CALIFORNIA
Water Boards

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ENVIRONMENTAL PROTECTION

State Water Resources Control Board

UST CASE CLOSURE REVIEW SUMMARY REPORT

Agency Information

Agency Name: Alameda County Health Care Services Agency (County)	Address: 1131 Harbor Bay Parkway Alameda, CA 94502
Agency Caseworker: Mark Detterman	Case No.: RO0000164

Case Information

USTCF Claim No.: 10081	Global ID: T0600101947
Site Name: RAS-CO Manufacturing Co.	Site Address: 413 West Sunset Bl., Hayward, CA 94541
Responsible Party (RP): RAS-CO Mfg. Co., Attn: Karniel Lang	Address: 413 West Sunset Bl., Hayward, CA 94541
USTCF Expenditures to Date: $34,789	Number of Years Case Open: 18

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600101947

Summary

The Low-Threat Underground Storage Tank (UST) Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Policy. This case meets all of the required criteria of the Policy. A summary evaluation of compliance with the Policy is shown in **Attachment 1: Compliance with State Water Board Policies and State Law**. The Conceptual Site Model upon which the evaluation of the case has been made is described in **Attachment 2: Summary of Basic Case Information (Conceptual Site Model).** Highlights of the case follow:

The Site is located at 413 West Sunset Boulevard in Hayward and is occupied by the RAS-CO Manufacturing Company building and yard as well as a house and garage. Two USTs were removed in November 1994 and over-excavation of affected soil to a depth of 21 feet. In 1999, one monitoring well was installed in the source area and sampled. Groundwater analytical results report non-detect concentrations of contaminants in groundwater.

The petroleum release was limited to the shallow soil and groundwater. No detectable concentrations of contaminants remain in the groundwater. There are no public supply wells regulated by the California Department of Public Health (CDPH) located within 250 feet of the Site. An on-Site domestic irrigation well (Ag Well) is located approximately 50 west of the former UST excavation. A door-to-door well survey was conducted by ERS in 2012. No additional water supply wells have been identified within 250 feet of the former source area. In 1996 a concentration of 1,200 micrograms per liter (µg/L) of methyl tert-butyl ether (MTBE) was reported in the on-site domestic irrigation well. Subsequent sampling in 1999 and 2010 showed no detections of any constituents including MTBE in either the source area well or the on-site domestic irrigation well. The affected groundwater is not currently being used as a source of drinking water, and it is highly unlikely that the affected groundwater will be used as a source of drinking water in the foreseeable future. Other designated beneficial uses of groundwater are not threatened. Water is provided to water users near the Site by the East Bay Municipal Utilities District (EBMUD). Additional corrective action will not likely change the conceptual model. The corrective action performed is protective of human health, safety, and the environment.

Rationale for Closure under the Policy

- General Criteria: The case meets all eight Policy general criteria.
- Groundwater Specific Criteria: There are not sufficient mobile constituents (leachate, vapors, or light non-aqueous liquids [LNAPL]) to cause groundwater to exceed the groundwater criteria in this Policy.
- Vapor Intrusion to Indoor Air: The case meets Policy Criterion 2a. Site-specific conditions at the release site satisfy all of the characteristics and criteria of Scenario 3. Benzene concentrations are less than 100 milligrams per kilogram (mg/kg) in the upper 10 feet of soil (the bioattenuation zone) and groundwater reports benzene concentrations less than 100 micrograms per liter (µg/L).
- Direct Contact and Outdoor Air Exposure: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Policy Table 1 and the concentration limits for Utility Worker are satisfied. There are no soil sample results in the case record for naphthalene. However, the relative concentration of naphthalene in soil can be conservatively estimated using the published relative concentrations of naphthalene and benzene in gasoline. Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2 percent benzene and 0.25 percent naphthalene. Therefore, benzene can be directly substituted for naphthalene concentrations with a safety factor of eight. Benzene concentrations from the Site are below the naphthalene thresholds in Policy Table 1. Therefore, the estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

Objections to Closure and Response

The County objects to UST case closure for this case because:

- Lateral and vertical extent of contamination is undetermined; onsite domestic irrigation well is possibly impacted but screen interval is undetermined.
  RESPONSE: Concentrations in groundwater in both the source area well (MW-1) and the onsite domestic irrigation well are at non-detect levels. There is no groundwater contaminant plume at the Site; this is a soils-only case.
- Site Characterization has not been completed; potential risks and threats have not been fully evaluated.
  RESPONSE: Further characterization is unnecessary. There is no groundwater contaminant plume. Shallow soil concentrations are non-detect.
- Well survey and conduit survey have not been conducted.
  RESPONSE: A well and conduit survey was issued in May 2012 and is available on GeoTracker. There are not sufficient mobile constituents to cause groundwater to exceed the groundwater criteria; thus, nearby wells are not threatened. This is a soils-only case.
- Onsite domestic irrigation well is a possible receptor; additional work is needed to determine if other vicinity residential/agricultural wells exist.
  RESPONSE: In 1996 a concentration of 1,200 micrograms per liter (µg/L) of methyl tert-butyl ether (MTBE) was reported in the domestic irrigation well. Subsequent sampling in 1999 and 2010 showed no detections of any constituents including MTBE. Also, no concentrations of the constituents of concern have been reported in monitoring well MW-1, located in the former source area. There are no additional wells identified within 250 feet from the former source area. There are not sufficient mobile constituents to cause groundwater to exceed the groundwater criteria; thus, nearby wells are not threatened. This is a soils-only case.
- Responsible Party has not responded to requests for work or Notice of Violation.
  RESPONSE: The case meets the Policy criteria for closure. Additional work is not necessary.

- Site not claimed in Geotracker, so well data are not uploaded. Well not surveyed to Geotracker standards.
  RESPONSE: Review of GeoTracker shows that Site has been claimed. Available data are sufficient for an appropriate site conceptual model. Further data collection is not necessary.

Determination
Based on the review performed in accordance with Health & Safety Code Section 25299.39.2 subdivision (a), the Fund Manager has determined that closure of the case is appropriate.

Recommendation for Closure
Based on available information, residual petroleum hydrocarbons at the Site do not pose significant risks to human health, safety, or the environment, and the case meets the requirements of the Policy. Accordingly, the Fund Manager recommends that the case be closed. The State Water Board is conducting public notification as required by the Policy. Alameda County has the regulatory responsibility to supervise the abandonment of monitoring wells.

Lisa Babcock — 2/25/13

Lisa Babcock, P.G. 3939, C.E.G. 1235 — **Date**

Prepared by: Roger Hoffmore, P.G.

ATTACHMENT 1: COMPLIANCE WITH STATE WATER BOARD POLICIES AND STATE LAW

The case complies with the State Water Resources Control Board policies and state law. Section 25296.10 of the Health and Safety Code requires that sites be cleaned up to protect human health, safety, and the environment. Based on available information, any residual petroleum constituents at the site do not pose significant risk to human health, safety, or the environment.

The case complies with the requirements of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.[1]

Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations? The corrective action provisions contained in Chapter 6.7 of the Health and Safety Code and the implementing regulations govern the entire corrective action process at leaking UST sites. If it is determined, at any stage in the corrective action process, that UST site closure is appropriate, further compliance with corrective action requirements is not necessary. Corrective action at this site has been consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations and, since this case meets applicable case-closure requirements, further corrective action is not necessary, unless the activity is necessary for case closure.	☒ Yes ☐ No
Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this case?	☐ Yes ☒ No
If so, was the corrective action performed consistent with any order?	☐ Yes ☐ No ☒ NA
General Criteria General criteria that must be satisfied by all candidate sites: **Is the unauthorized release located within the service area of a public water system?**	☒ Yes ☐ No
Does the unauthorized release consist only of petroleum?	☒ Yes ☐ No
Has the unauthorized ("primary") release from the UST system been stopped?	☒ Yes ☐ No
Has free product been removed to the maximum extent practicable?	☒ Yes ☐ No ☐ NA
Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?	☒ Yes ☐ No

[1] Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.
http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2012/rs2012_0016atta.pdf

Has secondary source been removed to the extent practicable?	☒ Yes ☐ No
Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15?	☒ Yes ☐ No
Nuisance as defined by Water Code section 13050 does not exist at the site?	☒ Yes ☐ No
Are there unique site attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	☐ Yes ☒ No
<u>Media-Specific Criteria</u> Candidate sites must satisfy all three of these media-specific criteria: **1. Groundwater:** To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:	
Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?	☐ Yes ☐ No ☒ NA
Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites? If YES, check applicable class: ☐ **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5**	☐ Yes ☐ No ☒ NA
For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?	☐ Yes ☒ No ☐ NA
2. Petroleum Vapor Intrusion to Indoor Air: The site is considered low-threat for vapor intrusion to indoor air if site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies.	
Is the Site an active commercial petroleum fueling facility? Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk.	☐ Yes ☒ No
a. Do site-specific conditions at the release site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4? If YES, check applicable scenarios: ☐ **1** ☐ **2** ☒ **3** ☐ **4**	☒Yes ☐ No ☐ NA

b. Has a site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?	☐ Yes ☐ No ☒ NA
c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?	☐ Yes ☐ No ☒ NA
3. Direct Contact and Outdoor Air Exposure: The site is considered low-threat for direct contact and outdoor air exposure if site-specific conditions satisfy one of the three classes of sites (a through c).	
a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?	☒ Yes ☐ No ☐ NA
b. Are maximum concentrations of petroleum constituents in soil less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health?	☐ Yes ☐ No ☒ NA
c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?	☐ Yes ☐ No ☒ NA

ATTACHMENT 2: SUMMARY OF BASIC CASE INFORMATION (Conceptual Site Model)

Site Location/History

- The Site is located at 413 West Sunset Boulevard in Hayward.
- The Site is occupied by the RAS-CO Manufacturing Company building and yard as well as a house and garage. The Site is bounded by residences to the south, west and north and by Interstate Highway 880 to the east.
- The USTs were removed in November 1994 and over-excavation of affected soil occurred in the following months. In 1999, one monitoring well was installed and sampled.
- Site map showing the location of the former USTs and wells MW-1 and Ag Well is provided at the end of this closure review summary (Environmental Risk Specialties Corporation [ERS], 2011).
- Nature of Contaminants of Concern: Gasoline.
- Source: UST system.
- Date reported: November 1994.
- Status of Release: USTs removed.
- Free Product: None reported.

Tank Information

Tank No.	Size in Gallons	Contents	Closed in Place/ Removed/Active	Date
1	500	Gasoline	Removed	November 1994
2	250	Gasoline	Removed	November 1994

Receptors

- GW Basin: Santa Clara Valley – East Bay Plain.
- Beneficial Uses: Agricultural Supply, Municipal, and Domestic Supply.
- Land Use Designation: Residential.
- Public Water System: East Bay Municipal Utilities District (EBMUD).
- Distance to Nearest Supply Well: According to data available in GeoTracker, there are no public supply wells regulated by CDPH within 250 feet of the defined plume boundary. An on-Site domestic irrigation well (Ag Well) is located approximately 50 west of the former UST excavation. A door-to-door well survey was conducted by ERS in 2012. No additional wells have been identified within 250 feet of the defined plume boundary in files reviewed.
- Distance to Nearest Surface Water: No surface water identified within 250 feet of the defined plume boundary.

Geology/Hydrogeology

- Stratigraphy: The Site is underlain by sandy clay, fine-grained sands and silts to approximately 30 feet bgs.
- Maximum Sample Depth: 30 feet below ground surface (bgs).
- Minimum Groundwater Depth: 21.38 feet bgs at the Ag Well.
- Maximum Groundwater Depth: 23.06 feet bgs at the Ag Well.
- Current Average Depth to Groundwater: ~23 feet bgs.
- Saturated Zones(s) Studied: 18 - 28 feet bgs.
- Appropriate Screen Interval: Yes.

- Groundwater Flow Direction: Regional groundwater flow is towards the west to northwest, generally towards San Francisco Bay. Monitoring wells MW-1 and Ag Well are located approximately 10 feet west and 60 feet west of the former excavation, respectively, and groundwater levels within these wells are consistent with regional data.

Monitoring Well Information

Well Designation	Date Installed	Screen Interval (feet bgs)	Depth to Water (feet bgs) (12/16/10)
MW-1	June 1999	18-28	22.59
Ag Well	NA	NA	23.06

Remediation Summary

- Free Product: None reported.
- Soil Excavation: Impacted soil (approximately 230 cubic yards) was removed to a depth of 21 feet bgs, remediated to non-detect levels, and reused on-Site as approved by County.
- In-Situ Soil/Groundwater Remediation: None reported.

Most Recent Concentrations of Petroleum Constituents in Soil*

Constituent	Maximum 0-5 feet bgs [mg/kg and (date)]	Maximum 5-10 feet bgs [mg/kg and (date)]
Benzene	<0.005 (10/03/95)	<0.005 (10/03/95)
Ethylbenzene	<0.005 (10/03/95)	<0.005 (10/03/95)
Naphthalene	NA	NA
PAHs	NA	NA

*: Values reported for stockpiled soil which reported non-detect concentrations prior to use as backfill
mg/kg: milligrams per kilogram, parts per million
<: Not detected at or above stated reporting limit
PAHs: Polycyclic aromatic hydrocarbons

Most Recent Concentrations of Petroleum Constituents in Groundwater

Sample	Sample Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)
MW-1	12/16/10	<50	<0.005	<0.005	<0.005	<0.005	<0.50	<10
Ag Well	12/16/10	<50	<0.005	<0.005	<0.005	<0.005	<0.50	<10
WQOs	-	**50**	**1**	**300**	**700**	**1,750**	**5**	**12**

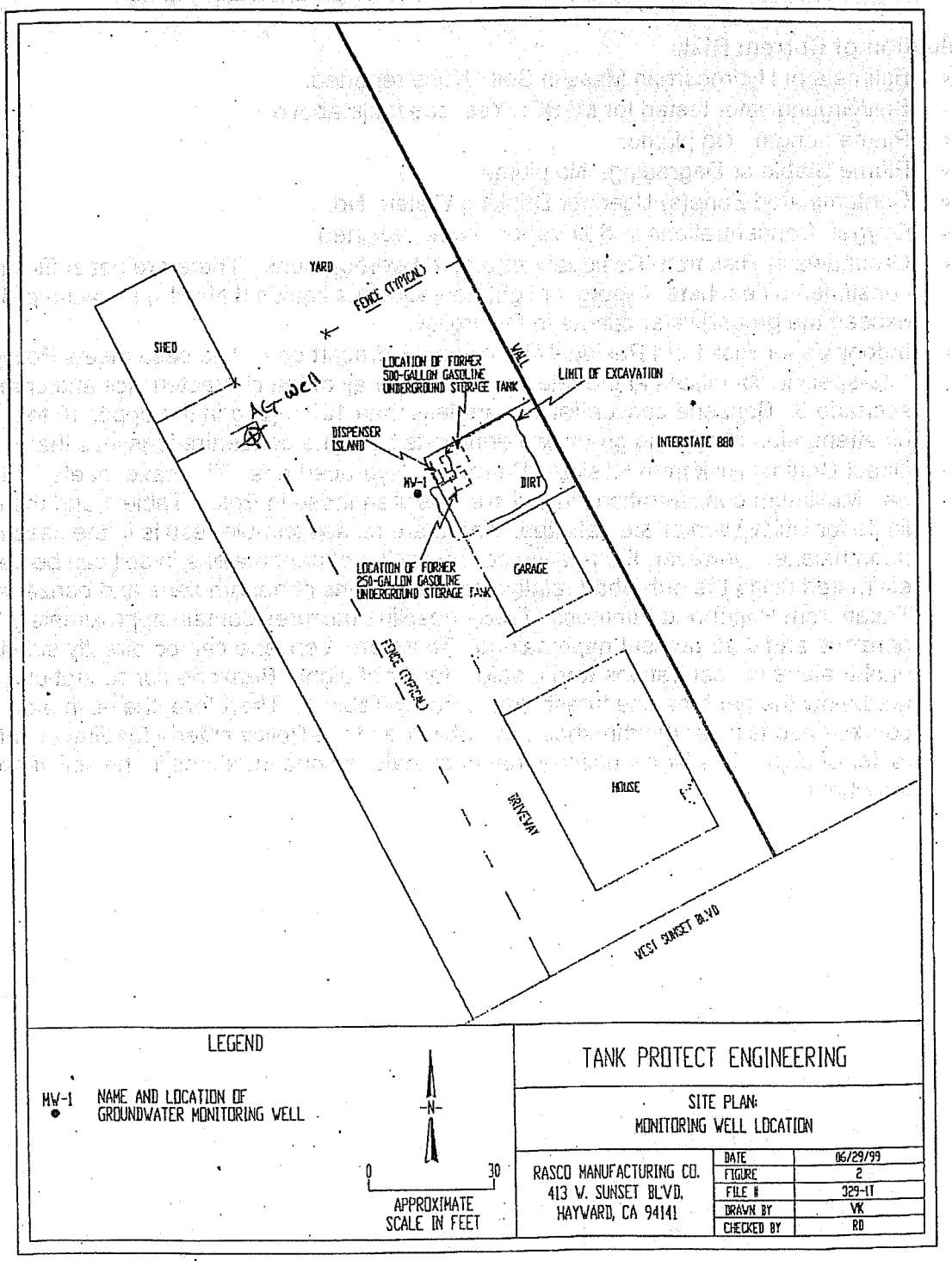
µg/L: micrograms per liter, parts per billion
<: Not detected at or above stated reporting limit
TPHg: Total petroleum hydrocarbons as gasoline
MTBE: Methyl tert-butyl ether
TBA: Tert-butyl alcohol
WQOs: Water Quality Objectives, Region 2 Basin Plan

Groundwater Trends

- Available data reports non-detect concentrations in groundwater, although Ag Well was reported to have MTBE in one sample in 1996. There is no groundwater plume.

Evaluation of Current Risk

- Estimate of Hydrocarbon Mass in Soil: None reported.
- Soil/Groundwater tested for MTBE: Yes, see table above.
- Plume Length: No plume.
- Plume Stable or Degrading: No plume.
- Contaminated Zone(s) Used for Drinking Water: No.
- Oxygen Concentrations in Soil Vapor: None reported.
- Groundwater Risk from Residual Petroleum Hydrocarbons: There are not sufficient mobile constituents (leachate, vapors, or light non-aqueous liquids [LNAPL]) to cause groundwater to exceed the groundwater criteria in this Policy.
- Indoor Vapor Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 2a. Site-specific conditions at the release site satisfy all of the characteristics and criteria of scenario 3. Benzene concentrations are less than 100 mg/kg in the upper 10 feet of soil (the bioattenuation zone) and groundwater reports benzene concentrations less than 100 µg/L.
- Direct Contact Risk from Residual Petroleum Hydrocarbons: The case meets Policy Criterion 3a. Maximum concentrations in soil are less than those in Policy Table 1 and the concentration limits for Utility Worker are satisfied. There are no soil sample results in the case record for naphthalene. However, the relative concentration of naphthalene in soil can be conservatively estimated using the published relative concentrations of naphthalene and benzene in gasoline. Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2 percent benzene and 0.25 percent naphthalene. Therefore, benzene can be directly substituted for naphthalene concentrations with a safety factor of eight. Benzene concentrations from the Site are below the naphthalene thresholds in Policy Table 1. Therefore, the estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.


YARD
FENCE (TYPICAL)
SHED
AG well
LOCATION OF FORMER
500-GALLON GASOLINE
UNDERGROUND STORAGE TANK
DISPENSER
ISLAND
MW-1
DIRT
WALL
LIMIT OF EXCAVATION
INTERSTATE 880
GARAGE
LOCATION OF FORMER
250-GALLON GASOLINE
UNDERGROUND STORAGE TANK
FENCE (TYPICAL)
DRIVEWAY
HOUSE
WEST SUNSET BLVD
LEGEND
MW-1
NAME AND LOCATION OF
GROUNDWATER MONITORING WELL
N
0
30
APPROXIMATE
SCALE IN FEET
TANK PROTECT ENGINEERING
SITE PLAN:
MONITORING WELL LOCATION
RASCO MANUFACTURING CO.
413 W. SUNSET BLVD.
HAYWARD, CA 94141
DATE 06/29/99
FIGURE 2
FILE # 329-1T
DRAWN BY VK
CHECKED BY RD