



# DEL MONTE CORPORATION (OAHU PLANTATION) SUPERFUND SITE

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • October 2003

## Poamoho Section Proposed for Removal from Superfund List

The United States Environmental Protection Agency (“EPA”) requests public comment on its intent to remove the Poamoho Section of the Del Monte Corporation (Oahu Plantation) Superfund Site), located in Oahu, Hawaii, from the National Priorities List (“NPL”). The remaining portion of the site, the Kunia Section, will remain on the NPL and is not a part of this proposed decision.

The public comment period runs from October 30, 2003 to December 1, 2003. Comments may be submitted to U.S. EPA, Region 9, Janet Rosati (SFD-8-2), 75 Hawthorne Street, San Francisco, CA 94105, postmarked no later than December 1, 2003. Comments may be faxed to (415) 947-3526 or e-mailed to [rosati.janet@epa.gov](mailto:rosati.janet@epa.gov) by December 1, 2003.

### Why EPA Proposes to Delete the Poamoho Section

Federal law provides that a site may be deleted from the NPL, or the Superfund List, when environmental sampling shows that it poses no significant threat to human health or the environment. This means that cleanup measures are not necessary. Based on the results of the Del Monte site investigation, the EPA and the State of Hawaii Department of Health have determined that taking cleanup measures on the Poamoho Section are not necessary. Therefore, the EPA is proposing to remove this section of the Del Monte site from the NPL. The following sections discuss the details of the Poamoho cleanup investigations.

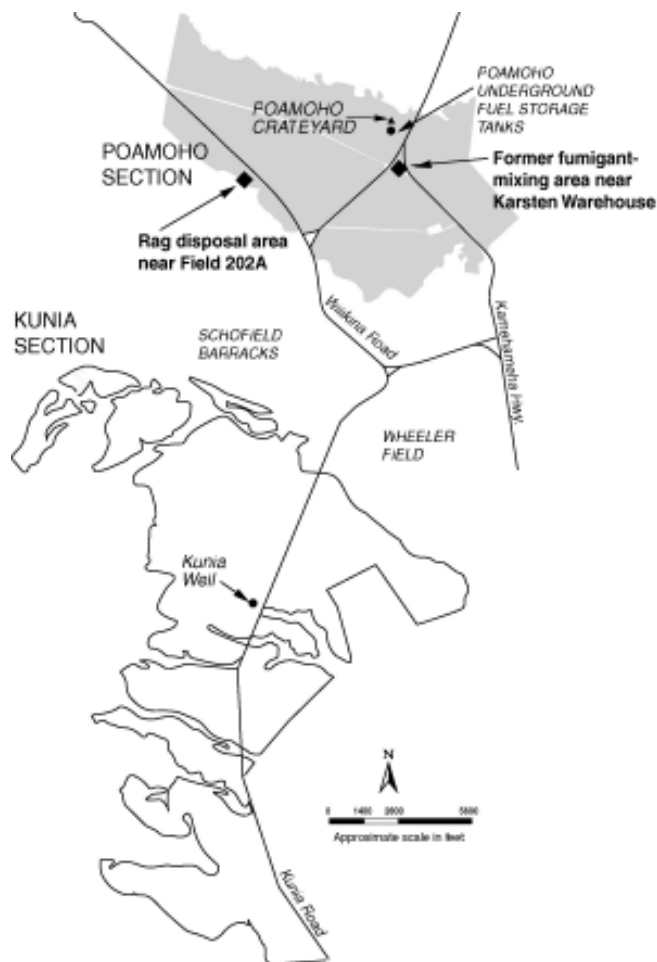
Detailed information on the Poamoho investigations can be found in the November 1998 Remedial Investigation Report and the March 17, 2003 Remedial Investigation Technical Memorandum 02-02, Investigation Results for Additional Other Potential Source Area.

### Site Background

The Del Monte site is an active pineapple plantation that consists of two major sections known as Kunia and Poamoho. The Kunia Section is located in the general vicinity of the Kunia Well. The Poamoho Section is geographically separated from the Kunia Section by Schofield Army Barracks and is located 3 miles north of the Kunia Well.

In December 1994, EPA listed the site on the NPL, primarily over concerns with contaminated groundwater at the Kunia Section, a source of drinking water. Since 1995, Del Monte Fresh Produce has investigated contamination throughout the site, including two potential source areas on the Poamoho Section: a former fumigant drum burial site and a closed underground storage tank site.

In August 2002, two additional Other Potential Source Areas were identified for investigation: a Former Fumigant Mixing Area



*Del Monte Superfund Site location*

near the Karsten Warehouse and a Rag Disposal Area near the southern end of Field 202A.

*Cont'd. on page 2*

## Poamoho Drum Burial Investigation

In the early 1970s, empty soil fumigant drums were buried behind an area known as the Poamoho Crater. Soil samples were collected at varying depths from directly beneath the buried material. Soil analysis showed that no EDB, DBCP or other chemicals associated with fumigant drum burial were present in the soils. The pesticide Heptachlor was detected in one sample at 2.3 micrograms per liter (ug/l), but this level is well below EPA's residential health-based guideline for Heptachlor of 99 ug/l.

A soil gas sample was also collected from each of the three boreholes at the base of the buried debris. Although a number of chemicals were detected in soil gas samples, the concentrations are low and do not present a human health risk. Because soil gas vapors can migrate up to the ground surface and disperse into the air, a soil gas analysis was conducted to examine the health risk from inhalation. The analysis showed that levels of chemicals in the air that people might breathe were far lower than EPA's health-based guidelines.

The estimated concentrations of chemicals in soil were also much lower than EPA's guidelines. Moreover, the concentrations of chemicals in soil gas and soil do not pose a risk to groundwater due to the low concentrations detected and the great depth to the aquifer.

## Poamoho Fuel Storage Tank Investigation

In 1987, Del Monte Fresh Produce removed two 6,000-gallon steel underground fuel storage tanks (USTs) that previously contained either diesel fuel or gasoline. In March 1997, **soil beneath** the two former USTs were sampled. An analysis for petroleum and associated constituents was conducted, but none of these compounds were detected.

## Poamoho Former Fumigant Mixing Area

During the late 1950s and early 1970s, a fumigant mixing area near the Karsten Warehouse was used for diluting concentrated soil fumigants with diesel fuel. The soil fumigants included EDB and possibly Shell DD (a mixture of 1,2-dichloropropane, 1,3-dichloropropene, 2,3-dichloropropene, 3,3-dichloropropene and traces of trichloropropane). During the mixing operations, spills occasionally occurred. Rags used to wipe down the fumigant drums were discarded in the Rag Disposal Area discussed in the next section.

In September and October 2002, soil samples were collected within the 30 by 40 foot boundary of the Former Fumigant Mixing Area and analyzed for volatile organic compounds (VOCs). The only compound detected at a concentration greater than residential health based guidelines was 1,2,3-trichloropropane (TCP) at 10 micrograms per kilogram (ug/Kg) at a depth of 15 feet below ground surface (bgs). EPA's residential health-based guideline for TCP is 5 ug/Kg.

Additional sampling at depths below 15 feet bgs was conducted in February 2003 to determine the extent of TCP contamination. The second round of sampling showed TCP at levels below the residential health-based guidelines, with the highest level being 4.4 ug/Kg.

## Poamoho Rag Disposal Area

The rags used in the above fumigant mixing area were discarded in a debris disposal and burn area operated by the City and County of Honolulu. Sampling in this area was conducted in September and October 2002. The sampling at the Rag Disposal Area differed from sampling at the Former Fumigant Mixing Area because the depth of the debris was unknown and the most critical samples would be the soil samples beneath the disposal area.

Core samples were collected within the burn debris to a depth of approximately 3-5 feet beneath the bottom of the debris for visual observation and field screening for the potential presence of chemicals. Test pits identified the boundaries of the refuse disposal and burn site as an oblong area approximately 100 feet wide by 130 feet long. The nineteen samples were analyzed for VOCs, for TPH-diesel and Lindane, Toxaphene and Heptachlor.

No compounds were detected at concentrations above EPA's health-based guidelines. Three of the 19 soil samples contained detected compounds: 1) benzene at 4.2 ug/Kg, which is less than the health-based guideline of 600 mg/Kg; 2) bromomethane at 7.5 ug/Kg, which is significantly less than the health-based guideline of 3,900 ug/Kg; and 3) toluene at 5.2 ug/Kg, with health-based guideline for toluene of 520,000 ug/Kg.

## Del Monte Groundwater Levels

In the Poamoho Section of the Del Monte site, basal (deep) groundwater is approximately 600 -700 feet bgs and no perched (shallow) groundwater was encountered. At the Kunia Section three miles to the south, EPA has determined that there are two zones of contaminated groundwater: the basal aquifer, which is approximately 800 feet bgs, and the perched aquifer, which is approximately 100 feet bgs. At the Kunia Section the basal aquifer flows south, away from the Poamoho Section. Although the Kunia Section's perched aquifer flows north, it is a small and localized groundwater body in the immediate vicinity of the Kunia Well. Since the Poamoho Section is located several miles north of the Kunia Well, EPA does not expect that groundwater contamination will migrate to the Poamoho Section.



# DEL MONTE CORPORATION (OAHU PLANTATION) SUPERFUND SITE

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • Oktubre 2003

## Insayungkat Ti Poamoho Section Iti Pannakaikkat Na Diay Superfund List

Ti United States Environmental Protection Agency (“EPA”) ket dawatenna iti comentario ti publico gapu ta kayatna a maikkat ti Poamoho Section didiay National Priorities List (“NPL”) iti Del Monte Corporation (Oahu Plantation Superfund Site), a masarakan diadiay Oahu, Hawaii. Dadiay nabati nga parte, ti Kunia Section, ket saan nga maikkat didiay NPL ken saan nga mayraman ditoy a marisut.

Ti comentario ti publico ket mabalin nga awaten ti EPA mangrugi no Oktubre 30, 2003 ket aggibus no Disiembre 1, 2003. Ti comentario yo ket mabalin yo nga ited didiay U.S. EPA, Region 9, kenni Janet Rosati (SFD-8-2), 75 Hawthorne Street, San Francisco, CA 94105, saan nga naladladaw ngem no Disiembre 1, 2003. Mabalinyo met nga i-fax diay (415) 947-3526 wenno e-mail kenni rosati.janet@epa.gov Disiembre 1, 2003.

### Apay Nga Ti EPA Kayatna a Maikkat Ti Poamoho Section Didiay Listaan Ti NPL

Iti paglintegan iti umili ket kunana nga ti maysa a lugar ket mabalin nga maikkat didiay NPL, wenno diay Superfund List, no laketdi dagidiay “environmental sampling” ket saan nga makayted iti sakit kadagiti tao wenno makaaspectar iti aglawlaw. Kayatna nga sawen, saan nga masapul nga dalusan iti arubayan ta awan met ti naaspectaran. Gapu iti resulta iti investigacion didiay Del Monte Site, iti EPA ken ti State of Hawaii Department of Health ket imbagada nga saan a masapul nga dalusan iti Poamoho Section. Isuna nga iti EPA ket insayaungkat na nga maiikat daytoy nga parte iti Del Monte diay NPL. Iti sumarono nga parte ket isalaysay na nga detalyado iti “Poamoho cleanup investigations”.

Iti detalyado nga pakaammuan iti investigacion iti Poamoho ket masarakan diay November 1998 Remedial Investigation Report ken ti March 17, 2003 Remedial Investigation Technical Memorandum 02-02, Investigation Results for Additional Other Potential Source Area.

### Maypaggep Iti Lugar

Iti pagmulaan nga Del Monte ket nabingay iti dua nga parte, dagitoy iti Kunia ken Poamoho. Ti Kunia Section ket masarakan didiay Kunia Well. Ti Poamoho Section ket masarakan tallo (3) nga milia iti ammanan ti Kunia Well ket nagtingngaan dagiti dua nga “sections” iti Schofield Army Barracks.

Idi Diciembre 1994, iti EPA ket inlista da dagitoy nga lugar diay NPL, gapuna laeng iti kaadda iti contaminado nga danum nga masarakan didiay uneg ti daga didiay Kunia Section, iti pagal-alaan da iti mainom nga danum. Ingana idi 1995, Iti Del Monte Fresh Produce ket ininvestigaranda iti contaminado nga lugar, agraman iti dua (2) nga mabalin nga pagalaan nga lugar didiay Paomoho Section; diay dati nga pagikalian ti dram nga pagikabilan iti kemikal ken ti naysarra nga kamarin ti tangke nga naikabil didiay uneg ti daga.

Idi Agosto 2002, dua (2) pay nga lugar ti nakitada nga investigaran; iti dati nga Fumigant Mixing Area nga asideg diay Karsten Warehouse ken diay Rag Disposal Area a masarakan iti abagatan asideg didiay Field 202A.



### Mapa ti Lugar

### Investigacion Iti Naikali Nga Dram didiay Poamoho

Idi damdamu ti 1970, dagiti dram nga awan nagyannan a kemiko ket inkali da didiay likod iti Poamoho Crateyard. Nagalada iti daga iti nadumaduma nga kauneg didiay mismo nga

nagikalyan da iti dram. Ti resulta iti panagadalda kadagidiay daga nga naala da ket awan iti EDB, DBCP wenna dadduma paynga a kemikong a nakita da. Ti pesticidyo nga Heptachlor ket nakita iti maysa kadagidiay naala a daga ket 2.3 microgram kada litro (ug/l) iti kaaduna, ngem daytoy ket nababa unay no pagmidiran iti EPA residential health-based guideline para iti Heptachlor nga 99 ug/l.

Nagala da met iti daga ta kitaen da no adda gaas kadagidiay tallo nga abot nga kinali da iti parehas a disso. No pay adda nakita da nga kemiko kadagito y nga daga, bassit laeng ket saan nga makayted iti sakit ti tao. Gapuna ta iti puyopoy iti gaas ket mabalin nga agpangatu aggaput uneg daga a mapan iti rabaw, inadal da manen no adda epecto iti gaas iti tao no maangot da. Ti resulta na ket nababa iti kemiko nga mabalin a maangot iti tao no pagmidiran ti EPA's health-based guidelines.

Iti kaadu iti kemiko didiay innalada nga daga ket nababa unay no maicompara iti EPA guidelines. Nakitadapay iti kaadu iti kemiko didiay daga nga adda gaas na ken dadiay daga laeng, ket saan nga makaaspecto iti danum diay uneg iti daga gapuna ta bassit unay ti nakitada ken nauneg met ti "aquifer".

## **Investigacion Didiay Tangke Iti Gasolina Wenna Diesel Didiay Poamoho**

Idi 1987, ti Del Monte Fresh Produce ket inikkatda iti dua (2) nga naikali nga tangke iti gasolina wenna diesel nga aglaon iti 6,000 nga galon. Idi Marso 1997, nangala da iti daga didiay naggapuanan dagiti dua (2) nga tangke. Inadal da dagito y nga naala a daga ket awan ti nakitada da nga petrolyo ken dadduma pay a kapadpada na.

## **Dati Nga Fumigant Mixing Area Didiay Poamoho**

Idi agngalay iti 1950's ken idi damdamu pay iti 1970's, adda fumigant mixing area nga makita iti asideg ti Karsten Warehouse nga maus-usar nga paglaok iti concentrated soil fumigant ken iti diesel. Dagiti soil fumigants nga nausar ket EDB ken baka shell DD ( naglaok nga 1,2-dichloropropane, 1,3-dichloropropene, 2,3-dichloropropene, 3,3-dichloropropene ken bassit laeng nga trichloropropane). Idi tiempo iti panaglaok kadagito y nga kemiko, adda maibelleng no saggaminsan. Dagiti rotrot nga mausar nga pagpunas kadagidiay dram ket maibelleng didiay Rag Disposal Area, nga isunto ti sumaruno nga mapagsasaritaan.

Idi Septiembre ken Octubre 2002, nangala da manen iti daga iti arubayan ti dati nga Fumigant Mixing Area nga kasinlaw a iti 30 ken 40 pie' ket kinita da no adda volatile organic compounds (VOCs). Ti nakita da laeng nga "compound" nga nangatngato ngem iti residential health based guidelines ket 1,2,3-trichloropropane (TCP) adda 10 micrograms kada kilo ti daga (ug/Kg) nga naala iti 15 pie' ti kaunegna. EPA's residential health-based guidelines ti TCP ket 5ug/Kg.

Nangala da pay iti daga nga naggapu iti naun-uneg ngem 15 pie' idi Pebrero 2003 ta kitaen da iti kaadu ti TCP iti kasta nga kauneg. Daytoy nga maykadua nga panagadal da ket naduktalanda nga ti kaadu iti TCP ket nababbaba ngem iti residential health-based guidelines, ket ti kangatuan a naala da ket 4.4 ug/Kg.

## **Pagibellengan Ti Rotrot Didiay Poamoho**

Dagiti rotrot nga nausar didiay fumigant mixing area ket naibelleng diay pagbasuraan ket puoran iti City and County of Honolulu. Nangala da met ditoy iti "samples" nga adalenda idi Septiembre ken Octubre 2002. Dagiti naala didiay Rag Disposal Area ken diay dati nga Fumigant Mixing Area ket agsupadi da ta ngamin saanda nga ammo no kasano iti kauneg na dagidiay rotrot ken dagiti kasayaatan nga "soil sample" ket aggapo ditoy uneg ti daga daytoy nga lugar.

Ngarud nangala da manen iti adalenda tapno makita da a nasayaat dagidiay nagpuoran ken kitaenda met no adda kemiko ingana iti 3-5 nga pie' ti kaunegna didiay ayan ti nagpuoran. Ti nagibellengan ken nagpuoran da ket 100 pie' ti kalawa na ken 130 pie' met ti kaatiddug na. Dagiti sangapulo ket siyam nga naala nga adalenda ket para iti VOCs, TPH-diesel ken lindane, Toxaphene ken Heptachlor.

Awan ti nakita da nga "compound" nga nangatngato ngem didiay EPA's health-based guidelines. Tallo kadagidiay sangapulo ket siyam nga naala nga adalenda ket adda nakita nga "compounds": 1) benzene nga 4.2 ug/Kg. ket nababbaba ngem ti health-based guideline nga 600 mg/Kg; 2) bromomethane nga 7.5 ug/Kg, addayo nga nababbaba ngem iti health-based guideline nga 3,900 ug/Kg.; ken 3) toluene nga 5.2 ug/Kg. ket ti health-based guideline na ket 520,000 ug/Kg.

## **Kauneg Iti Danum didiay Del Monte**

Didiay Poamoho Section diay Del Monte Site, ti kauneg iti danum ket agarup nga 600–700 nga pie' ket awan iti narabaw nga ubbog. Didiay Kunia Section, tallo nga milia iti abagatan ti Poamoho Section, iti EPA ket naduktalanda nga dua nga lugar iti adda contaminado nga danum didiay uneg ti daga: diay basal aquifer, agarup nga 800 pie' ti kaunegna ken iti perched aquifer, agarup nga 100 pie' met ti kaunegna. Ditoy Kunia Section, dadiay basal aquifer ket agpaabagatan ti agus na, umadayo didiay Poamoho Section. Nupay diay agus ti perched aquifer didiay Kunia Section ket agpaammianan, bassit ken saan unay a makaadayo didiay Kunia Well. Gapuna ta daydiay Poamoho Section ket addayo unay didiay Kunia Well, ti EPA ket saan na nga patien nga maaspectaran dagidiay ubbog diay Poamoho Section.

# NO ADDA PAY KAYATYO NGA MAAMMUAN

No adda pay kayatyo nga ammuen maypanggep iti araramiden ti Superfund didiay Del Monte Superfund Site, agraman dagiti Administrative Records para daytoy nga naysayungkat nga pannakaikkat ti Poamoho Section diay listaan ti NPL, ket adda nga maamuan tayo didiay Information Repositories iti sumaganad nga lugar:

## FOR ADDITIONAL INFORMATION

Additional information concerning Superfund activities at the Del Monte Superfund Site, including the Administrative Record for the proposed Poamoho Section de-listing, is available at the Information Repositories at the following two locations:

**Superfund Records Center**  
U.S. EPA Region 9  
95 Hawthorne Street  
San Francisco, CA 94105  
(415) 563-2000

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



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David Cooper, Community Involvement Specialist  
U.S. Environmental Protection Agency Region 9  
75 Hawthorne Street (SFD-3)  
San Francisco, CA 94105



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## FOR MORE INFORMATION • NO ADDA PAY KAYATYO NGA MAAMMUAN

If you have questions or concerns about the Del Monte Superfund Site, please contact:

No adda kayatyo nga damagen wenno maamuan gapu ti Del Monte Superfund Site, ket tumawag kayo kenni:

**David Cooper**

Community Involvement Coordinator  
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75 Hawthorne Street  
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