



EPA

Del Monte Corporation (Oahu Plantation) Superfund Site



Cleanup Investigation To Begin

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 9 • SAN FRANCISCO, CALIFORNIA • APRIL 1997

Fact Sheet #2

Kunia, Hawaii

Under an agreement with the United States Environmental Protection Agency (US EPA), Del Monte Fresh Produce (Hawaii), Inc., has begun the part of the Superfund cleanup process called the Remedial Investigation (RI).

The RI is a detailed technical study of the nature and extent of contamination, including the kinds of chemicals used, the areas affected, and the human health and ecological risks associated with the contamination. The activities at the Del Monte site include soil testing at a number of locations and an investigation of the size, location and direction of movement of the groundwater contamination.

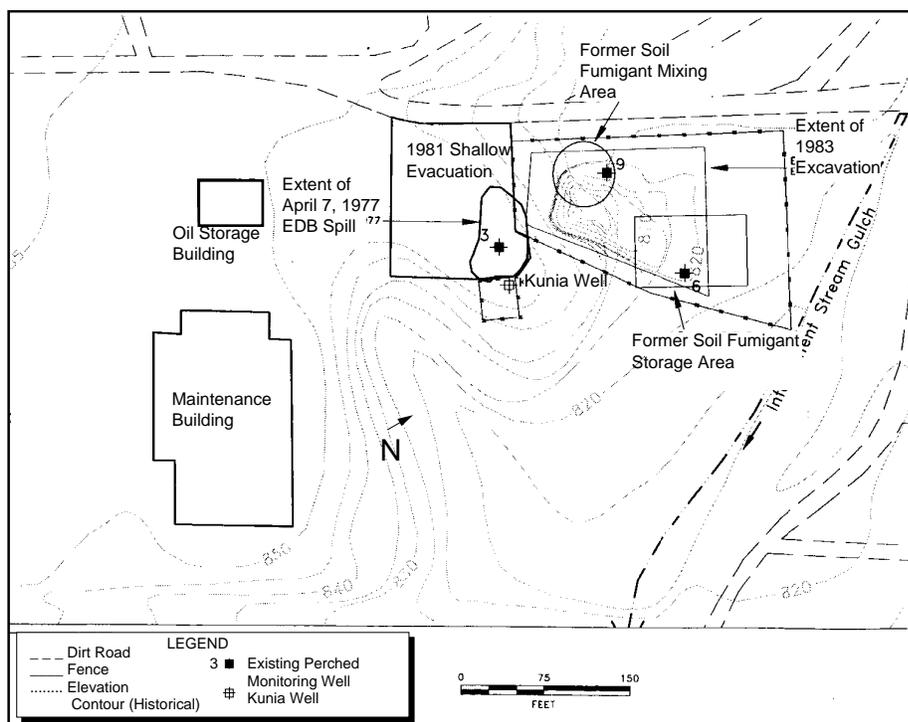


Figure 1: Schematic Of The Area Of Known Contamination

EPA and the State of Hawaii are holding a public meeting to announce the beginning of the cleanup investigation at the Del Monte site. During the meeting, community members will learn about EPA's cleanup process and about the availability of a Technical Assistance Grant (TAG) to help the community understand the technical documents created during the investigation and become involved in the cleanup process.

The meeting will include representatives from U.S. EPA, the Office of Hazard Evaluation and Emergency Response for the State of Hawaii's Department of Health, and the Agency for Toxic Substances and Disease Registry (ATSDR).

Contamination at Del Monte Site

The primary environmental concerns at the Del Monte site are soil and groundwater contamination. At present, the areas of greatest interest are the old storage area, the mixing area, and an area where 495 gallons of ethylene dibromide (EDB) were spilled near the Kunia Well. Figure 1 (above) shows a preliminary drawing of those areas.

Based on a review of historical site documents, several other potential sources of contamination may exist at the plantation. These include empty pesticide drum burial sites and areas where underground

Public Meeting

April 30, 1997, from
7-9 p.m.

Wahiawa Intermediate
School Library

275 Rose Street
Wahiawa, Hawaii

storage tanks for diesel, gasoline and waste oil exist. The full extent of soil, shallow groundwater and deep groundwater contamination from these potential sources is unknown.

The pesticides listed in Table 1 have been used primarily at the site. These chemicals can be classified as either soil fumigants or nematocides. There were other pesticides that were used at the site, but are not listed in Table 1.

The Remedial Investigation

Groundwater Sampling

Groundwater contamination is a concern at the Del Monte site. When contaminants move into groundwater, their location is called the plume. To measure the size of the plume and the direction it is moving, water will be taken from a number of wells which reach various depths.

shallow groundwater zone to the deeper groundwater, and whether contaminated shallow groundwater is reaching the surface. As the temporary and permanent wells are being drilled, samples of the soil will be collected and analyzed to determine if contamination is present and how the soil might influence groundwater flow.

The existing Kunia Well will be tested to determine if contamination is present in deep groundwater and to determine if the well is acting as a conduit to transport contamination from shallow to deep groundwater. If it is determined that the Kunia Well is not suitable for monitoring groundwater and cannot be retrofitted, a replacement well will be installed close to the Kunia Well. It may also be necessary to install a deep groundwater monitoring well downgradient of the Kunia Well. Existing regional deep groundwater monitoring wells will be sampled to obtain regional water quality data.

The wells used in the investigation will perform double duty. During the RI phase, they will provide information on the concentration of contaminants and the extent and movement of the groundwater plume. During the cleanup phase, these same wells can indicate the progress of the cleanup action (known as the remediation) by recording decreases in the concentration of contaminants and reduction in the size of the plume.

Soil Pesticides	
Pesticide	Approximate dates of use
Chloropicrin	Prior to mid-1940s
DBCP (1,2-dibromo-3-chloropropane)	Small scale experimental use 1950s - 1970s BANNED 1985
EDB (Ethylene dibromide)	Mid 1940s until 1983 BANNED 1984
DD (1,3-dichloropropene and 1,2-dichloropropane)	Primary pesticide used from the mid-1940s to 1983
Telone (100% 1,3-dichloropropene)	Experimental/small scale
Telone II (92% 1,3-dichloropropene)	Primary pesticide used since 1983

Table 1: Principal soil pesticides used at Del Monte site

The remedial investigation involves a substantial amount of data collection and analysis. The investigation effort will include site mapping, hydrogeological studies (an examination of the movement of the underground water), surface water and groundwater sampling (from new and existing wells), soil sampling, air monitoring, and computer modeling. To assure accuracy, EPA will independently test some samples to verify Del Monte Fresh Produce's test results.

EPA anticipates that eight temporary and three permanent clustered groundwater monitoring wells will be installed to define the width and depth of contamination in the shallow groundwater (referred to as the lateral and vertical extent of contamination). "Clustering" refers to the placement of two to three wells close together to monitor groundwater at various depths.

Sampling data from these wells will help determine whether contaminants are moving from the

Soil Sampling

There are a number of areas which will be tested for soil contamination. EPA anticipates collecting approximately 27 soil samples in the Kunia Village area.

This area includes the former fumigant storage area, the former fumigant mixing area, and the area around the Kunia Well where the EDB was spilled in 1977. Soil samples will be collected in five-foot intervals down to where it reaches the shallow groundwater, a depth of about 45 feet below ground surface. Approximately eighteen additional surface and near-surface soil samples (five feet deep or less) will be collected to confirm the boundaries of each area.

In addition, soil samples will be collected at areas of potential contamination, including five pesticide drum burial sites, three underground storage tank sites, and the burial site of a cylinder of methyl bromide. Samples will be collected from the base of the burial sites and below the base of the burial sites to determine if the leaks from drums or tanks contaminated the soil. A former soil fumigant storage area south of the Kunia Village area will be sampled from six inches to 25 feet below ground surface.

If contaminants are detected, then additional sampling may be needed to complete the evaluation of the nature and extent of contaminants in this area. Finally, areas around the

perimeter of Kunia Village will be sampled where aerial photographs indicate drums appear to have been stored.

What is *downgradient*?

As with surface water, groundwater flows from the higher areas toward the lower areas. However, because there are various kinds of soil and rock formations beneath the surface, it is often not possible to know how the groundwater moves. The geology of the Del Monte site makes it particularly difficult to know which direction the contaminated groundwater flows. Some of the soil is clay, which water must go around. The rock formations have cracks and fissures which may alter the expected flow of groundwater. So, *downgradient* may not be the same as *downhill*. The monitoring wells help determine what the groundwater is actually doing.

Surface Water and Sediment Sampling

An intermittent stream gulch and adjacent ravine will be sampled to determine whether contaminants have been transported there by erosion or migration of shallow groundwater at concentrations that need further evaluation. To evaluate drainage toward the ravine and the stream gulch, surface and subsurface sediment and soil samples will be collected downgradient of both the Kunia Well spill area and the former fumigant mixing and storage areas.

EPA anticipates that samples will be collected in two locations to a depth of five feet. Surface water samples will be collected during or following a storm. Eight sediment samples will be collected at one foot depths along the ravine and gulch. The locations will target the most likely portions of the gulch and ravine to have received drainage.

Future Activities

At the end of the Remedial Investigation, Del Monte Fresh Produce will conduct a Feasibility Study (FS) to review potential cleanup remedies. At the end of this phase, EPA will identify the remedy it considers best and create a proposed cleanup plan based on it. The results of the RI/FS processes and EPA's Proposed Cleanup Plan will be made available for public review, including

a comment period of at least 30 days. Community members will be invited to consider EPA's cleanup recommendations and comment in person or in writing.

Currently, the Remedial Investigation is scheduled to be completed in Fall 1998. Depending on the results of the investigation, the schedule may change. If the work goes as planned, the Feasibility Study will be finished during Winter 1998 and the Record of Decision will be completed in Summer 1999.

In addition, EPA will hold a public meeting to answer the

community's questions and assist the public with their evaluation and comments. EPA will make an official record of the community's comments during the 30-day

comment period.

After reviewing public comments, EPA will choose a cleanup method and explain its actions in a document called the Record of

Decision (ROD). Following the ROD, the specific construction details for the remedy will be developed during the Remedial Design phase, and the remedy will be built and put into operation during the Remedial Action phase. During these phases, EPA will continue to keep the community informed about the progress of the cleanup and any important changes that occur.

Site History

The Del Monte Site is part of a 6,000-acre pineapple plantation. It is operated by Del Monte Fresh Produce (Hawaii), Inc. The site is located on the western side of the Oahu central plain.

The plantation is separated into two parts. The southern portion of the plantation, the Kunia area, includes the Kunia community and surrounding agricultural fields. The northern portion of the plantation, the Poamoho area, lies north of the town of Wahiawa. It includes both housing and agricultural areas. Approximately 29,000 people live within four miles of the site.

The Del Monte site has been used for growing pineapples since the early 1940s. During that time, a number of chemicals were applied to the soil to kill nematodes (worms that attack pineapple roots). While Del Monte Corporation operated the site, a spill of 495 gallons of ethylene dibromide (EDB), a pesticide (also called a soil fumigant), occurred near the Kunia Camp Well on April 7, 1977. The well was immediately tested and no contamination was found.

In 1980, tests by the State of Hawaii Departments of Health and Agriculture and the Pineapple Growers Association of Hawaii found EDB and 1,2-dibromo-3-chloropropane (DBCP, another soil fumigant) in the Kunia Camp Well. The well was disconnected from Kunia's drinking water system.

The Del Monte Corporation conducted voluntary cleanup efforts. They removed contaminated soil during the first three years after discovering the contamination and began extracting contaminated groundwater, which continued until September 1994.

On December 16, 1994, the site was added to EPA's National Priorities List (NPL) which allows EPA to use Superfund resources to oversee a cleanup of the site.

Community Relations Plan Available

The blueprint for involving interested members of the community in the cleanup process for the Del Monte Superfund Site is called the Community Relations Plan. Through the activities identified in the plan, EPA will:

- 1) ensure two-way communication between the agency and the directly affected and interested community,
- 2) keep the community informed of technical progress at the site, and
- 3) involve the community in the decision-making process.

The plan includes information on the history of the site, a description of the contamination, and a number of ways that EPA will help the public stay informed about progress at the site. A copy of this plan is available for public review at the Information Repository located at the Wahiawa Public Library, 820 California Avenue in Wahiawa. EPA welcomes your comments on this plan. ■

Letter Of Intent Received For Technical Assistance Grant

EPA has received a Letter of Intent from *Friends of 'Apoha* on Oahu to apply for a Technical Assistance Grant (TAG). A TAG helps a community become involved in the cleanup process and in particular, the selection of a final cleanup remedy. The funding is available to hire an independent expert to explain the technical issues and information about the site, and to support the grantee's community outreach effort. The TAG provides funding of up to \$50,000.

Community organizations may apply for the TAG separately or as a coalition of eligible community groups. Organizations that

are interested in the TAG program are urged to contact Friend of 'Apoha, PO Box 62072, Honolulu, HI, 96839, (808) 988-9187, to see if there is interest in working together as a coalition of community groups. The application period is from April 14 to May 30, 1997. EPA will give preference to those applicants that show the highest community representation and highest capacity for community outreach to the directly-affected community.

Information about the TAG program and an application packet can be obtained by contacting the EPA Region 9 office toll-free at (800) 231-3075.

Information Repository

Technical documents, public comments, the community relations plan and other information concerning the Del Monte site will be available for public review at an information repository. These documents include the Del Monte Site Conceptual Model, the Del Monte Data Summary and Evaluation Report and the Del Monte Preliminary Assessment/Site Investigation. The repository will also include general information about Superfund. The repository is located at:

Wahiawa Public Library

820 California Avenue
Wahiawa, HI 96786
(808) 621-6331

Hours of Operation:

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Return to: Carmen White, U.S. EPA, 75 Hawthorne Street, (SFD-3), San Francisco, CA 94105

FOR ADDITIONAL INFORMATION

For additional copies of this fact sheet or general information on the Superfund process, you may contact:

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Inside:

*Public Meeting
April 30, 1997 for
Del Monte Site*