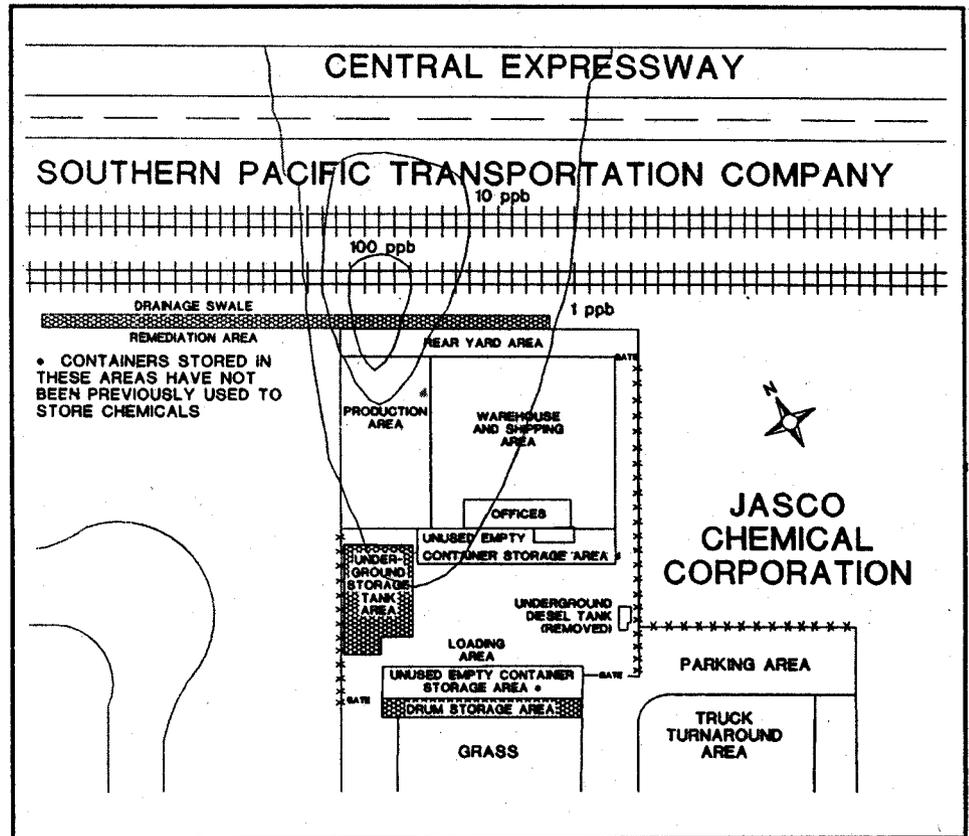


Figure 1: Site map of JASCO showing plume of groundwater contamination

SITE BACKGROUND

JASCO Chemical Corporation has repackaged and formulated chemical products on a 2.05-acre site located at 1710 Villa Street, Mountain View, since 1976. The site is bordered on the northeast by the Southern Pacific Railroad tracks and the Central Expressway and, on the remaining sides, by residential units.

The facility handles and stores numerous chemicals on-site in underground tanks, 55 gallon drums, and other containers. Methylene chloride, paint thinner, denatured alcohol, methanol, kerosene, lacquer thinner, and acetone, are stored in the underground tanks. Other chemicals are stored on-site in both covered and exposed storage areas.

In 1983, a private citizen complained that JASCO was dumping solvents at the rear of the site on a daily basis. The California Regional Water Quality Control Board (Regional Board) ordered JASCO to install a monitoring well at the site to determine if the groundwater had been contaminated. Samples taken in May, 1984 showed the presence of paint thinner, acetone and methanol in the groundwater. A subsequent groundwater sample obtained in April, 1985, showed the presence of pentachlorophenol and methylene chloride. High levels of volatile organic compounds (VOC's) were discovered in the drainage swale area located in the rear of the facility. It appears that past waste disposal practices, possible leakage from underground storage tanks, and surface water runoff from the facility to the swale resulted in the VOC-contaminated soil and the groundwater contamination.

On August 3, 1987, the Regional Water Quality Control Board issued Cleanup and Abatement Order (CAO) No. 87-094 to JASCO. On June 24, 1988, EPA proposed the site for inclusion on the National Priorities List (NPL). On December 21, 1988, EPA issued an Administrative Order (Docket No. 89-01) to JASCO to conduct a Remedial Investigation and Feasibility Study (RI/FS) at the site. Under the Order, JASCO has been working with the EPA and the Regional Board to determine the full extent of contamination and to prevent contaminant migration from the site. The site was listed on the NPL on October 4, 1989.

RESULTS OF THE INVESTIGATION

The extent of soil and groundwater contamination was evaluated during the Remedial Investigation. Following is a summary of the investigation results.

SOILS

The main concern with organic contaminants in the soil is their tendency to leach through the soil layers into the groundwater. During June 1987 and May 1988, to characterize the lateral and vertical extent of soil contamination, 11 on-site soil

borings were drilled to a depth of about 21.5 feet below ground level and six shallow soil borings were drilled to a depth of about three and one-half to six feet below ground level. Analysis of these soil borings indicated that the highest levels of VOC's were concentrated in the drainage swale area located between the Southern Pacific rail lines and the rear of the JASCO facility. The areal extent is approximately 20 feet wide by 250 feet long.

In October 1988, 572 cubic yards of soil from the drainage swale area was excavated and transported to a hazardous waste disposal facility in Casmalia, California. The section of soil excavated was about 10 to 12 feet wide by about 32 feet long. This excavation extended to the depth at which groundwater was encountered (about 22 to 28 feet). The drainage swale area contained the following chemicals: carbon tetrachloride, chloroform, ethylbenzene, tetrachloroethylene (PCE), trichloroethylene (TCE), 1,1-dichloroethene (1,1-DCE), trans-1,2-DCE, 1,1,1-trichloroethane (1,1,1-TCA) and 1,1-dichloroethane (1,1-DCA). Soil samples collected at the bottom of the excavation borings showed the following concentrations of residual organic compounds:

methylene chloride	840-2800 parts per billion (ppb)
1,1,1-trichloroethane	86-790 ppb
1,1-dichloroethane	110-300 ppb
1,1-dichloroethene	Not Detected (ND)
total petroleum hydrocarbons	ND-16,700 ppb
pentachlorophenol	ND

During July and August 1990, as part of the remedial investigation, JASCO completed five boreholes and installed two additional monitoring wells. Soil samples were collected from the surface and subsurface of the drainage swale area, the vicinity of the underground storage tanks, and the drum storage area. Samples were also collected along the southwestern property boundary to be used to provide background information on soil chemistry.

Results of the summer sampling round showed the presence of 1,1-DCA, 1,1-DCE, 1,1,1-TCA, bromoform, methylene chloride, tetrachloroethene, trichloroethene, isopropanol, methanol, low-

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GLOSSARY

Aquifer - An underground formation composed of material such as sand, clay, or gravel that can store and supply groundwater to wells and springs. Most aquifers used for water supplies in the United States are within 1000 feet of the earth's surface. The A-aquifer at the JASCO site is encountered between 25 to 35 feet below ground surface. The B1 aquifer is encountered between 47 and 56 feet and is separated from the A-aquifer by a clay aquitard about seven feet thick.

Contaminant Plume - A three-dimensional zone within the groundwater aquifer containing contaminants that generally move in the direction of, and with, the groundwater flow.

Leaching - The percolating action of water and/or contaminants as they move from the surface through soils toward the water table.

Maximum Contaminant Level (MCL) - Enforceable federal drinking water standards. MCLs are based on health risk, treatment technology, cost and analytical methods.

Parts Per Million/Billion (ppm/ppb) - Units commonly used to express low concentrations of contaminants. One ounce of trichloroethylene (TCE), for example, in one billion ounces (7.5 million gallons) of water is 1 ppb.

State Action Level (SAL) - Recommended drinking water quality guidelines developed by the California Department of Health Services to identify contaminant concentrations that pose potential health risks. These are not promulgated (enforceable) drinking water standards.

Volatile Organic Compounds (VOCs) - A sub-group of organic (carbon-containing) chemicals characterized by their tendency to evaporate (volatilize) readily at room temperature. Some familiar substances containing VOCs are solvents, gasoline, paint thinners and nail polish remover. VOCs found at the JASCO site include trichloroethylene (TCE), dichloroethane (DCA), benzene, dichloroethene (DCE), chloroethane, methylene chloride, and paint thinner.

OPPORTUNITIES FOR PUBLIC INVOLVEMENT

Community involvement is an important component of the Superfund process, particularly in the decisions on how to clean up the JASCO site. There are several ways to become involved.

PUBLIC COMMENT PERIOD AND COMMUNITY MEETING

EPA will issue a Proposed Plan for cleaning up the contamination at the JASCO site in mid 1991. EPA will then hold a 30-day public comment period during which community members are encouraged to submit written comments on the proposed

cleanup plan. The dates of the review and comment period will be announced in local newspapers and in another fact sheet, such as this one, which will be distributed describing the cleanup alternatives considered.

During the comment period a community meeting will be held to discuss the results of the RI/FS and to receive both oral or written comments on EPA's preferred alternative plan for the cleanup.

To receive future fact sheets to keep up-to-date on activities at the JASCO site, please return the mailing list coupon printed on this document.

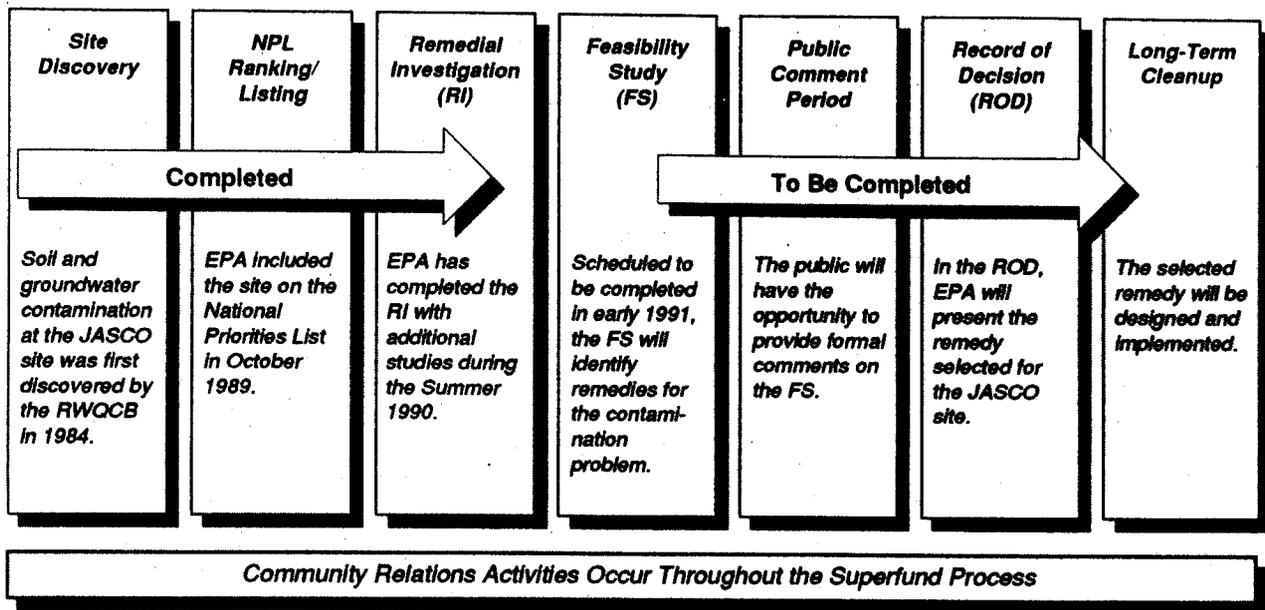
Technical Assistance Grants (TAG): A New Community Relations Opportunity

EPA has a community relations activity called the Technical Assistance Grants (TAG) Program. The purpose of the TAG program is to assist community groups in interpreting technical information. Under this program, one eligible group at each Superfund site may obtain one grant of up to \$50,000 in federal funds to provide technical assistance in understanding site documents. To be eligible, a group must be:

- Incorporated
- Able to meet a 20% matching funds requirement (in-kind contributions - i.e., donated goods and services permissible), or obtain a waiver of this requirement:
- Capable of preparing a plan to use technical assistance based on the schedule for preparing cleanup plans and carrying out the cleanup activities.

For more information about TAG, contact Jack Lockwood at 1-800-231-3075 and leave a message. He will return your call.

JASCO Chemical Corporation Superfund Process



WHAT IS SUPERFUND?

Superfund is the commonly-used name for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a federal law enacted in 1980 and amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA). CERCLA enables EPA to respond to hazardous waste sites that threaten public health or the environment where owners or operators are either unable or unwilling to address the contamination themselves.

Two major steps in the Superfund process are to conduct an in-depth investigation of a site (the RI) and to evaluate possible cleanup (remedial) alternatives (the FS). During the RI, information is gathered to determine the general nature, extent, and sources of contamination at the

site. EPA then selects its preferred cleanup alternative, called the Proposed Plan, using the following considerations: overall protection of human health and the environment; reduction of toxicity, mobility, and volume of contamination; short-term and long-term effectiveness; implementability; cost; community acceptance; and compliance with state, federal and special district laws.

After consideration of all public comments, EPA will issue a Record of Decision (ROD). The ROD also contains the Responsiveness Summary (RS), EPA's response to public comments. Design and implementation of the remedy (Remedial Design and Remedial Action) will then proceed.

Mailing List

If you would like to be included on the permanent mailing list for the JASCO Superfund Site, please complete this coupon, detach and mail to:

Fraser Felter
Community Relations Coordinator
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street, H-1-1
San Francisco, CA 94105

Name: _____

Mailing Address: _____

Phone Number: _____

Affiliation: _____

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medium boiling point hydrocarbons, toluene, xylene, and ethylbenzene. Concentrations ranged up to 6,700 parts per million (ppm), and contamination was found 30 feet below the ground surface in a 50 foot wide area, located to the west of the former excavated area.

The borehole in the underground storage tank area showed 1,2 DCE at 10 parts per billion and toluene at 10 ppb at the 20-30 foot interval below the surface.

GROUNDWATER

A well use investigation of an area extending from about 600 feet east to 600 feet west of the site and extending about 1,000 feet north showed no private or municipal wells producing water for any potable purposes within the JASCO area. Mountain View residences within the area of JASCO obtain their potable water from municipal sources.

Due to the leaching of contaminants from the soil, the A-aquifer groundwater beneath the site is contaminated by a variety of VOCs. The extent of the contamination has been generally determined from on and off-site monitoring wells. Groundwater monitoring wells placed in both the A and B1 aquifers are sampled quarterly.

EPA's estimate of the extent of groundwater contamination is shown in Figure 1. The data indicate that contaminated groundwater extends at least 275 feet north of the site, just past the northern boundary of the Central Expressway. The direction of groundwater flow is to the north-northeast.

Several VOCs were detected in monitoring wells beneath and near the site at concentrations exceeding drinking water standards, or the Federal Maximum Contaminant Levels (MCLs) and State Action Levels (SALs). For example, in the on-site monitoring well containing the highest chemical concentrations, 1,1 DCA was recently detected at 240 ppb, exceeding the MCL and SAL of 5 ppb. The highest total VOC level in on-site monitoring

well V4 ranges from 263 ppb to 335 ppb. Other chemicals detected in groundwater during the July sampling are listed in the following table.

CONTAMINANT	CONCENTRATION	MCL
vinyl chloride	5 ppb	1 ppb
1,1 DCE	98 ppb	6 ppb
1,1 DCA	240 ppb	20 ppb
1,1,1 TCA	48 ppb	200 ppb
chloroethane	12 ppb	
methylene chloride	6.4 ppb	
total petroleum hydrocarbons	610 ppb	

Overall, 1,1 DCA, 1,1 DCE, and methylene chloride were detected in groundwater above their MCLs of 20 ppb, 6 ppb, and 5 ppb respectively.

In addition to the soil removal, JASCO has constructed a 14-well monitoring network, designed a runoff management system to prevent surface water infiltration within the drainage swale area and the company has implemented a groundwater extraction system. This system consists of an onsite A-aquifer well that captures the most highly contaminated groundwater from beneath the site. Pumped groundwater is discharged to the sanitary sewer system, and is regulated under a permit from the City of Mountain View. A quarterly groundwater monitoring program is also in place at the facility.

CONCLUSIONS

Although site-related contaminants in groundwater are at levels of public health concern if ingestion, dermal contact, or inhalation occurs, no current human exposures to contaminants exist.

For More Information

If you have questions or need more information, please contact

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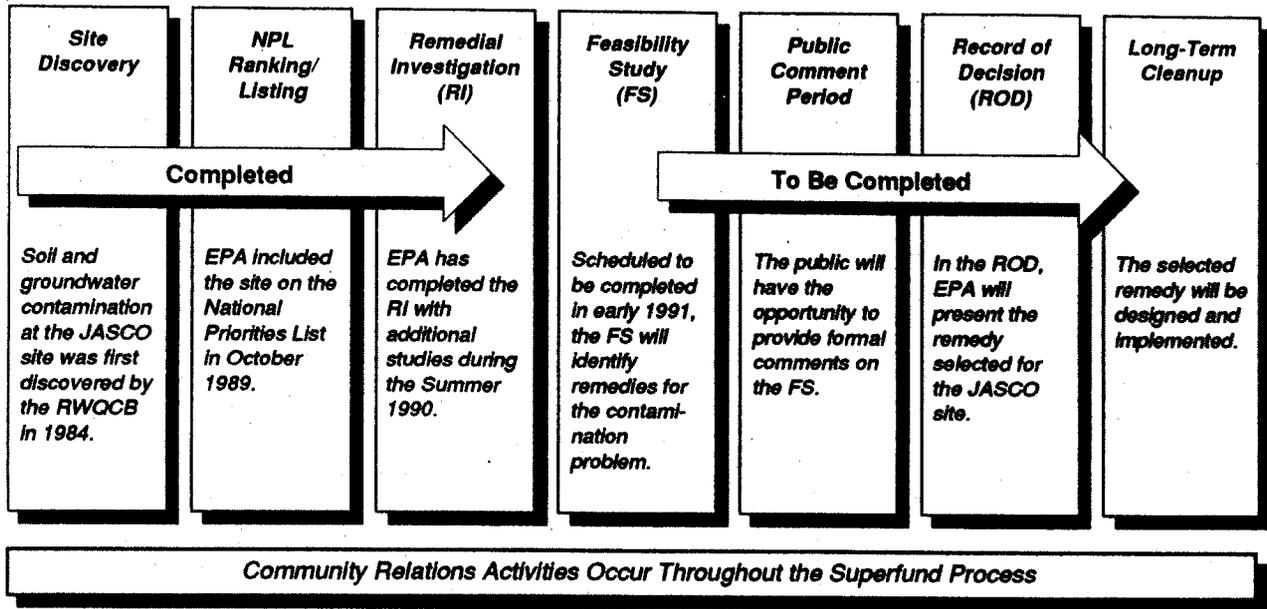
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