



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 2, 2011

Mr. Michael Desso (sent via E-mail to: michael.desso@us.nestle.com)
800 North Brand Blvd.
Glendale, CA 91203

Mr. Mark Hall (sent via E-mail to: markh@hallequitiesgroup.com)
Encinal 14th Street, LLC
1855 Olympic Blvd., Suite 250
Walnut Creek, CA 94596

Subject: Case Closure for SLIC Case No. RO0000018 and GeoTracker Global ID T0600100262,
Carnation Dairy, 1310 14th Street, Oakland, CA 94607

Dear Mr. Desso and Mr. Hall:

This letter confirms the completion of site investigation and remedial actions for the soil and groundwater investigation at the above referenced site. We are also transmitting the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported releases at the subject site with the provision that the information provided to this agency was accurate and representative of existing conditions. The subject Spills, Leaks, Investigation, and Cleanup (SLIC) case is closed. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (<http://geotracker.swrcb.ca.gov>) and the Alameda County Environmental Health website (<http://www.acgov.org/aceh/index.htm>).

SITE INVESTIGATION AND CLEANUP SUMMARY

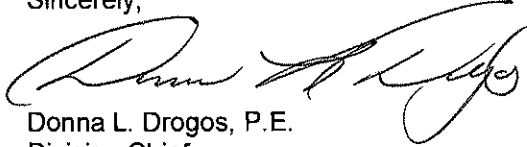
Please be advised that the following conditions exist at the site:

- Total petroleum hydrocarbons as gasoline remain in soil beneath the site at concentrations up to 12,000 parts per million (ppm).
- Benzene remains in groundwater beneath the site at concentrations up to 50,000 parts per billion (ppb).
- Due to the residual contamination, a Covenant and Environmental Restriction was recorded for the site on February 25, 2011. The Covenant and Environmental Restrictions limit future land use to commercial or industrial land use only and requires that the residual contamination be capped to limit potential exposure. If the cap is to be disturbed by excavation or construction, approved development/construction plans must be submitted to ACEH for review and approval.
- The restrictions on this site are to be entered into the City Of Oakland Permit Tracking System due to the residual contamination on the site.

Responsible Parties
RO0000018
March 2, 2011
Page 2

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely,



Donna L. Drogos, P.E.
Division Chief

Enclosure: Case Closure Summary

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341,
Oakland, CA 94612-2032 (Sent via E-mail to: lgriffin@oaklandnet.com)

Kenneth Cheitlin, Hall Equities Group, 1855 Olympic Blvd., Suite 250
Walnut Creek, CA 94596 (sent via E-mail to KenC@hallequitiesgroup.com)

Jennifer Costanza, Nestle USA, Inc., 800 North Brand Blvd.
Glendale, CA 91203 (sent via E-mail to jennifer.costanza@us.nestle.com)

Brent Searcy, Environmental Cost Management, 3525 Hyland Avenue, Suite 200, Costa Mesa, CA
92626 (sent via E-mail to bsearcy@ecostmanage.com)

Markus Niebanck, amicus, 580 Second Street, Suite 260, Oakland CA 94607 (Sent via E-mail to:
markus@amicusenv.com)

Donna Drogos, ACEH (Sent via E-mail to: donna.drogos@acgov.org)
Jerry Wickham, ACEH (Sent via E-mail to: jerry.wickham@acgov.org)

GeoTracker, e-File

**CASE CLOSURE SUMMARY
SPILLS, LEAKS, INVESTIGATION, AND CLEANUP PROGRAM**

I. AGENCY INFORMATION

Date: February 8, 2011

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Jerry Wickham	Title: Senior Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Carnation Dairy		
Site Facility Address: 1310 14 th Street, Oakland, CA 94607		
RB Case No.: 01-0282	Local Case No.: STID 3779	SLIC Case No.: RO0000018
URF Filing Date: 01/24/1989	GeoTracker ID: T0600100262	APN: 5-482-2
Responsible Parties	Addresses	Phone Numbers
Mr. Michael Desso Nestle USA, Inc.	800 North Brand Blvd. Glendale, CA 91203	818-549-5746
Mr. Mark Hall Encinal 14 th Street, LLC	1855 Olympic Blvd., Suite 250 Walnut Creek, CA 94596	925-933-4000

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
T-1	10,000 gallons	Gasoline	Removed	1/5/1989
T-2	10,000 gallons	Gasoline	Removed	1/5/1989
T-3	12,000 gallons	Diesel	Removed	1/5/1989
T-4	12,000 gallons	Diesel	Removed	1/5/1989
T-5	1,000 gallons	Used Oil	Removed	1/12/1989
Piping			Removed	1/5/1989

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown. No visible holes were observed in the fuel tanks. Soil beneath the product lines was heavily stained.		
Site characterization complete? Yes	Date Approved By Oversight Agency: ----	
Monitoring wells installed? Yes	Number: 212	Proper screened interval? ---
Highest GW Depth Below Ground Surface: approximately 10 feet bgs	Lowest Depth: 27 feet bgs	Flow Direction: West Northwest to Northwest
Most Sensitive Current Use: Potential Drinking Water Source		

<p>Summary of Production Wells in Vicinity: One water supply well was located on an adjacent parcel approximately 175 feet southeast of the site. The water supply well was a 10-inch diameter well with approximately 150 feet of 4-inch diameter production casing and a pump. No records of the well were found during review of the Alameda County Public Works and California Department of Water Resources databases. The unidentified well was found in an underground vault adjacent to a bunker oil tank during excavation activities for fuel leak case RO0002978 on the adjacent parcel. The unidentified water supply well was purged and sampled on May 9, 2008. Total petroleum hydrocarbons as gasoline, diesel, motor oil, and bunker oil were not detected in groundwater from the well. Methyl tert butyl ether (MTBE) was detected at a concentration of 11 ppb; all other VOCs were not detectable at their respective reporting limits. The unidentified water supply well was decommissioned by grouting from the bottom up in May 2008.</p> <p>A 55-foot deep irrigation well is located approximately 450 feet east of the site. Based on the upgradient location of the irrigation well, the well is not expected to be a receptor for the site.</p> <p>A water supply well is located approximately 750 feet east of the site at DeFremery Park. The water supply well was reportedly installed in 1927 and is reported as 120 feet deep with a casing diameter of 2 inches. Based on the crossgradient location of the well, the well is not expected to be a receptor for the site.</p> <p>An industrial well is located at 1614 Campbell Street, approximately 400 feet west northwest of the site. The industrial well is 200 feet deep. Based on the crossgradient location of the well, the well is not expected to be a receptor for the site.</p> <p>In 2000, a neighborhood well survey was conducted within the residential area west of the site for Nestle USA. No water supply wells were located during the neighborhood well survey.</p>	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: San Francisco Bay is approximately 4,500 feet northwest of the site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and City of Oakland Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/ Destination)	Date
Tanks	T-1 (10,000 gallons) T-2 (10,000 gallons) T-3 (12,000 gallons) T-4 (12,000 gallons) T-5 (1,000 gallons)	Disposal destination not reported.	12/19/1988 and 1/12/1989
Piping	Not reported	Not reported	12/19/1988
Free Product	3,855 gallons	Product skimming from excavation. Product was recycled at Gibson Oil and Refinery in Bakersfield, California.	January 1989-July 1989
Soil	1,200 cubic yards	Approximately 1,200 cubic yards of soil was removed during UST excavation, treated on-site, and replaced in the excavation	11/27/2007
Groundwater	1,500,000 gallons	Water was treated on site with granular activated carbon and discharged to the sanitary sewer.	11/2007 to 12/2007

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
 (Please see Attachments 1 through 6 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	38,000	12,000	30,600,000	870,000
TPH (Diesel)	17,000	17,000	960,000	560,000
TPH (Motor Oil)	13,000	13,000	Not Analyzed	Not Analyzed
Benzene	310	140	99,000	50,000
Toluene	910	580	110,000	13,000
Ethylbenzene	200	120	80,000	46,000
Xylenes	850	620	640,000	560,000
Lead	180(1)	180(1)	<50(2)	<50(2)
MTBE	0.084(3)	0.084(3)	2,750(4)	120(5)
Other VOCs (8240/8270)	3.1(6)	3.1(6)	52(7)	52(7)
PCBs	0.87(8)	0.87(8)	<1	<1

- 1) Lead = 180 ppm; no other metals analyzed.
- 2) Lead <50 ppb; no other metals analyzed.
- 3) MTBE = 0.084 ppm; 1,2-dichloroethane = 0.43 ppm; no other oxygenates analyzed.
- 4) MTBE = 2,750 ppb; 1,2-dichloroethane = 2,200 ppb; EDB <0.5 ppb; no other oxygenates analyzed.
- 5) MTBE = 120 ppb; 1,2-dichloroethane = 2,200 ppb; EDB <0.5 ppb; no other oxygenates analyzed.
- 6) 1,2-dichlorobenzene = 3.1 ppm; 1,3-dichlorobenzene = 0.038 ppm; 1,4-dichlorobenzene = 0.33 ppm; other VOCs not detected above various reporting limits.
- 7) 1,1-dichloroethane = 52 ppb; 1,1,1-trichloroethane = 1.0 ppb; and trichloroethene = 2.4 ppb; all other VOCs not detected above various reporting limits or detected at trace concentrations.
- 8) PCBs (undifferentiated) = 0.87 ppm; Arochlor 1254 = 0.26 ppm.

Site History and Description of Corrective Actions:

This case closure for SLIC case RO0000018 applies only to APN parcel 5-482-2, which is the northwestern quadrant of a former four city-block area bordered by 16th Street on the north, 14th Street on the south, Poplar Street on the east, and Mandela Parkway on the west. Case RO0002978, which was closed on December 4, 2008, was separated from SLIC case RO0000018 on August 15, 2008 and applies to the eastern half and southwestern quadrant of the four block area. Site investigation activities for SLIC case RO0000018 within APN parcel 5-482-2 were recently completed under the direction of Nestlé USA. Site investigation and cleanup activities within APN parcels 5-373-10-3, 5-373-5-1, and 5-375-2-1 for case RO0002978 were previously completed under the direction of Encinal 14th Street LLC.

The site (APN parcel 5-482-2) is a 1.4-acre area that contains an L-shaped building with the remaining portion of the site covered by concrete or asphalt. Surrounding land use is mixed commercial and residential. A dairy facility was constructed on the site in 1915 with various improvements and additions made between 1946 and 1973. Carnation ceased dairy operations at the site in March 1991. The L-shaped building was formerly used as a warehouse and vehicle maintenance facility for the dairy. Two 12,000-gallon diesel tanks and two 10,000-gallon gasoline tanks were removed from the site in December 1988. Free-phase product was observed in the bottom of the tank pit during the excavation. Dairy fat and detergent were also observed in the soil and floating on groundwater within the excavation.

During subsequent site investigations, free-phase product was found over a large area of the site extending approximately from the former tank pit north to 16th Street. Status reports prepared in 1989 indicated that two distinct free-phase product plumes existed at the site. The free-phase product beneath the maintenance shop was roughly 90% gasoline while the free-phase product in the fuel tank pit excavation area was primarily diesel fuel. The fuel release was reportedly estimated to be 100,000 gallons.

Thirty-three monitoring wells and 103 product recovery wells were installed at the site in 1989. Pumping from these wells resulted in recovery of approximately 5,000 gallons of gasoline and diesel. Approximately 1.5 million gallons of groundwater was pumped and treated by carbon adsorption prior to discharge under permit to the sanitary sewer. In an attempt at enhanced bioremediation, a bacterial solution containing microorganisms was injected into groundwater at the product recovery probes containing free product on a periodic basis. A portable air injection system was operated in conjunction with the addition of microbial solutions.

An off-site investigation, consisting of the installation of five monitoring wells, was conducted in August 1989 to define the northern extent of the free-phase product and dissolved phase plume beneath 16th Street. Results from the off-site investigation indicated that the dissolved phase plume extended north beneath 16th Street but the free-phase product plume apparently did not extend north beneath 16th Street.

Between April 1991 and August 1991, twenty soil borings were advanced and sampled throughout the site to further define the horizontal and vertical extent of contamination. The investigation included sampling for PCBs in the area south of the warehouse and vehicle service bays.

PCBs have been detected inconsistently in the area south of the warehouse and vehicle service bays and west of the former freezer. PCBs were first reported in a document entitled, "Unauthorized Release Report for PCB Contamination at the Carnation Dairy Facility, Oakland, Alameda County, California," dated September 12, 1989, which reported that a groundwater sample from PR-12 contained Arochlor 1254 at a concentration of 0.06 ppm and a product sample from PR-12 contained 66 ppm of Arochlor 1254. A November 7, 1989 draft document reported the detection of PCBs in a soil sample collected from a depth of 10 feet bgs at boring location PR-86 but reported no detections of PCBs in groundwater. PCBs were reported in soil samples from two soil borings (SB-6 and SB-8) in a report dated September 17, 1991. Oily liquid from the borings contained PCBs at a concentration of 49 ppm. During the most recent investigation for PCBs in May 2008, PCBs were not detected at concentrations above reporting limits in soil samples collected from eight soil borings within the area where PCBs were previously detected. PCBs were also not detected in grab groundwater samples

collected from seven of the eight boring locations.

A soil vapor extraction system operated at the site from January 1994 to December 1995 and removed an estimated 5,200 gallons of hydrocarbons. The SVE system was shut down and removed in December 1995 because the system was not capable of further removal although free-phase product remained in a number of wells. A multi-phase extraction system was installed and operated from August 1997 through June 2000. The multi-phase extraction system removed a total of 10,875 pounds of petroleum hydrocarbons.

In August 1999, soil and soil gas samples were collected from thirteen soil borings. Benzene concentrations in the soil gas samples ranged from 0.91 to 9,900 ppbv.

A deed restriction and Risk Management Plan were submitted in 2000 to protect against possible direct exposure to residual contamination on site. The deed restriction was executed by Nestlé USA and the City of Oakland Fire Services on June 8, 2000. In July 2000, the property was sold by Nestlé USA to Encinal 14th Street LLC. The June 2000 deed restriction has been replaced by a Covenant and Environmental Restriction on Property executed by the property owner and ACEH and attached to this closure summary.

Up to 65 monitoring wells were sampled quarterly and semi-annually between 1994 and 2002. Between December 2002 and late 2004, groundwater monitoring was conducting using eleven monitoring wells, most of which were located off-site. The remaining unused wells were decommissioned in December 2002.

Additional soil, soil vapor, and groundwater sampling was conducted between March and July 2008 to address the data gaps identified by ACEH in correspondence dated September 28, 2007. Soil vapor samples collected beneath the site building contained elevated concentrations of benzene. In order to assess the potential for vapor intrusion to indoor air, sub-slab vapor sampling was conducted at six locations beneath the existing building on January 6, 2010. No chemicals were detected at concentrations exceeding cancer-based on noncancer-based screening levels. A human health risk evaluation based on the results of the sub-slab vapor sampling concluded that the concentrations of volatile chemicals are below levels of concern with respect to potential vapor intrusion into the building.

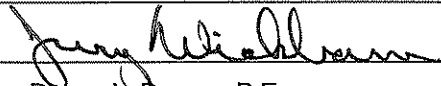
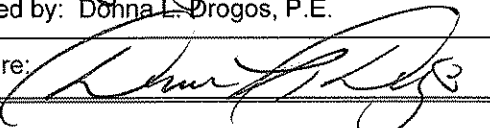
IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions and existing building construction and site paving.		
Site Management Requirements: Case closure is granted for industrial or commercial land use only. Restrictions on future land use are described in the "Covenant and Environmental Restriction on Property" that is included as an attachment to this Case Closure Summary. All use and development of the site shall preserve the integrity of any capped areas. In the event that the site is to be redeveloped, approved development/construction plans are to be submitted to ACEH for review and approval. The restrictions on this site are to be entered into the City Of Oakland Permit Tracking System due to the residual contamination on the site.		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? Yes		Date Recorded:
Monitoring Wells Decommissioned: No	Number Decommissioned: 202	Number Retained: 17
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: ---		

V. ADDITIONAL COMMENTS, DATA, ETC.

<p>Considerations and/or Variances:</p> <p>Significant residual contamination has been left in place beneath the existing site building and the area south of the building. The results of a human health risk assessment based on sub-slab vapor sampling indicate that potential risks from vapor intrusion to indoor air are within an acceptable range for the existing site building as currently constructed and configured. The existing building foundation appears to serve as a cap or barrier preventing migration and exposure to the residual contamination. Any future development of the site must maintain a similar level of protection from the residual contamination. Requirements for maintenance of the protective cap are described in the "Covenant and Environmental Restriction on Property" that is filed with the Alameda County Clerk-Recorder's office and the Risk Management Plan dated September 7, 2010.</p> <p>PCBs were detected inconsistently in the area south of the warehouse and vehicle service bays and west of the former freezer. During the most recent investigation for PCBs in May 2008, PCBs were not detected in soil and groundwater samples collected from locations where PCBs had previously been reported.</p> <p>Conclusion:</p> <p>Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment under the current commercial land use and the restrictions specified in the "Covenant and Environmental Restriction on Property." No further investigation or cleanup for the fuel leak case is necessary at this time. ACEH staff recommend closure for this site.</p>
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VI. LOCAL AGENCY REPRESENTATIVE DATA

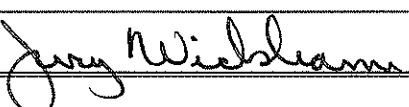
Prepared by: Jerry Wickham	Title: Senior Hazardous Materials Specialist
Signature: 	Date: 03/02/11
Approved by: Donna L. Drogos, P.E.	Title: Division Chief
Signature: 	Date: 03/02/11

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Notification Date: 02/08/11	

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: NA	Date of Well Decommissioning Report: January 20, 2011	
All Monitoring Wells Decommissioned: No	Number Decommissioned: 16	Number Retained: 1
Reason Wells Retained: Well MW-27 could not be located using ground-penetrating radar and excavation of street asphalt and surfacing material to a depth of approximately 12 inches. Well MW-27 was classified as a lost well by Alameda County Public Works Agency with acknowledgment that best efforts were used in attempts to locate the well.		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: 	Date: 03/02/11	

Attachments:

1. Site Location Map (1 page)
2. Site Plans and Boring Location Maps (3 pages)
3. Groundwater Elevations, Concentration Contour Maps, and Cross Sections (16 pages)
4. Soil Analytical Data (13 pages)
5. Soil Vapor Analytical Data (4 pages)
6. Groundwater Analytical Data (11 pages)
7. Boring Logs (209 pages)
8. Covenant and Environmental Restriction on Property (22 pages)
9. Risk Management Plan (18 pages)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

Wickham, Jerry, Env. Health

From: Cherie McCaulou [CMccaulou@waterboards.ca.gov]
Sent: Wednesday, February 09, 2011 10:37 AM
To: Wickham, Jerry, Env. Health
Subject: Re: Closure notification

Jerry - Thank you for the closure notification. The file looks quite extensive on GeoTracker. The Water Board has no objection to the ACEH's recommendation to close the case since appropriate vapor intrusion studies and risk evaluations have been completed and a deed restriction and risk management plan are in place to manage the residual pollution.

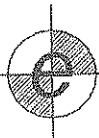
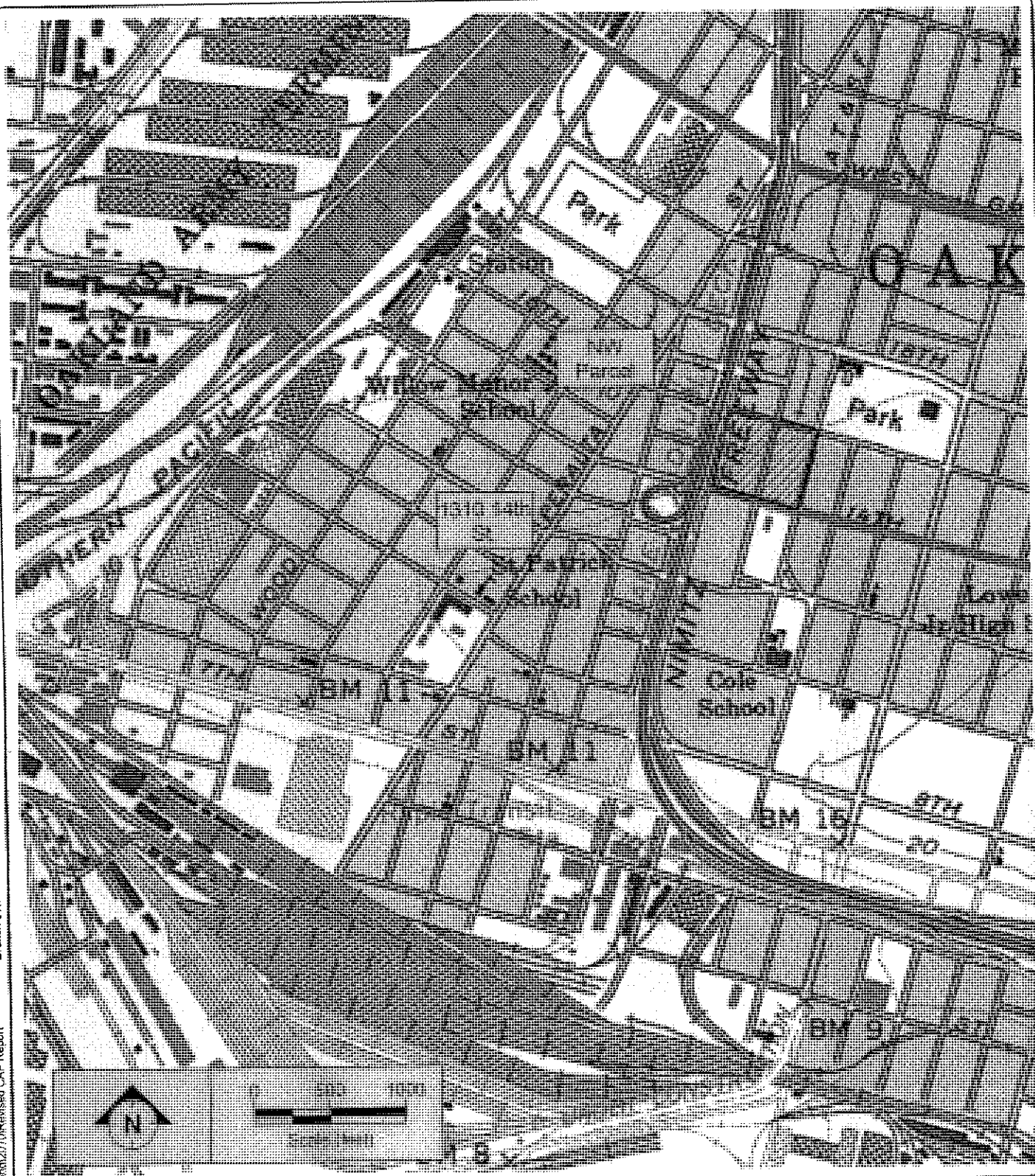
Sincerely,

Cherie McCaulou
Engineering Geologist
San Francisco Bay Regional Water Quality Control Board
cmccaulou@waterboards.ca.gov
510-622-2342

>>> "Wickham, Jerry, Env. Health" <jerry.wickham@acgov.org> 2/8/2011 3:19 PM >>>
Hi Cherie,

This email provides notification of pending closure for case RO0018, 1310 14th Street, Oakland.

Thanks,
Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
phone: 510-567-6791
jerry.wickham@acgov.org

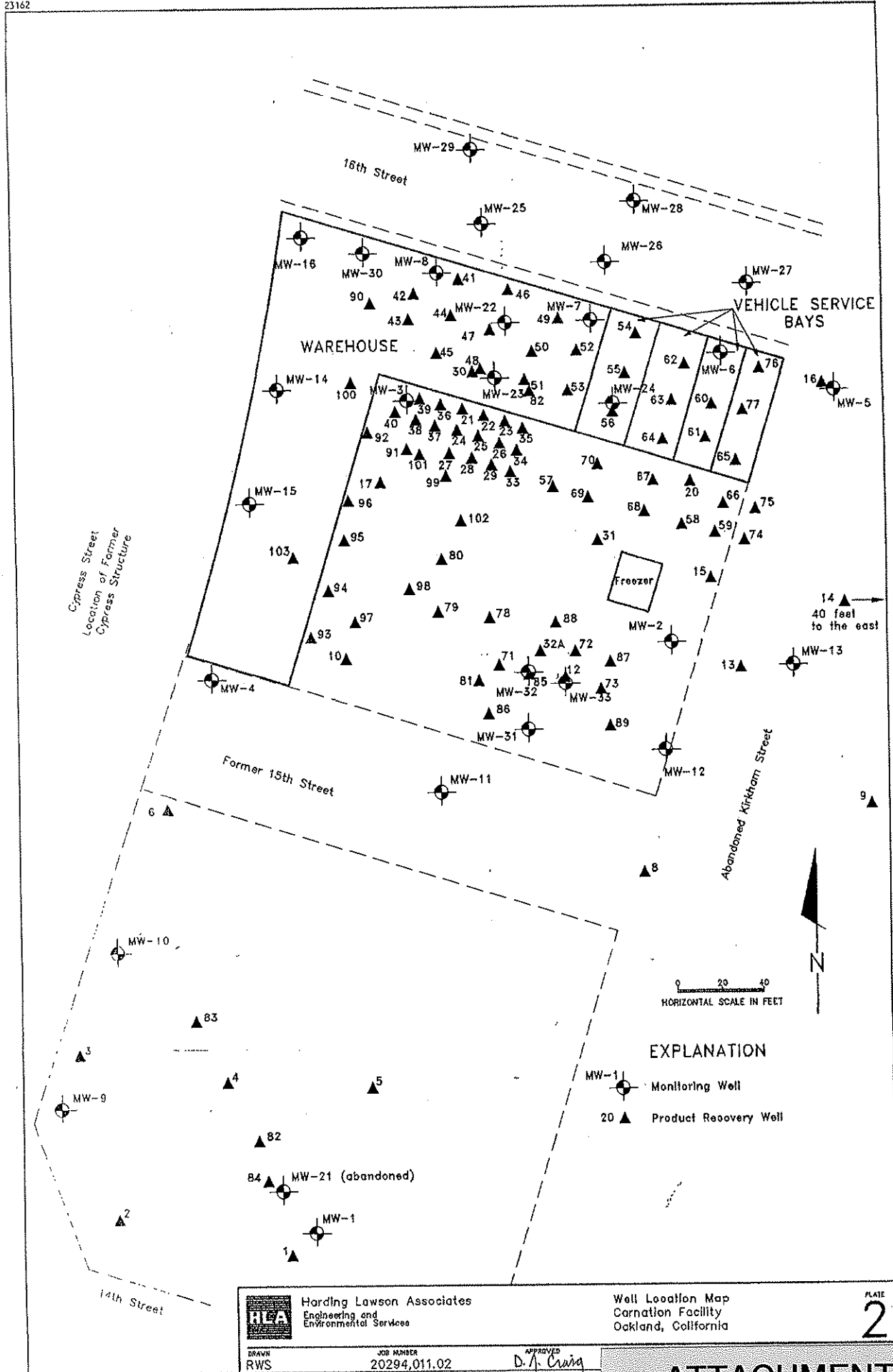


ENVIRONMENTAL COST MANAGEMENT, Inc.
Managing Cost and Liability
 3525 Hyland Avenue, Suite 200 • Costa Mesa, CA 92626
 Tel: (714) 662-2759 • Fax: (714) 662-2758

Site Location
Former Nestle Oakland Facility
 1310 14th Street, Oakland, CA-94607

Figure
1

ATTACHMENT 1



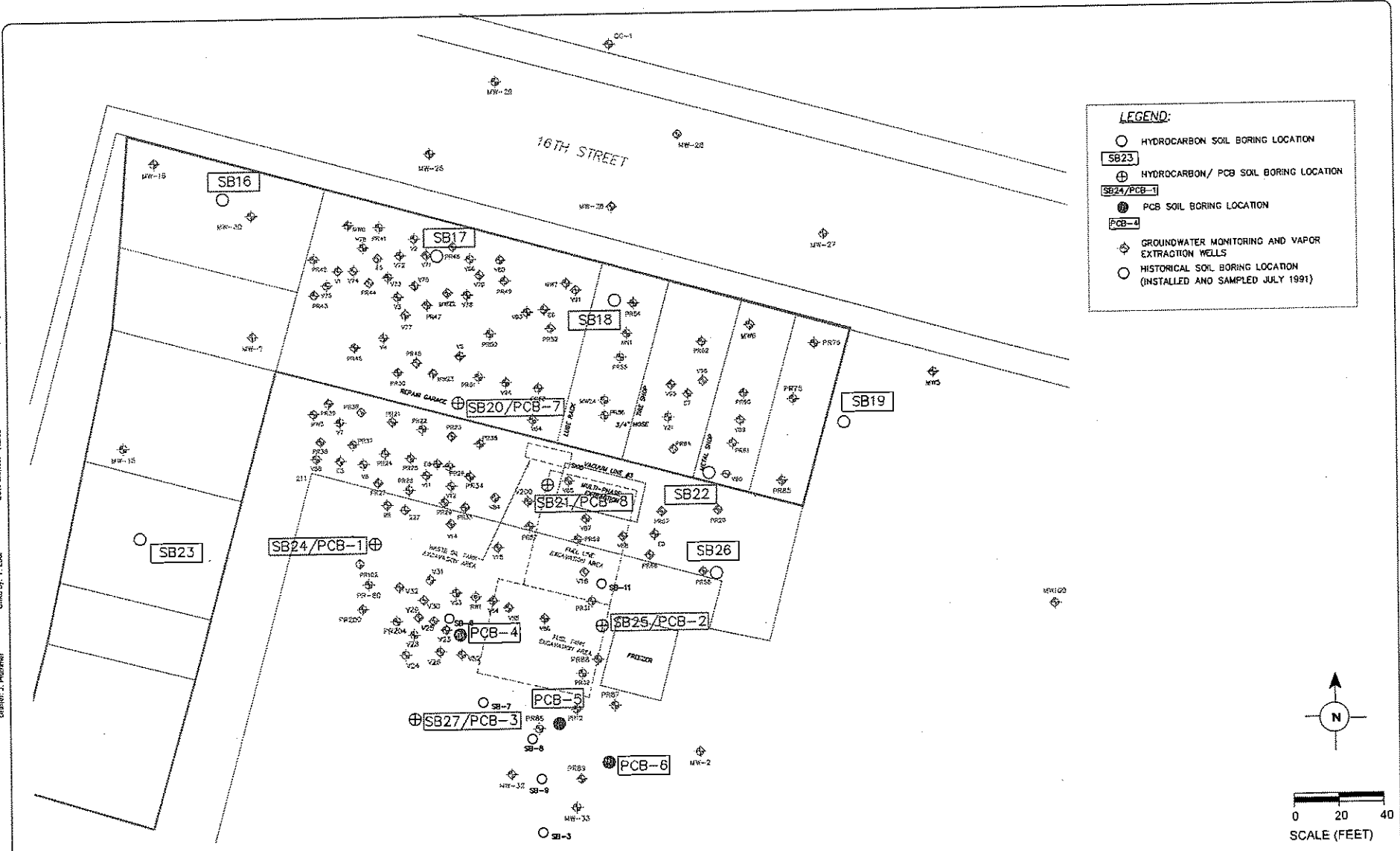
RLA Harding Lawson Associates
Engineering and Environmental Services

Well Location Map
Carnation Facility
Oakland, California

PLATE
2

DRAWN: RWS JOB NUMBER: 20294,011.02 APPROVED: *D. N. Craig*

ATTACHMENT 2



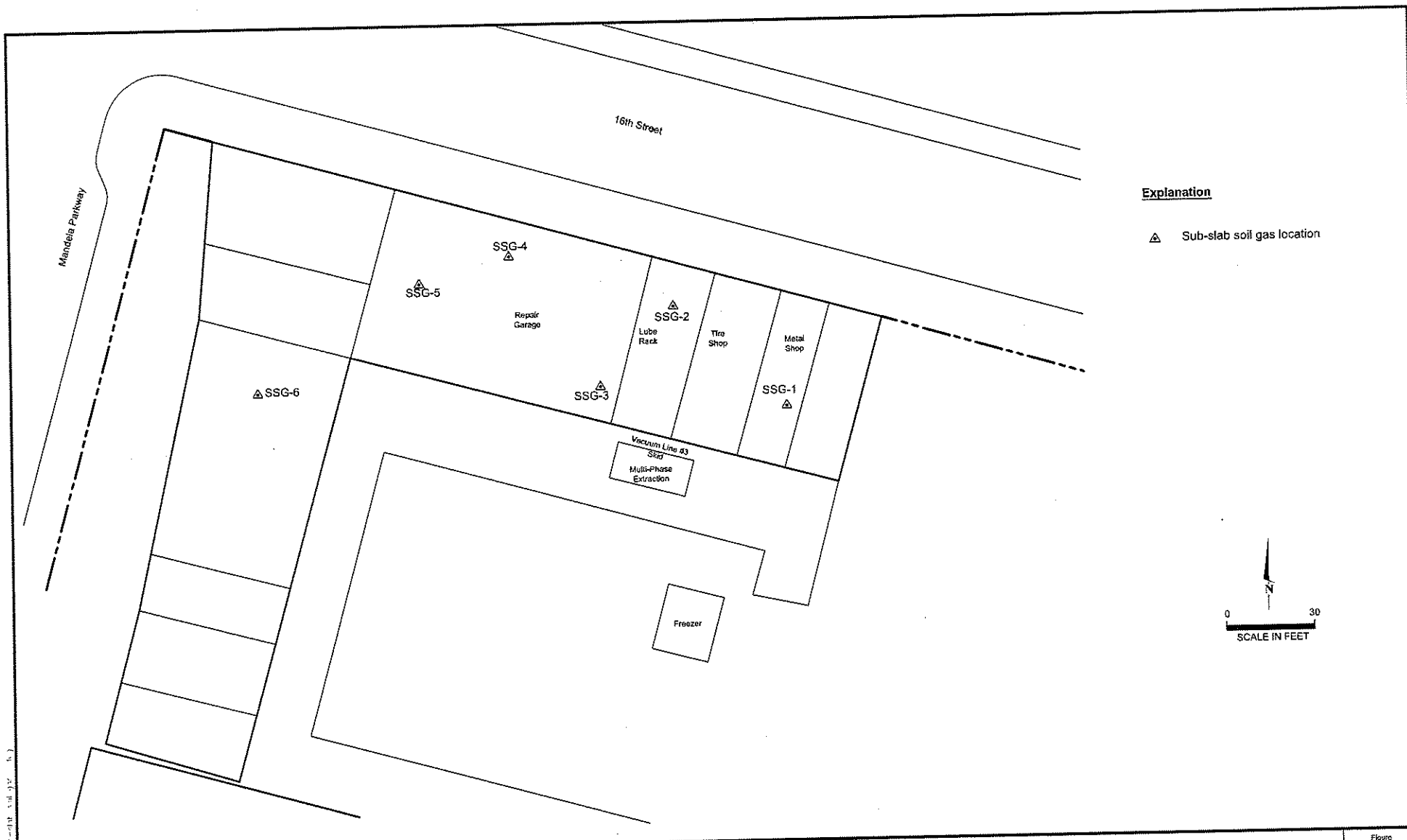
Former Nestle Oakland Facility
 1310 14th Street
 Oakland, California - 94607



ENVIRONMENTAL COST MANAGEMENT, INC.
Managing Cost and Liability
 660 Baker Street, Suite 253 • Costa Mesa, CA 92626
 Tel: (714) 682-2759 • Fax: (714) 682-2758

SUPPLEMENTAL SOIL, SOIL GAS AND
 GROUNDWATER INVESTIGATION
 Soil Boring Locations
 May 2008

Figure
 2



Explanation

▲ Sub-slab soil gas location



IRIS ENVIRONMENTAL
 1438 Webster Street, Suite 302
 Oakland, California 94612
 Ph: (510) 834-4747 Fax: (510) 834-4189

Sub-slab Soil Gas Sampling Locations
 Sub-slab Soil Gas Sampling and Analysis Report
 1310 14th Street, Oakland, California

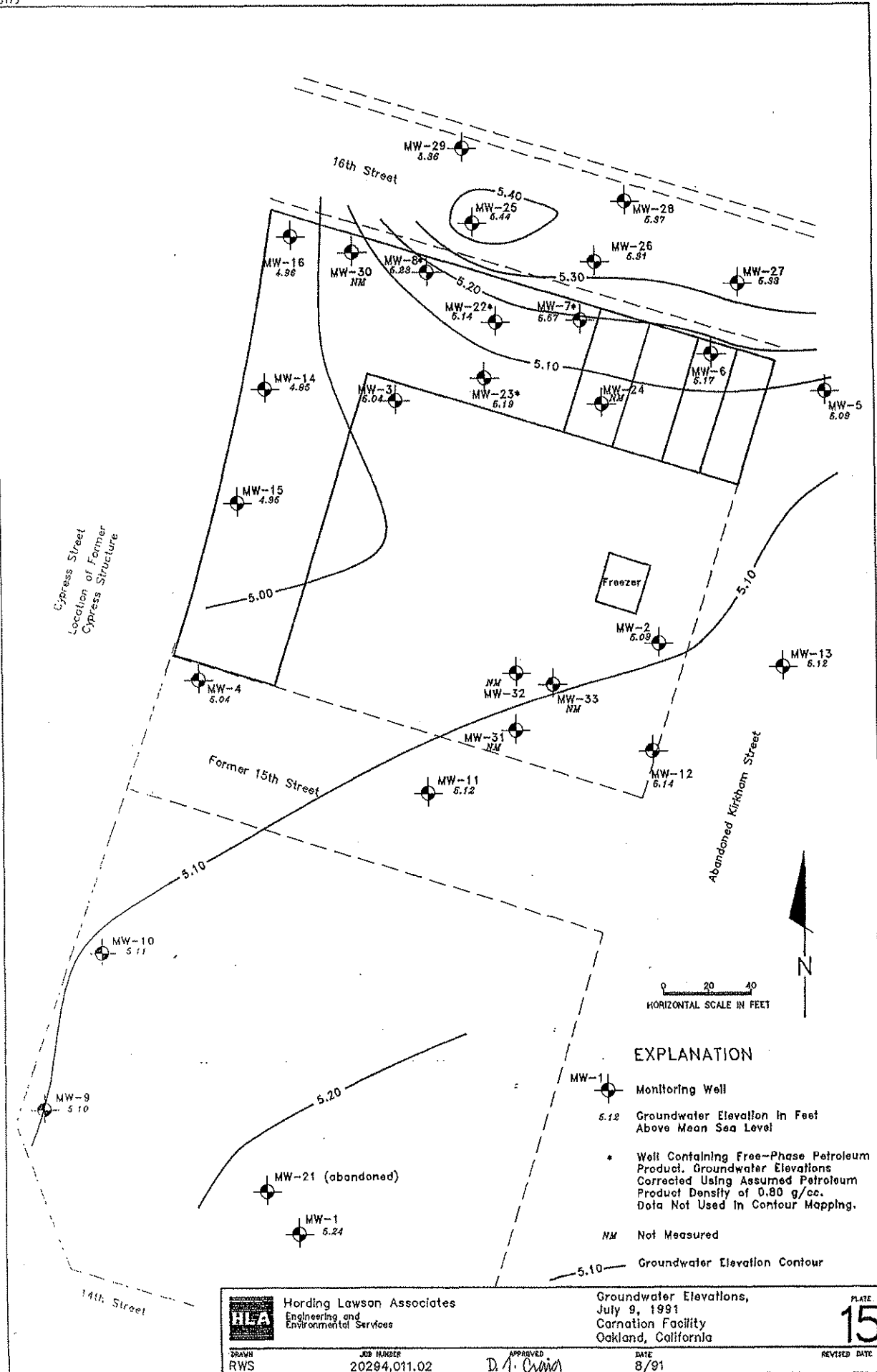
Figure

2

Contract Number: 07-557B

Drafter: EC

Date: 01/25/10

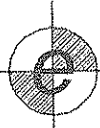
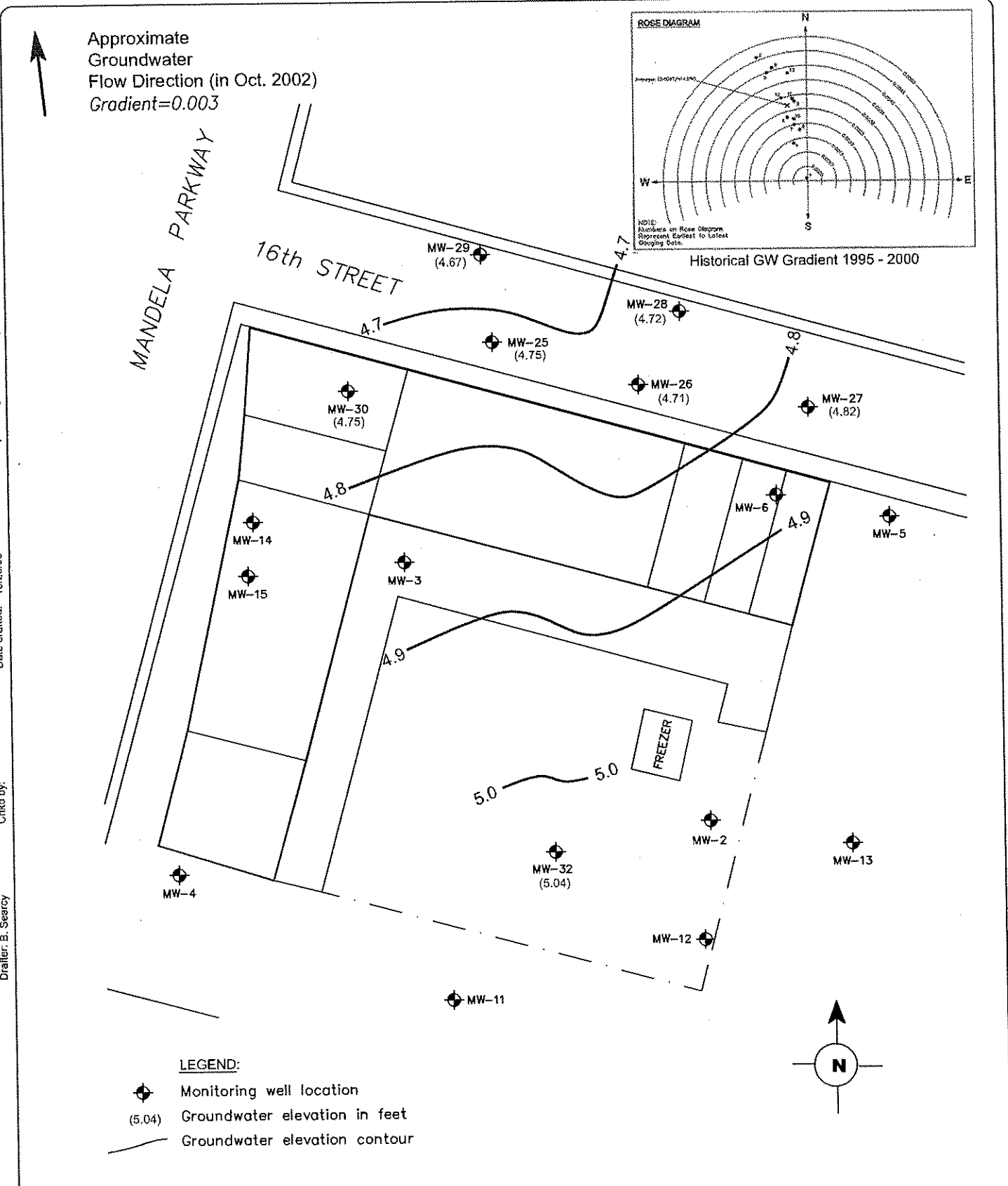


HLA Hording Lawson Associates
 Engineering and Environmental Services

Groundwater Elevations,
 July 9, 1991
 Carnation Facility
 Oakland, California

PLATE
15

DRAWN: RWS JOB NUMBER: 20294,011.02 APPROVED: *D. J. Oving* DATE: 8/91 REVISED DATE:

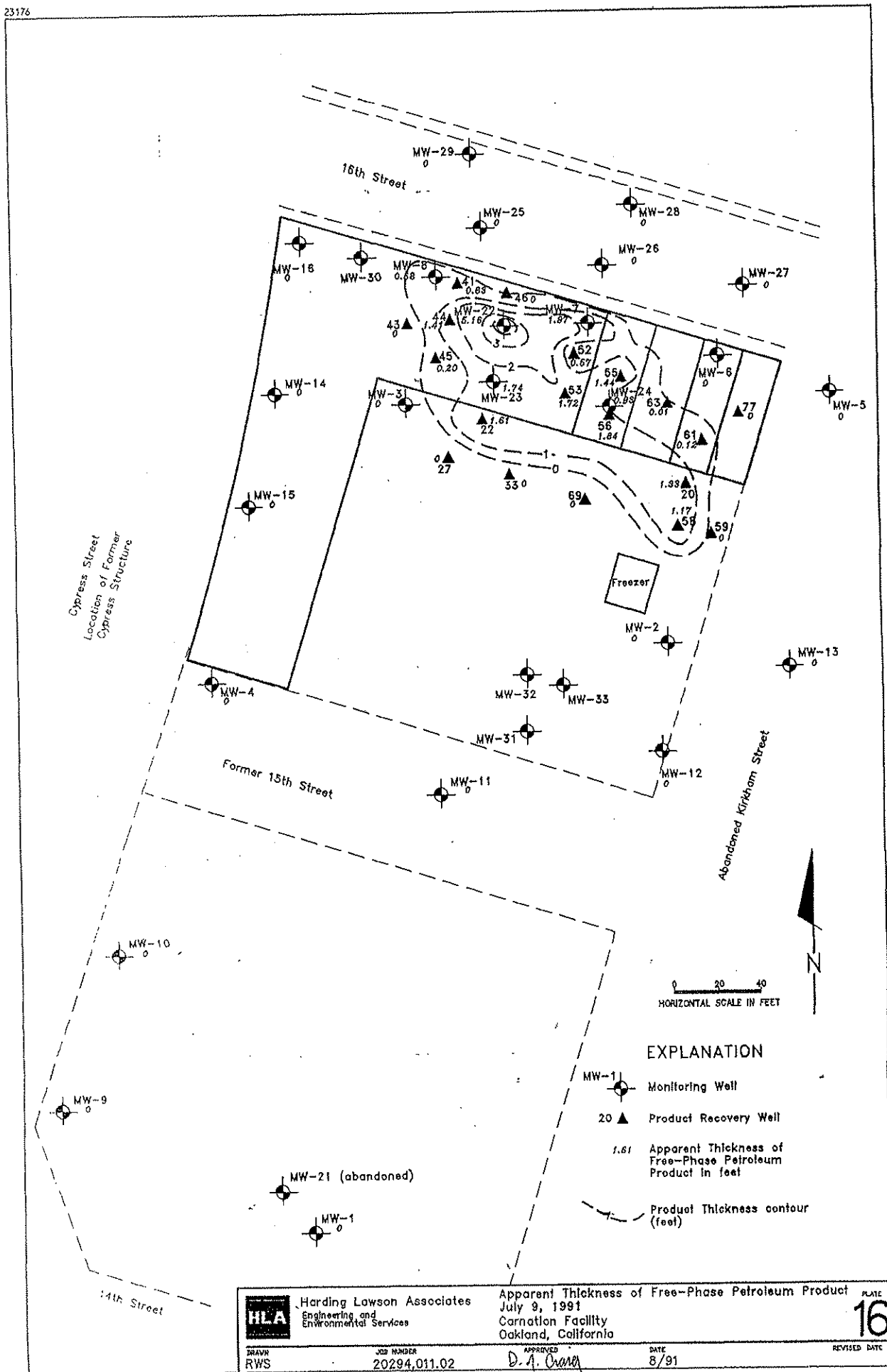


ENVIRONMENTAL COST MANAGEMENT
Managing Cost and Liability
 660 Baker Street, Suite 253 • Costa Mesa, CA 92626
 Tel: (714) 662-2759 • Fax: (714) 662-2758

Revised Site Conceptual Model
 November 2008
 Historical Groundwater Gradient

Figure

7



EXPLANATION

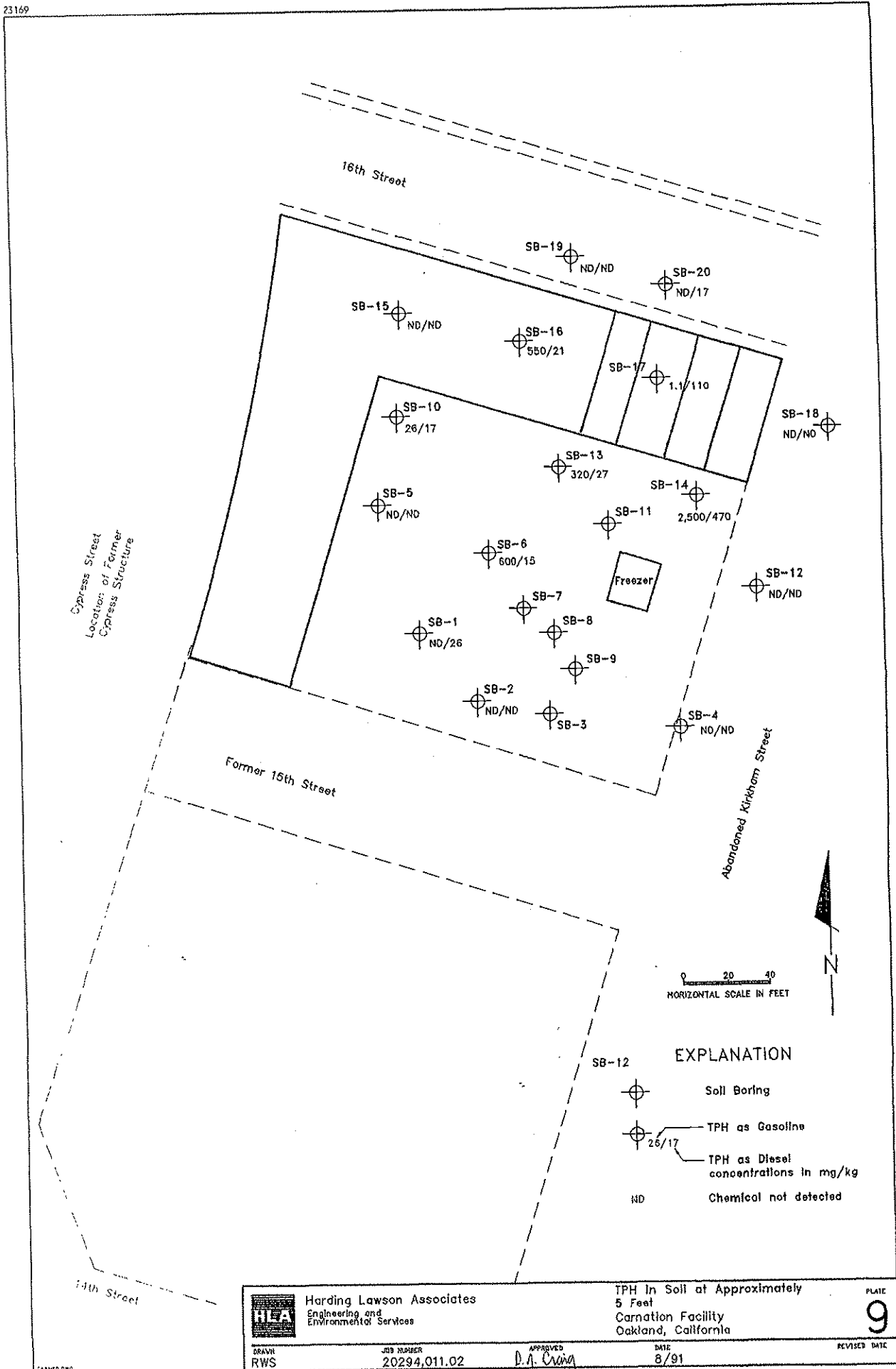
- MW-1 Monitoring Well
- 20 Product Recovery Well
- 1.61 Apparent Thickness of Free-Phase Petroleum Product in feet
- Product Thickness contour (feet)

HLA Harding Lawson Associates
Engineering and Environmental Services

Apparent Thickness of Free-Phase Petroleum Product
July 9, 1991
Carnation Facility
Oakland, California





PLATE
16

DRAWN: RWS JOB NUMBER: 20294.011.02 APPROVED: *D.A. Crane* DATE: 8/91 REVISED DATE:



0 20 40
HORIZONTAL SCALE IN FEET

EXPLANATION

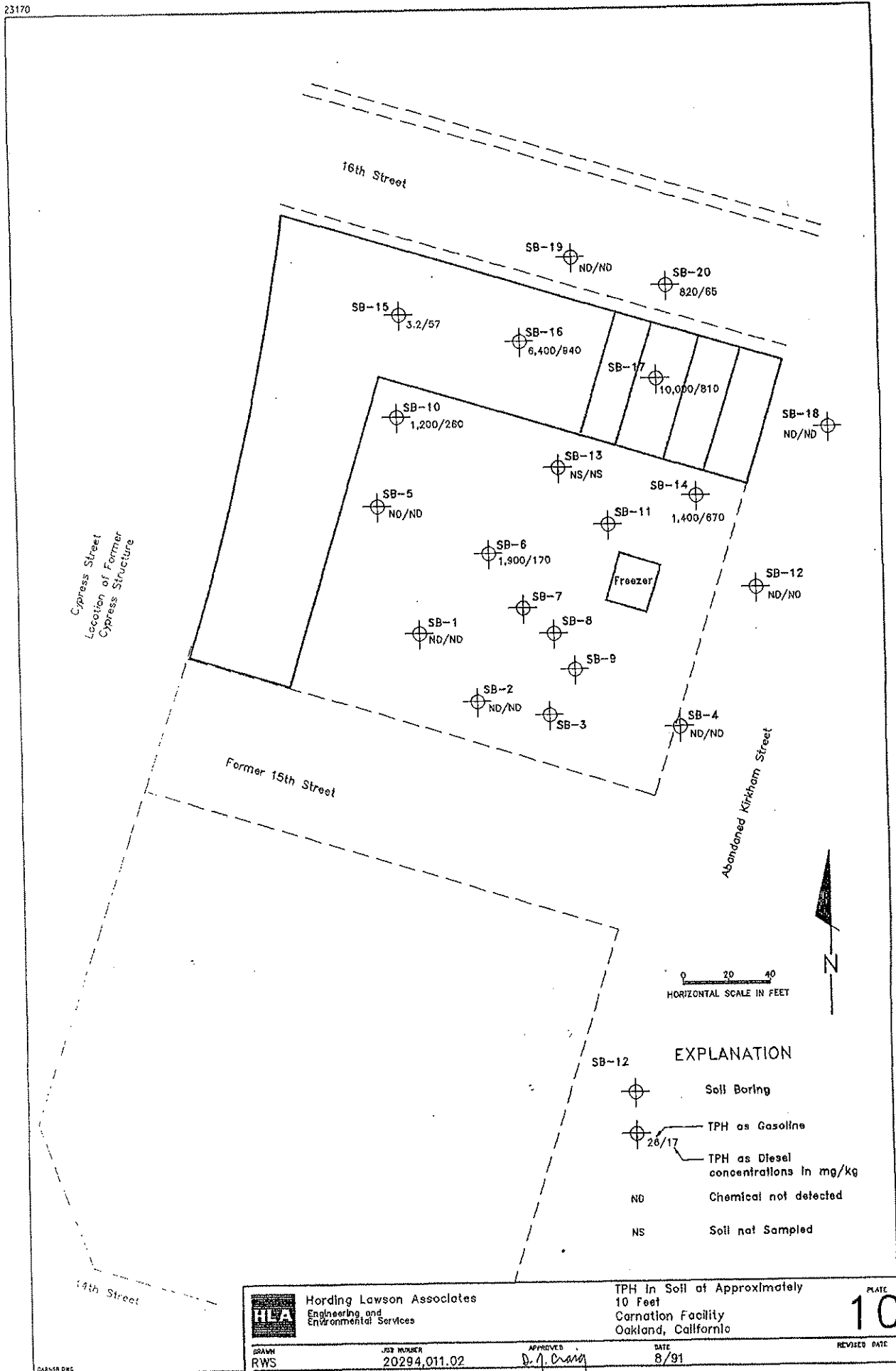
-  Soil Boring
-  TPH as Gasoline
-  TPH as Diesel concentrations in mg/kg
-  ND Chemical not detected

HLA Harding Lawson Associates
Engineering and Environmental Services

TPH in Soil at Approximately
5 Feet
Carnation Facility
Oakland, California

PLATE
9

DRAWN: RWS JOB NUMBER: 20294.011.02 APPROVED: *D.A. Cheng* DATE: 8/91 REVISOR DATE:

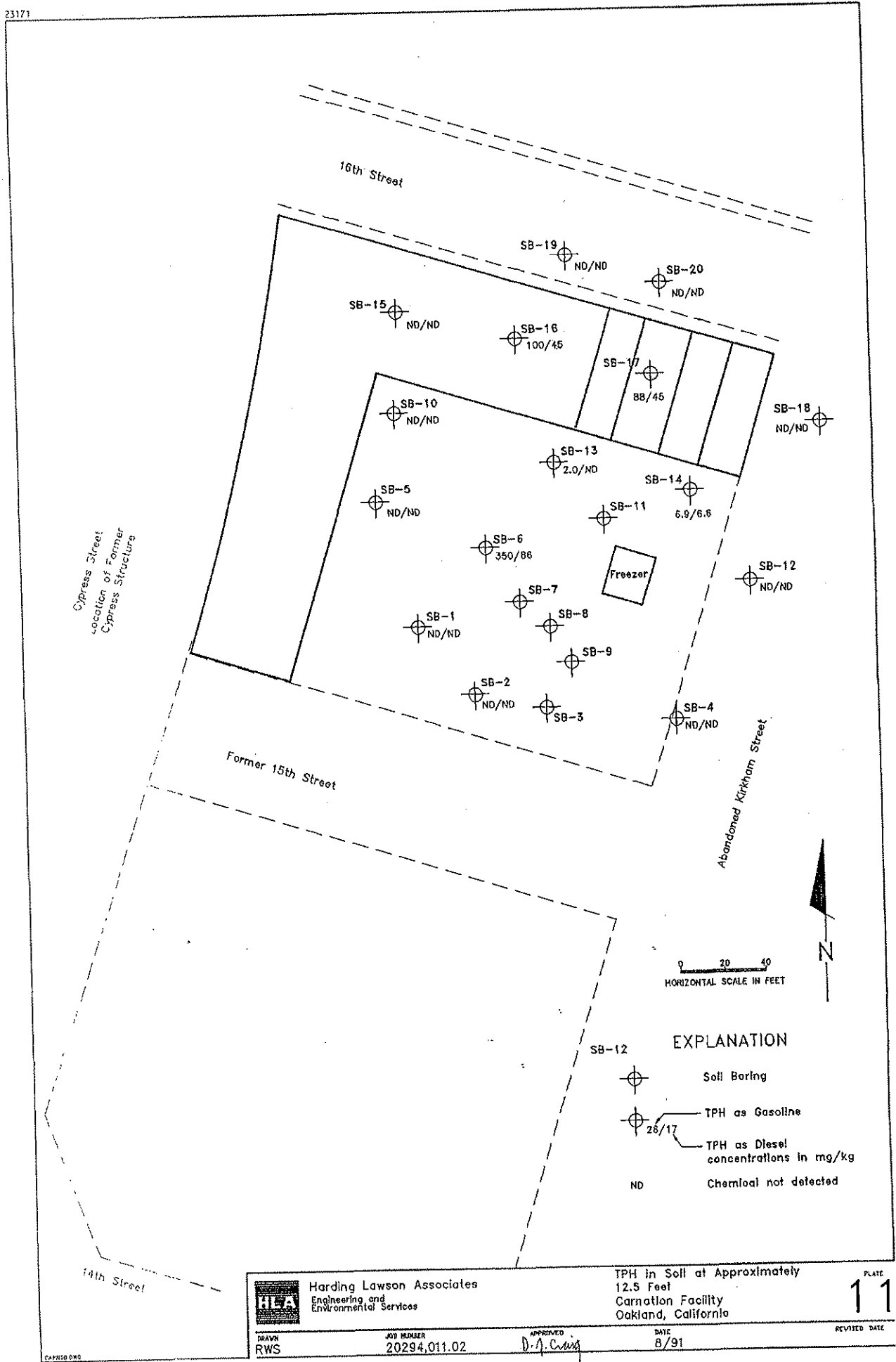


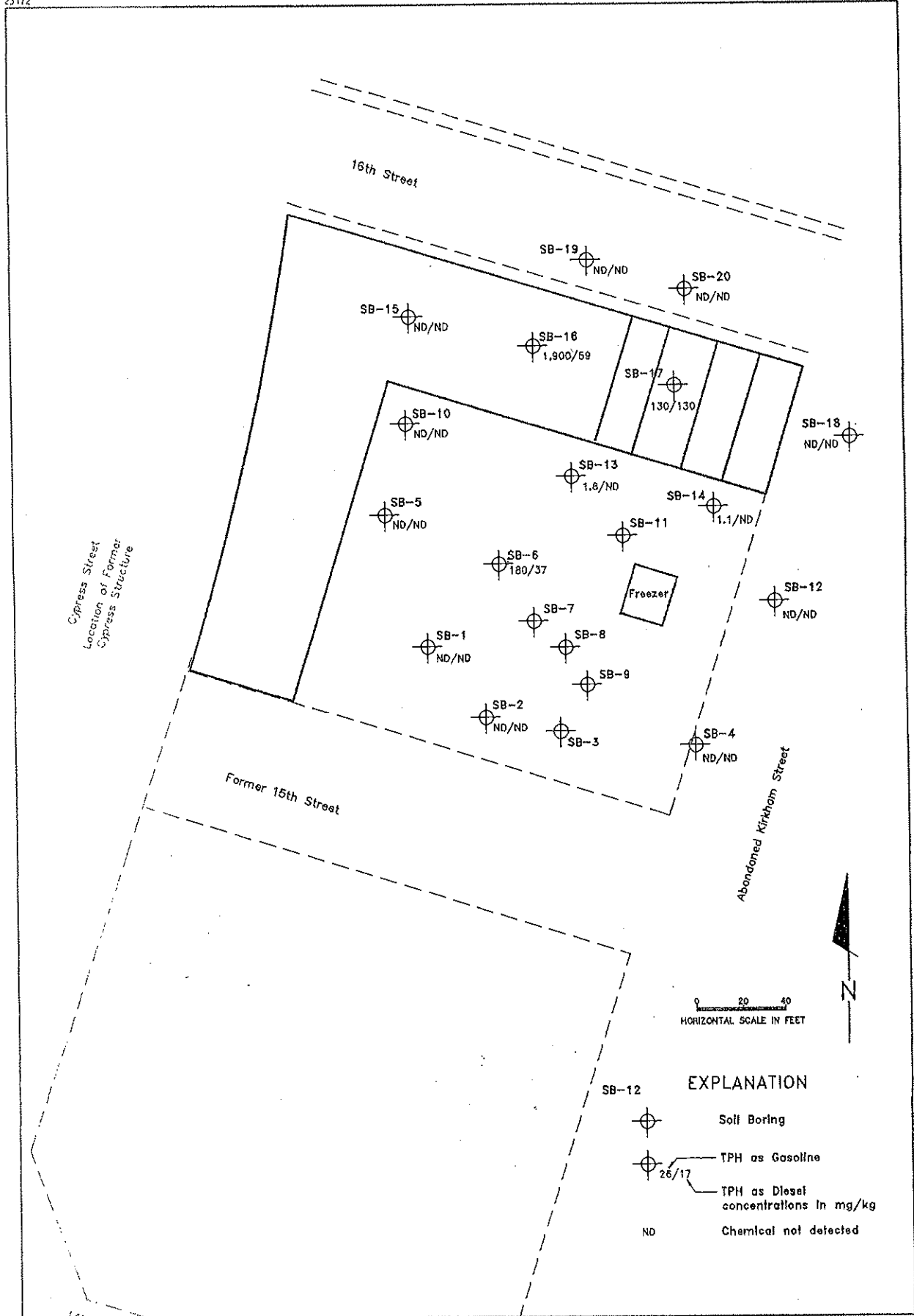
HWA Hording Lawson Associates
Engineering and Environmental Services

TPH in Soil at Approximately 10 Feet
Carnation Facility
Oakland, California

PLATE
10

DRAWN RWS	JOB NUMBER 20294,011.02	APPROVED <i>D. J. Cray</i>	DATE 8/91	REVISED DATE
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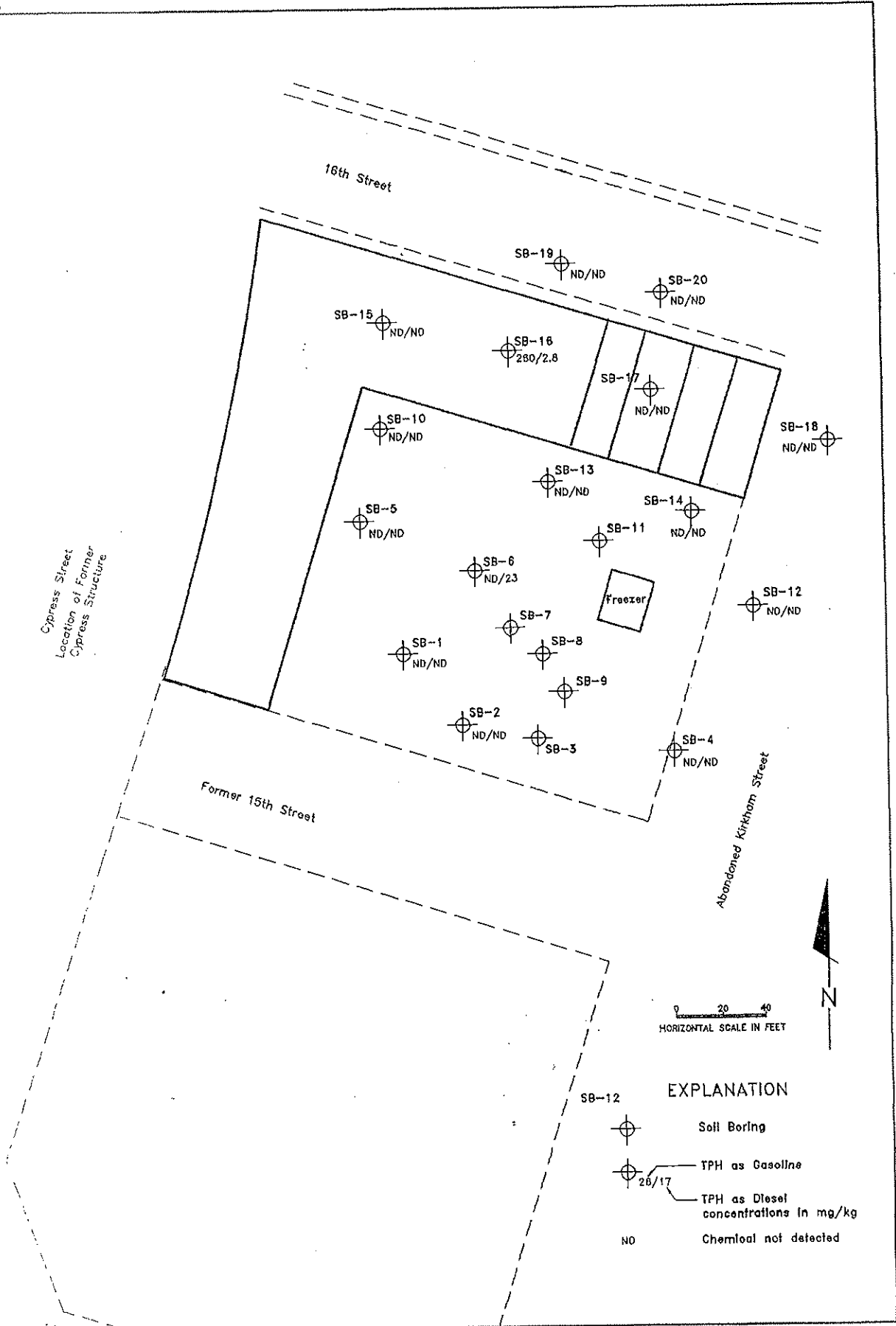


HLA Harding Lawson Associates
Engineering and Environmental Services

TPH in Soil at Approximately
15 Feet
Carnation Facility
Oakland, California

PLATE
12

DRAWN: RWS JOB NUMBER: 20294.011.02 APPROVED: *D.A. Cheng* DATE: 8/91 REVISED DATE:



EXPLANATION

SB-12

⊕ Soil Boring

⊕/26/17 TPH as Gasoline

⊕/26/17 TPH as Diesel concentrations in mg/kg

ND Chemical not detected

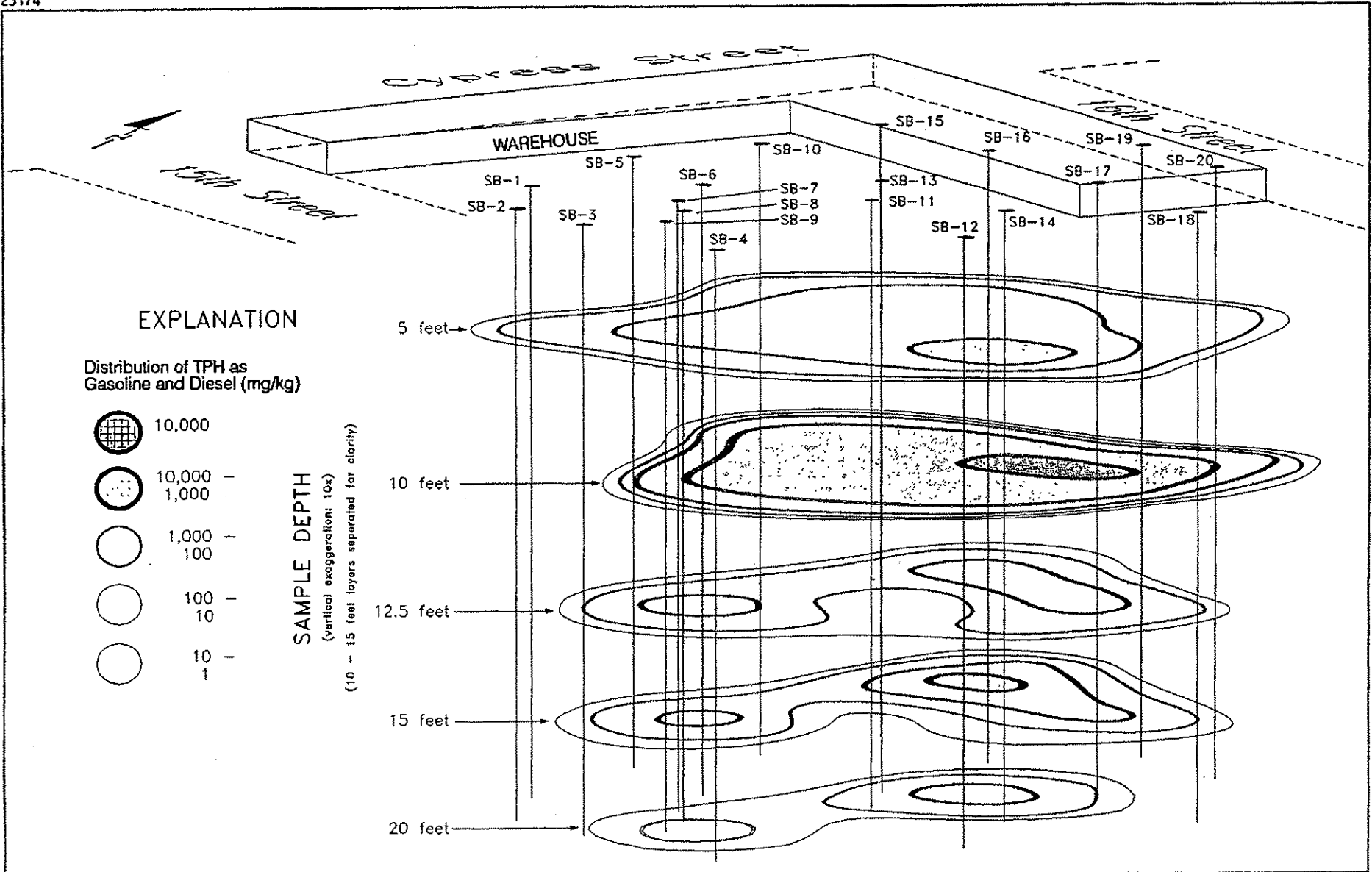
HLA Harding Lawson Associates
Engineering and Environmental Services

TPH in Soil at Approximately
20 Feet
Carnation Facility
Oakland, California

PLATE

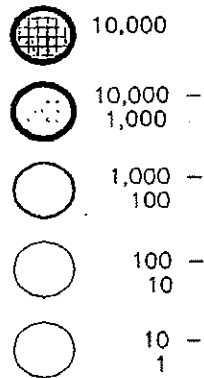
13

DRAWN: RWS JOB NUMBER: 20294,011.02 APPROVED: *D.A. [Signature]* DATE: 8/91 REVISED DATE:



EXPLANATION

Distribution of TPH as Gasoline and Diesel (mg/kg)



SAMPLE DEPTH

(vertical exaggeration: 10x)

(10 - 15 feet layers separated for clarity)

5 feet
10 feet
12.5 feet
15 feet
20 feet



Harding Lawson Associates
Engineering and Environmental Services

TPH in Soil with Depth
Carnation Facility
Oakland, California

PLATE

14

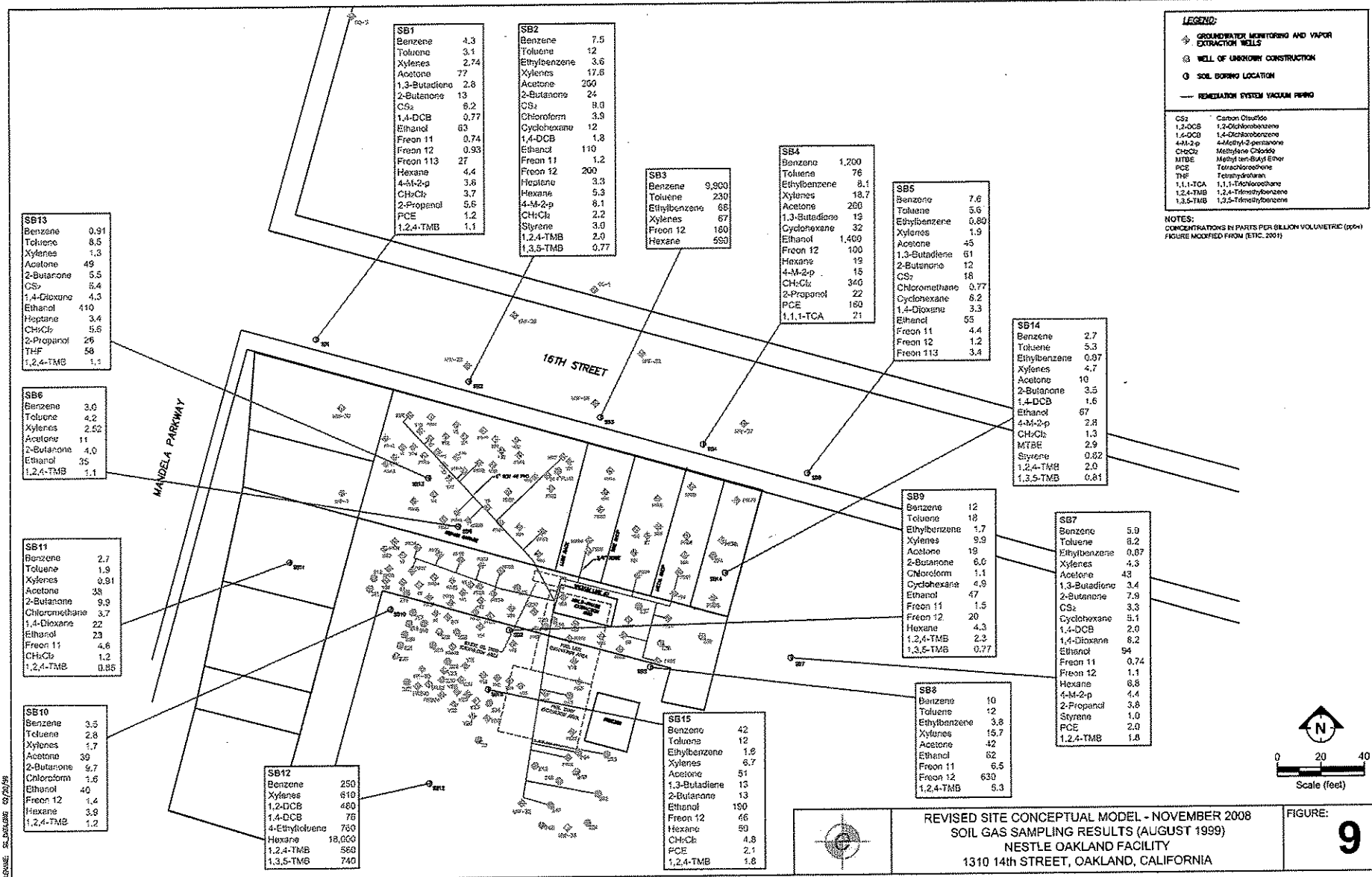
DRAWN
RWS

JOB NUMBER
202994.011.02

APPROVED
D. J. Cronig

DATE
8/91

REVISED DATE



LEGEND:

- ☉ GROUNDWATER MONITORING AND VAPOR EXTRACTION WELLS
- ⊗ WELL OF UNKNOWN CONSTRUCTION
- SOIL BORING LOCATION
- REVEALATION SYSTEM VACUUM PIPING

CS₂ Carbon Disulfide
 1,3-DCB 1,3-Dichlorobenzene
 1,4-DCB 1,4-Dichlorobenzene
 4-M-2-p 4-Methyl-2-pentene
 CH₂Cl₂ Methylene Chloride
 MTBE Methyl tert-Butyl Ether
 TCE Trichloroethene
 THF Tetrahydrofuran
 1,1,1-TCA 1,1,1-Trichloroethane
 1,2,4-TMB 1,2,4-Trimethylbenzene
 1,3,5-TMB 1,3,5-Trimethylbenzene

NOTES:
 CONCENTRATIONS IN PARTS PER BILLION VOLUMETRIC (PPB)
 FIGURE MODIFIED FROM (ETIC, 2001)

SB13

Benzene	0.91
Toluene	8.5
Xylenes	1.3
Acetone	49
2-Butanone	5.5
CS ₂	5.4
1,4-Dioxane	4.3
Ethanol	410
Heptane	3.4
CH ₂ Cl ₂	5.6
2-Propanol	26
THF	58
1,2,4-TMB	1.1

SB6

Benzene	3.0
Toluene	4.2
Xylenes	2.52
Acetone	11
2-Butanone	4.0
Ethanol	35
1,2,4-TMB	1.1

SB11

Benzene	2.7
Toluene	1.9
Xylenes	0.91
Acetone	38
2-Butanone	9.9
Chloromethane	3.7
1,4-Dioxane	22
Ethanol	23
Freon 11	4.6
CH ₂ Cl ₂	1.2
1,2,4-TMB	0.85

SB10

Benzene	3.5
Toluene	2.8
Xylenes	1.7
Acetone	39
2-Butanone	9.7
Chloroform	1.6
Ethanol	40
Freon 12	1.4
Hexane	3.9
1,2,4-TMB	1.2

SB12

Benzene	250
Xylenes	610
1,2-DCB	480
1,4-DCB	75
4-Ethyltoluene	760
Hexane	18,000
1,2,4-TMB	568
1,3,5-TMB	740

SB1

Benzene	4.3
Toluene	3.1
Xylenes	2.74
Acetone	77
1,3-Butadiene	2.8
2-Butanone	13
CS ₂	6.2
1,4-DCB	0.77
Ethanol	63
Freon 11	0.74
Freon 12	0.93
Freon 113	27
Hexane	4.4
4-M-2-p	3.6
CH ₂ Cl ₂	3.7
2-Propanol	5.6
PCE	1.2
1,2,4-TMB	1.1

SB2

Benzene	7.5
Toluene	12
Ethylbenzene	3.5
Xylenes	17.6
Acetone	260
2-Butanone	24
CS ₂	8.0
Chloroform	3.9
Cyclohexane	12
1,4-DCB	1.8
Ethanol	110
Freon 11	1.2
Freon 12	200
Heptane	3.3
Hexane	5.3
4-M-2-p	8.1
CH ₂ Cl ₂	2.2
Styrene	3.0
1,2,4-TMB	2.0
1,3,5-TMB	0.77

SB3

Benzene	9,900
Toluene	230
Ethylbenzene	66
Xylenes	67
Freon 12	160
Hexane	550

SB4

Benzene	1,200
Toluene	76
Ethylbenzene	8.1
Xylenes	18.7
Acetone	250
1,3-Butadiene	12
Cyclohexane	32
Ethanol	1,400
Freon 12	100
Hexane	19
4-M-2-p	15
CH ₂ Cl ₂	360
2-Propanol	22
PCE	160
1,1,1-TCA	21

SB5

Benzene	7.6
Toluene	3.6
Ethylbenzene	0.80
Xylenes	1.9
Acetone	45
1,3-Butadiene	61
2-Butanone	12
CS ₂	18
Chloromethane	0.77
Cyclohexane	6.2
1,4-Dioxane	3.3
Ethanol	55
Freon 11	4.4
Freon 12	1.2
Freon 113	3.4

SB14

Benzene	2.7
Toluene	5.3
Ethylbenzene	0.97
Xylenes	4.7
Acetone	10
2-Butanone	3.5
1,4-DCB	1.6
Ethanol	67
4-M-2-p	2.8
CH ₂ Cl ₂	1.3
MTBE	2.9
Styrene	0.82
1,2,4-TMB	2.0
1,3,5-TMB	0.81

SB9

Benzene	12
Toluene	18
Ethylbenzene	5.7
Xylenes	9.3
Acetone	19
2-Butanone	6.0
Chloroform	1.1
Cyclohexane	4.9
Ethanol	47
Freon 11	1.5
Freon 12	20
Hexane	4.3
1,2,4-TMB	2.3
1,3,5-TMB	0.77

SB7

Benzene	5.9
Toluene	8.2
Ethylbenzene	0.87
Xylenes	4.3
Acetone	43
1,3-Butadiene	3.4
2-Butanone	7.9
CS ₂	3.3
Cyclohexane	5.1
1,4-DCB	2.0
1,4-Dioxane	8.2
Ethanol	94
Freon 11	0.74
Freon 12	1.1
Hexane	6.8
4-M-2-p	4.4
2-Propanol	3.8
Styrene	1.0
PCE	2.0
1,2,4-TMB	1.8

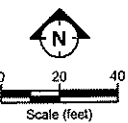
SB8

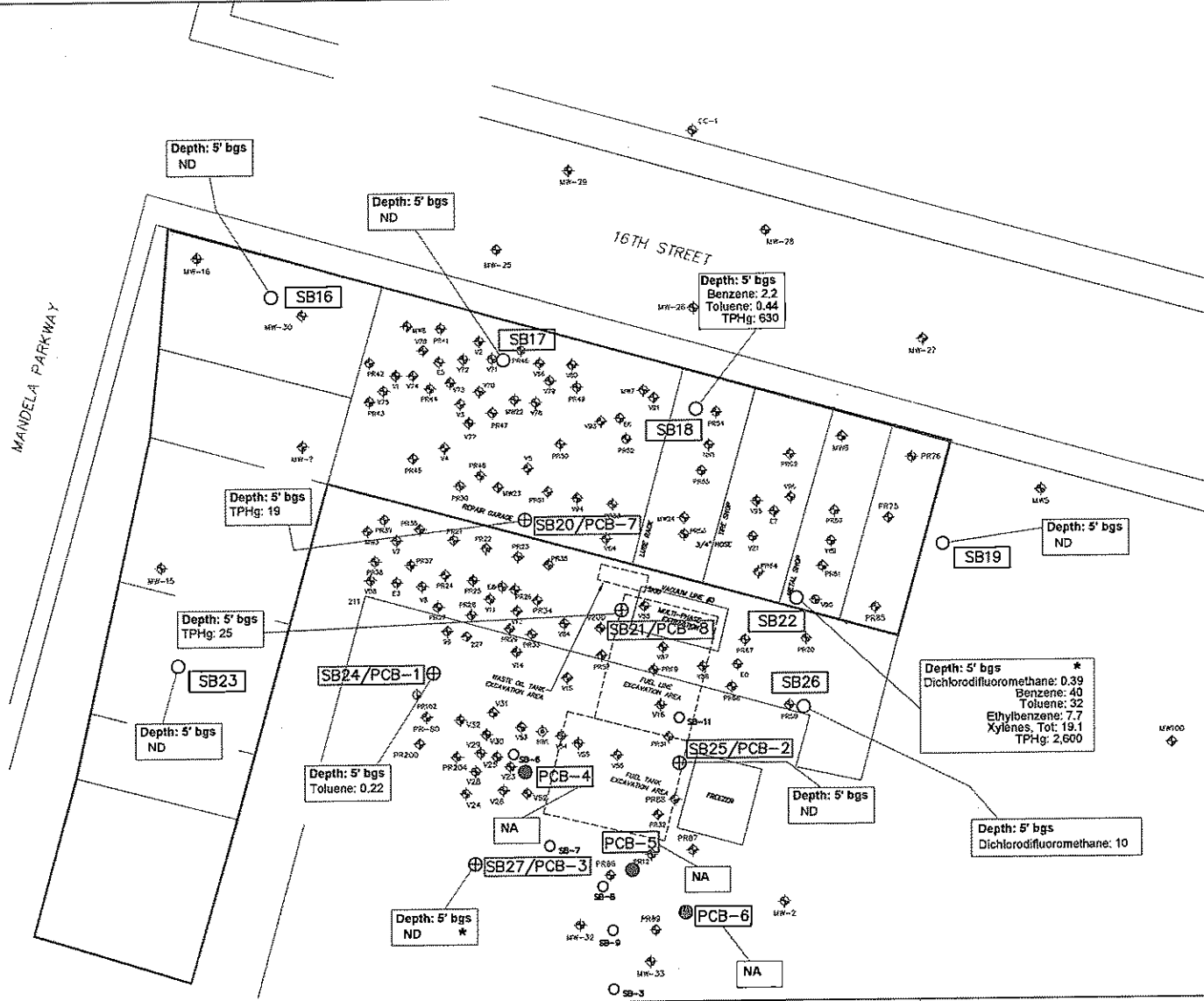
Benzene	10
Toluene	12
Ethylbenzene	3.8
Xylenes	15.7
Acetone	42
Ethanol	62
Freon 11	6.5
Freon 12	630
1,2,4-TMB	5.3

SB15

Benzene	42
Toluene	12
Ethylbenzene	1.8
Xylenes	6.7
Acetone	51
1,3-Butadiene	13
2-Butanone	13
Ethanol	190
Freon 12	66
Hexane	80
CH ₂ Cl ₂	4.8
PCE	2.1
1,2,4-TMB	1.8

REVISED SITE CONCEPTUAL MODEL - NOVEMBER 2008
 SOIL GAS SAMPLING RESULTS (AUGUST 1999)
 NESTLE OAKLAND FACILITY
 1310 14th STREET, OAKLAND, CALIFORNIA

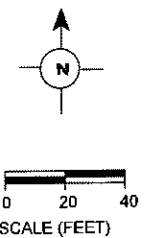


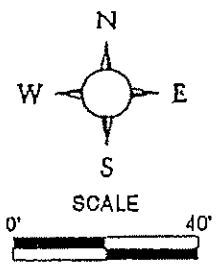


LEGEND:

- HYDROCARBON SOIL BORING LOCATION
- ⊕ SB23 HYDROCARBON/PCB SOIL BORING LOCATION
- ⊕ SB24/PCB-1 PCB SOIL BORING LOCATION
- ⊕ PCB-4
- ◆ GROUNDWATER MONITORING AND VAPOR EXTRACTION WELLS
- HISTORICAL SOIL BORING LOCATION (INSTALLED AND SAMPLED JULY 1991)
- * DUPLICATE SAMPLE COLLECTED

- NOTES:**
1. CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (µg/L) FOR SOIL VAPOR.
 2. ND: BELOW LABORATORY REPORTING LIMIT. REFER TO TABLE 2 FOR INDIVIDUAL ANALYTES AND REPORTING LIMITS.
 3. NA: NOT ANALYZED.
 4. bgs: BELOW GROUND SURFACE.





LEGEND

- 0'-1' OF FREE PRODUCT
- 1'-2' OF FREE PRODUCT
- GROUNDWATER MONITORING WELLS
- 2 INCH WELLS INSTALLED BY PREVIOUS CONSULTANTS FOR PRODUCT RECOVERY
- CONTROL ZONE: 4" BRASS GATE VALVE
- 4" SCH 40 PVC PIPE (VACUUM LINES)
- THERMAL OXIDIZER VAPOR EXTRACTION SYSTEM

NOTE:
ADDITIONAL WELLS EXIST ON SITE

LAYOUT OF VAPOR EXTRACTION SYSTEM
 NOVEMBER 4, 1993
 NESTLE/CARNATION
 1310 14TH STREET
 OAKLAND, CALIFORNIA
 PROJECT # 5008-J11
 5008-J11-3

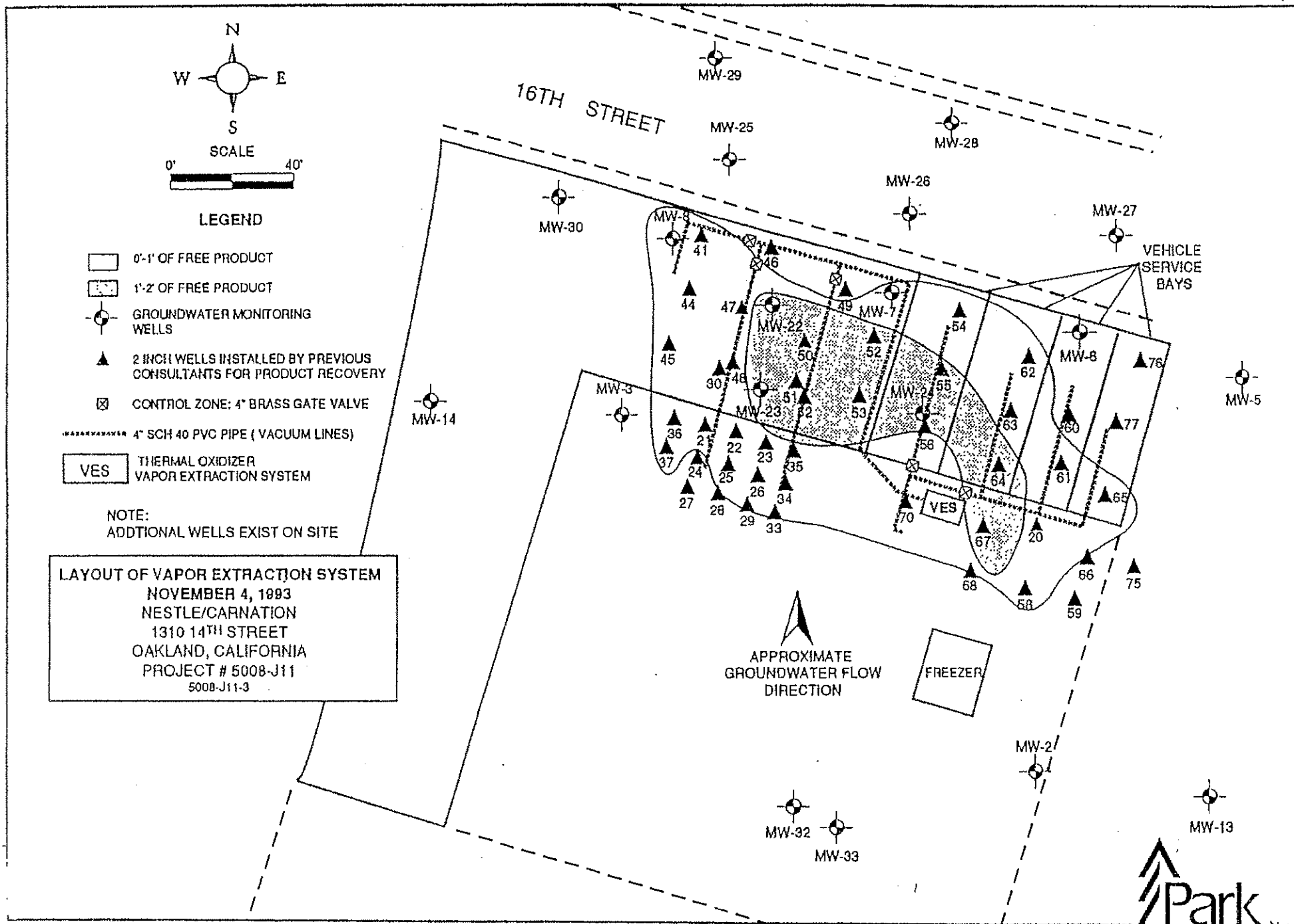
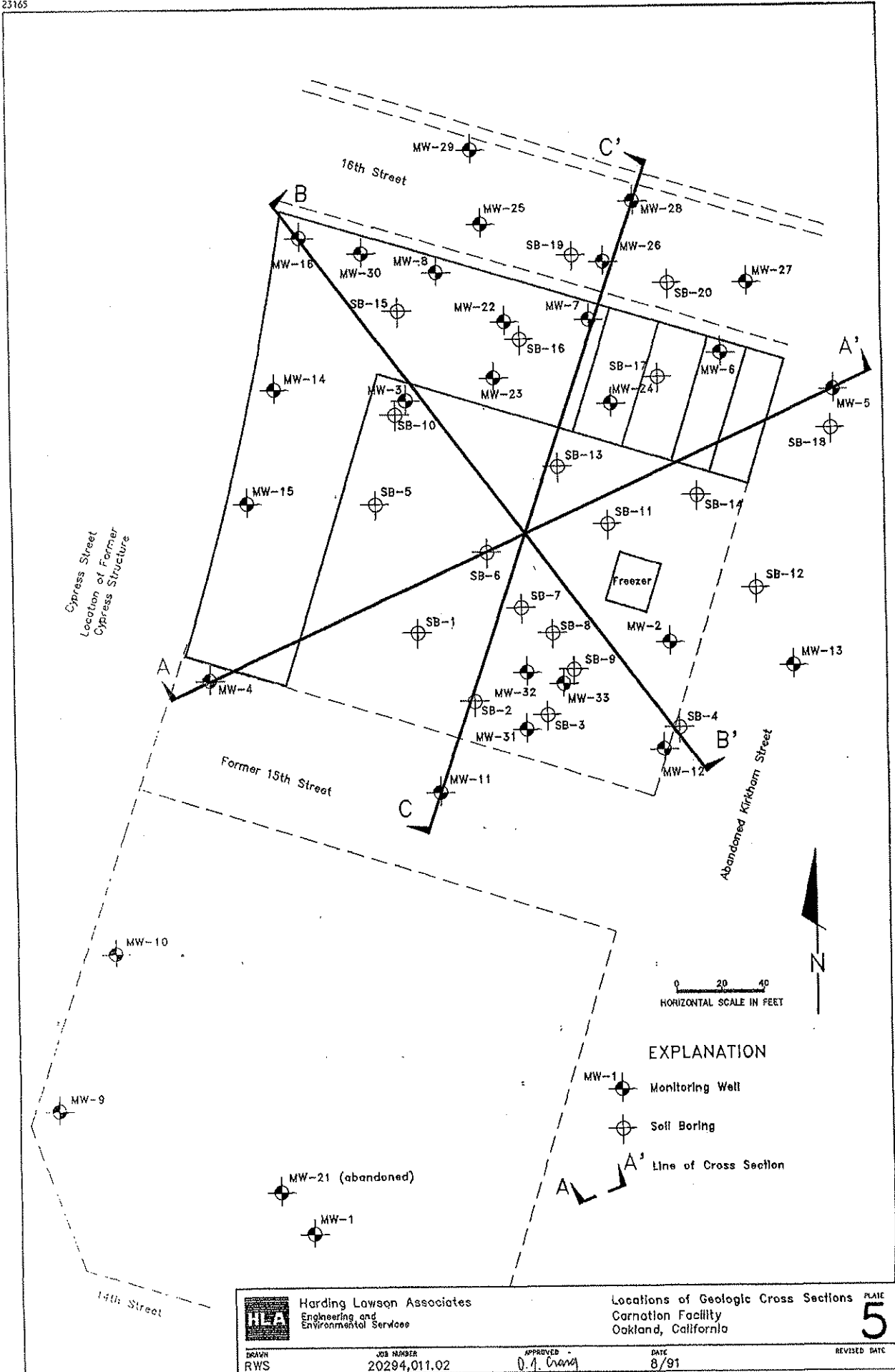


Figure 5



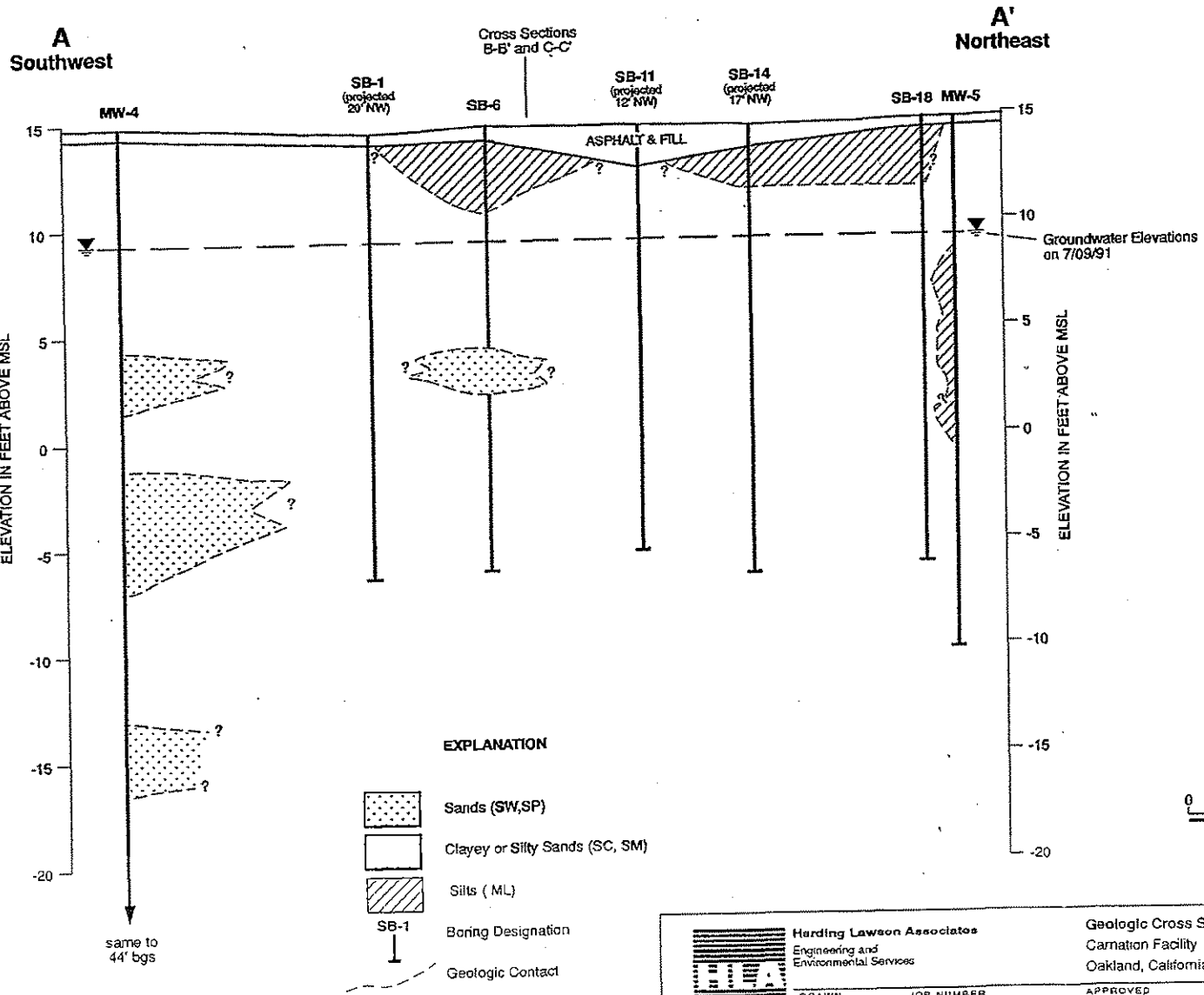
EXPLANATION

- MW-1 Monitoring Well
- Soil Boring
- A-A' Line of Cross Section

HLA Harding Lawson Associates
 Engineering and Environmental Services

Locations of Geologic Cross Sections
 Carnation Facility
 Oakland, California

DRAWN: RWS JOB NUMBER: 20294,011.02 APPROVED: *D.J. Chang* DATE: 8/91 REVISED DATE: **5**



Harding Lawson Associates
Engineering and
Environmental Services

Geologic Cross Section A-A'
Carnation Facility
Oakland, California

DRAWN: PMc
JOB NUMBER: 20294,011.02

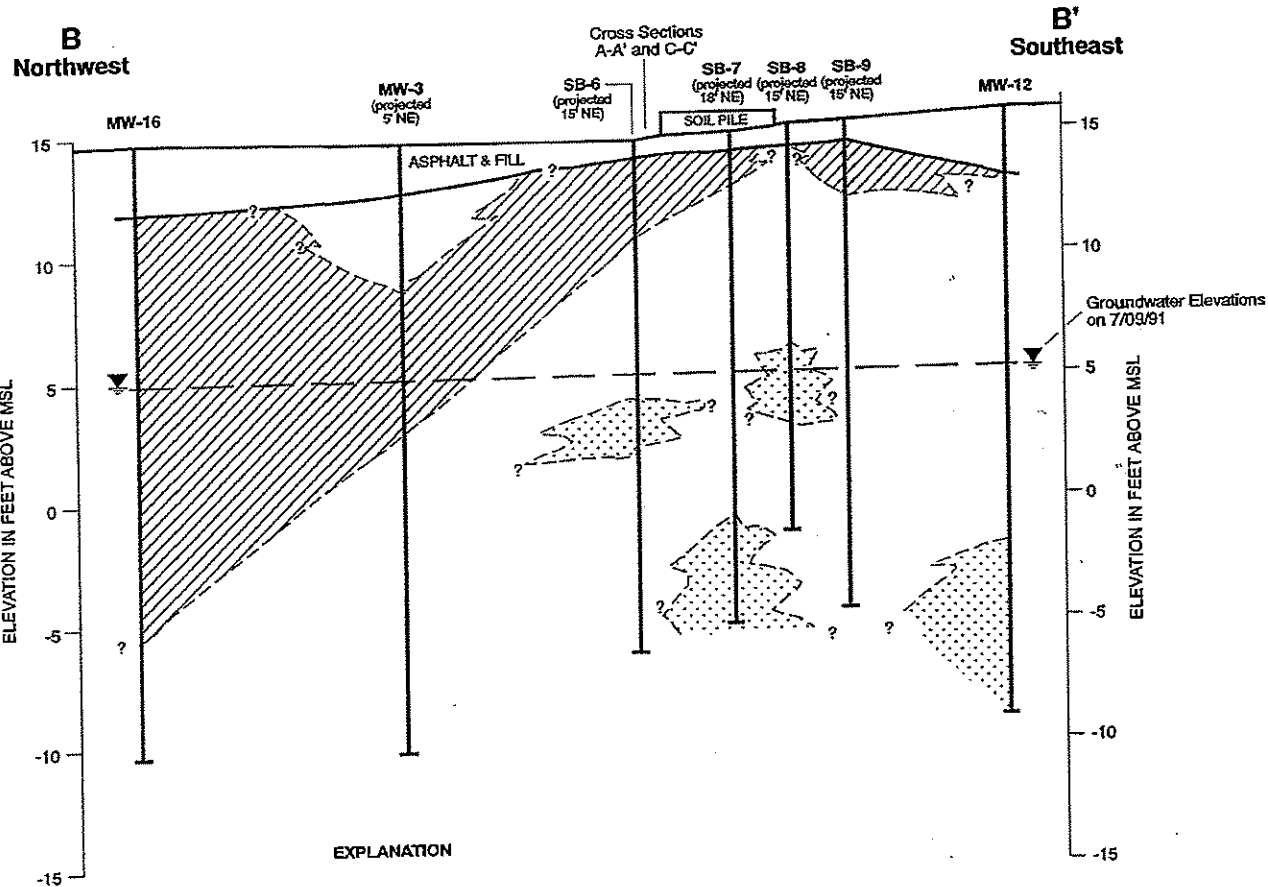
APPROVED: *D.A. Gray*

DATE: 8/91






REVISED DATE

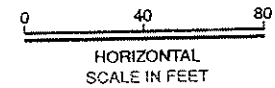
PLATE

6



EXPLANATION

-  Sands (SW, SP)
-  Clayey or Silty Sands (SC, SM)
-  Silts (ML)
-  Boring Designation
-  Geologic Contact



Vertical Exaggeration = 8x

0513PM



Harding Lawson Associates
Engineering and
Environmental Services

Geologic Cross Section B-B'
Camation Facility
Oakland, California

PLATE

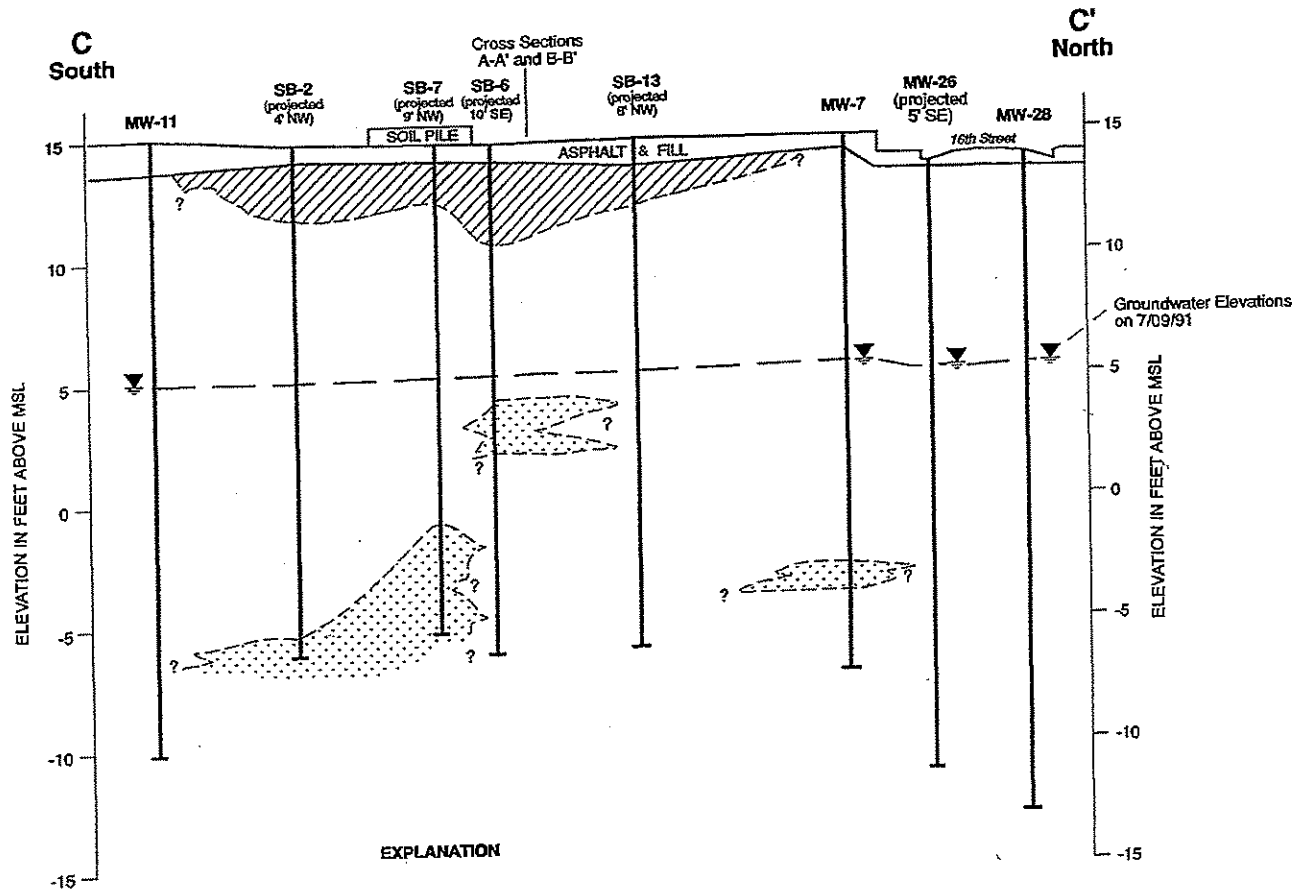
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DRAWN PMc JOB NUMBER 20294,011.02






APPROVED *[Signature]*

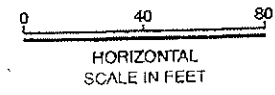
DATE 8/91

REVISED DATE



EXPLANATION

-  Sands (SW, SP)
-  Clayey or Silty Sands (SC, SM)
-  Silts (ML)
-  Boring Designation
-  Geologic Contact



Vertical Exaggeration = 8x 0915PM



Harding Lawson Associates
Engineering and Environmental Services

Geologic Cross Section C-C'
Carnation Facility
Oakland, California

PLATE
8

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
PMc	20294.011.02	<i>D. A. Wong</i>	8/91	

Table 7.1: Soil Analytical Results

Sample Number	Location	Depth Below Ground Surface (Feet)	THP-Gasoline 10mg/kg	THP-Diesel 10mg/Kg	Oil and Grease 50mg/kg	Benzene 0.3µg/kg	Toluene 0.3µg/kg	Ethyl-benzene 0.3µg/kg	Xylenes 0.3µg/kg	Lead 0.044mg/kg
3649	MW-1	4.5 to 5.0	NA	ND<10	NA	<0.03	<0.03	<0.03	<0.03	5.2
3650	MW-1	9.5 to 10.0	NA	ND<10	NA	<0.03	<0.03	<0.03	<0.03	7.1
3838	MW-2	4.5 to 5.0	ND<10	ND<10	NA	<0.03	0.04	<0.03	0.05	5.8
3839	MW-2	9.5 to 10.0	ND<10	ND<10	<50	<0.03	0.035	<0.03	0.04	4.7
3829	MW-3	4.0 to 4.5	ND<10	ND<10	NA	<0.03	0.04	<0.03	0.07	2.3
3833	MW-3	9.0 to 9.5	ND<10	ND<10	<50	0.03	0.05	<0.03	0.05	3.9
3681	MW-4	4.0 to 4.5	ND<10	NA	NA	<0.03	0.07	0.05	0.3	ND<1.1*
3682	MW-4	9.5 to 10.0	ND<10	NA	<50	ND<0.03	<0.03	<0.03	0.09	ND<1.1*
3965	MW-5	6.0 to 6.5	ND<10	ND<10	65	<0.03	0.04	<0.03	0.04	7.4
3966	MW-5	10.0 to 10.5	<10	<10	115	<0.03	0.045	<0.03	0.045	7.9
3164	MW-6	4.5 to 5.0	ND<10	NA	<50	0.1	0.08	<0.03	0.11	19
3165	MW-6	10.5 to 11.0	ND<10	NA	<50	0.04	0.04	<0.03	<0.03	10.1
3166	MW-6	15.5 to 16.0	ND<10	NA	<50	<0.03	0.03	<0.03	<0.03	9.7
3153	MW-7	4.5 to 5.0	30	ND<10	NA	0.32	0.1	0.03	0.16	21
3154	MW-7	9.5 to 10.0	15,660	390	NA	310	1100	300	1550	10.8
3155	MW-7	15.5 to 16.0	12	ND<10	<50	3	8	13	13	5.5
3156	MW-7	21.0 to 21.5	ND<10	ND<10	NA	0.20	0.30	0.04	0.20	8.2
3161	MW-8	4.5 to 5.0	ND<10	NA	NA	0.04	0.03	<0.03	0.12	ND<1.1*
3162	MW-8	9.5 to 10.0	5,960	NA	1220	37	210	60	320	1.5*
3163	MW-8	16.5 to 17.0	ND<10	NA	NA	0.05	0.16	0.04	0.21	ND<1.1*
3661	MW-9	4.0 to 4.5	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	7.3
3662	MW-9	8.0 to 8.5	NA	ND<10	<50	ND<0.03	ND<0.03	ND<0.03	ND<0.03	8.2
3657	MW-10	4.5 to 5.0	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	5.0
3658	MW-10	9.5 to 10.0	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	10.1
3671	MW-11	5.0 to 5.5	ND<10	ND<10	NA	0.03	0.03	<0.03	0.05	4.4
3672	MW-11	9.0 to 9.5	ND<10	ND<10	<50	<0.03	0.04	<0.03	0.04	4.5
3679	MW-12	4.0 to 4.5	ND<10	ND<10	NA	<0.03	0.04	<0.03	0.05	9.5
3680	MW-12	9.0 to 9.5	ND<10	ND<10	<50	<0.03	0.04	<0.03	0.05	5.6
3969	MW-13	6.0 to 6.5	ND<10	ND<10	<50	<0.03	0.035	<0.03	0.035	10.1
3970	MW-13	9.0 to 9.5	ND<10	ND<10	<50	<0.03	0.036	<0.03	0.036	10.5
3149	MW-14	4.5 to 5.5	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	6.4
3150	MW-14	9.5 to 10.0	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	4.6
3151	MW-14	13.0 to 13.5	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	12.1
3152	MW-14	21.0 to 21.5	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	7.3
3157	MW-15	4.5 to 5.0	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	4.0
3159	MW-15	12.0 to 12.5	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	8.1
3160	MW-15	20.0 to 20.5	NA	ND<10	NA	ND<0.03	ND<0.03	ND<0.03	ND<0.03	8.6
3973	MW-16	6.0 to 6.5	ND<10	ND<10	<50	<0.03	0.033	<0.03	0.04	8.4
3974	MW-16	11.0 to 11.5	ND<10	ND<10	<50	<0.03	0.033	<0.03	0.04	5.9

*Detection Limit is 1.1 mg/kg

NA - Not Analyzed

ND - Not Detected

Revised Site Conceptual Model
Former Nestlé USA, Inc. Facility-Oakland, CA
1310 14th Street, Oakland, CA

Table 2: Historical Soil Sample Results (1999 - 2008)

Boring Location	Sample Depth (feet bgs)	Date of Sample Collection	Analytical results (mg/Kg)									
			TPH-g	TPH-d	TPH-mo	Benzene	Toluene	Ethylbenzene	Xylenes_Tot	1,2-DCA	Others	
SB-1	3.5-4.0	08/12/99	<0.13	1,200	NA	<0.0013	<0.0013	<0.0013	<0.0013	<0.0011		
SB-1	6.5-7.0	08/12/99	<0.10	<5.9	NA	<0.001	<0.001	<0.001	<0.001	<0.0008		
SB-2	3.5-4.0	08/12/99	<0.09	<5.6	NA	<0.0009	<0.0009	<0.0009	<0.0009	<0.001		
SB-2	6.5-7.0	08/12/99	<0.10	<5.9	NA	<0.001	<0.001	<0.001	<0.001	0.001		
SB-3	3.5-4.0	08/12/99	<0.10	<5.6	NA	<0.001	<0.001	<0.001	<0.001	0.0007		
SB-3	6.5-7.0	08/12/99	6.160	<5.7	NA	11	190	100	460	0.0018	MTBE: 0.073	
SB-4	3.5-4.0	08/12/99	<0.10	<5.5	NA	<0.001	<0.001	<0.001	<0.001	<0.0007		
SB-4	6.5-7.0	08/12/99	1	94	NA	0.082	0.0085	0.0073	0.013	0.001		
SB-5	3.5-4.0	08/12/99	<0.09	<5.5	NA	<0.0009	<0.0009	<0.0009	<0.0009	0.0006		
SB-5	6.5-7.0	08/12/99	<0.08	<5.9	NA	<0.0008	<0.0008	<0.0008	<0.0008	0.0009		
SB-6	3.5-4.0	08/13/99	<0.10	<5.5	NA	<0.001	<0.001	<0.001	<0.001	<0.0008		
SB-6	6.5-7.0	08/13/99	10,100	1,100	NA	76	490	170	990	0.43		
SB-7	3.5-4.0	08/12/99	<0.10	<5.4	NA	<0.001	<0.001	<0.001	<0.001	<0.0008		
SB-7	6.5-7.0	08/12/99	<0.11	<5.8	NA	<0.0011	<0.0011	<0.0011	<0.0011	<0.0009		
SB-8	3.5-4.0	08/12/99	<0.10	<5.6	NA	<0.001	<0.001	<0.001	<0.001	<0.0007		
SB-8	6.5-7.0	08/12/99	13	<5.8	NA	0.43	0.36	0.12	0.83	0.0012	MTBE: 0.022	
SB-9	3.5-4.0	08/13/99	<0.09	<5.6	NA	<0.0009	<0.0009	<0.0009	<0.0009	<0.001		
SB-9	6.5-7.0	08/13/99	<0.61	<5.8	NA	0.024	<0.0061	<0.0061	<0.0061	<0.0011		
SB-10	3.5-4.0	08/13/99	<0.09	<5.6	NA	<0.0009	<0.0009	<0.0009	<0.0009	<0.0008		
SB-10	6.5-7.0	08/13/99	<0.13	<6.4	NA	<0.0013	<0.0013	<0.0013	<0.0013	<0.001		
SB-10	3.5-4.0	08/13/99	<0.20	<5.5	NA	<0.002	<0.002	<0.002	<0.002	<0.0011		
SB-11	6.5-7.0	08/13/99	<0.11	<5.7	NA	<0.0011	<0.0011	<0.0011	<0.0011	<0.001		
SB-12	3.5-4.0	08/12/99	<0.10	<5.5	NA	<0.001	<0.001	<0.001	<0.001	<0.0008		
SB-12	4.5-5.0	08/12/99	498	2,900	NA	0.07	0.632	4	6.7	<0.0009	Chlorobenzene: 0.0017 1,2-DCB: 3.1 1,3-DCB: 0.038 1,4-DCB: 0.33 MTBE:	
SB-12	6.5-7.0	08/12/99	2	60	NA	<0.001	<0.001	0.023	0.0098	<0.0011	MTBE: 0.001	
SB-13	3.5-4.0	08/13/99	1	390	NA	<0.0012	0.002	0.0027	0.0027	0.0025		
SB-13	6.5-7.0	08/13/99	12	65	NA	0.25	0.048	0.15	0.49	0.0014		
SB-14	3.5-4.0	08/12/99	<0.08	<5.5	NA	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	MTBE: 0.084	
SB-14	6.5-7.0	08/12/99	29	450	NA	0.56	0.29	0.33	1.7	0.0097		
SB-15	3.5-4.0	08/12/99	<0.51	140	NA	<0.0054	<0.0054	<0.0054	<0.0054	<0.0091		
SB-15	6.5-7.0	08/12/99	<0.57	81	NA	<0.0061	0.012	<0.0061	0.0085	<0.0098		
SB-16	6-6.5	05/19/08	<0.22	30	<50	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043		
SB-17	8-8.5	05/22/08	2,500	3,600	2,900	30	130	27	120	ND		
SB-17	10-10.5	05/22/08	12,000	17,000	13,000	140	580	120	620	<8.3		
SB-17	16-15.5	05/22/08	64	1,400	1,300	<0.89	<0.89	<0.89	<1.8	<0.89		
SB-17	20-20.5	05/22/08	<0.21	<0.99	<49	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042		
SB-18	8-8.5	05/21/08	1,800	67	<49	41	110	23	130	<19		
SB-19	8-8.5	05/21/08	<0.25	<0.99	<49	<0.0050	<0.0050	<0.0050	<0.010	<0.0050		
SB-20/ PCB-7	8-8.5	05/22/08	5,600	390	51	86	280	54	280	<8.3		
SB-21/ PCB-8	8-8.5	05/21/08	3,800	2,500	<49	40	210	69	360	<19		
SB-22	8-8.5	05/21/08	3,200	1,100	<500	<47	140	<47	190	<47		
SB-23	11.5-12	05/22/08	<0.21	1.2	<49	<0.0041	<0.0041	<0.0041	<0.0082	<0.0041		
SB-24/ PCB-1	9-9.5	05/20/08	<0.19	1.6	<50	<0.0039	<0.0039	<0.0039	<0.0078	<0.0039		
SB-25/ PCB-2	8-8.5	05/20/08	<0.19	1.1	<50	<0.0037	<0.0037	<0.0037	<0.0075	<0.0037		
SB-26	8.5-9	05/21/08	<0.23	10	<50	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047		
SB-27/ PCB-3	8.5-9	05/20/08	<0.27	<0.99	<49	<0.0054	<0.0054	<0.0054	<0.011	<0.0054		
SB-20/ PCB-7 Dup	8-8.5	05/22/08	4,900	610	<50	95	300	64	340	<21		
SB-25/ PCB-2 Dup	8-8.5	05/20/08	NA	<1.0	<50	NA	NA	NA	NA	NA		

Notes:

NA = Not Analyzed
EPA Method 8260 for BTEX and 1,2-DCA analyses of soil
EPA Method 8015m for TPH-g, TPH-d, and TPH-mo analyses of soil

Supplemental Soil, Soil Gas, and Groundwater Investigation
 Former Nestlé USA, Inc. Facility-Oakland, CA
 1310 14th Street, Oakland, CA

Table 3: Soil Sample Results
 Hydrocarbons in Soil

Boring Location	Sample Depth (feet bgs)	Date of Sample Collection	Analytical results (mg/Kg)								
			TPH g	TPH d	TPH mo	Benzene	Ethylbenzene	Toluene	Xylenes, Tot	1,2-DCA	Others
SB-16	6-6.5	19-May-08	<0.22	30	<50	<0.0043	<0.0043	<0.0043	<0.0087	<0.0043	
SB-17	8-8.5	22-May-08	2,500	3,600	2,900	30	27	130	120	<8.3	
SB-17	10-10.5	22-May-08	12,000	17,000	13,000	140	120	580	620	<0.89	
SB-17	15-15.5	22-May-08	64	1,400	1,300	<0.89	<0.89	<0.89	<1.8	<0.89	
SB-17	20-20.5	22-May-08	<0.21	<0.99	<49	<0.0042	<0.0042	<0.0042	<0.0084	<0.0042	
SB-18	8-8.5	21-May-08	1,900	67	<49	41	28	110	130	<19	
SB-19	8-8.5	21-May-08	<0.25	<0.99	<49	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	
SB-20/ PCB-7	8-8.5	22-May-08	5,600	390	51	86	54	280	280	<8.3	
SB-21/ PCB-8	8-8.5	21-May-08	3,800	2,500	<49	40	69	210	360	<19	
SB-22	8-8.5	21-May-08	3,200	1,100	<500	<47	<47	140	190	<47	
SB-23	11.5-12	22-May-08	<0.21	1.2	<49	<0.0041	<0.0041	<0.0041	<0.0082	<0.0041	
SB-24/ PCB-1	9-9.5	20-May-08	<0.19	1.6	<50	<0.0039	<0.0039	<0.0039	<0.0078	<0.0039	
SB-25/ PCB-2	8-8.5	20-May-08	<0.19	1.1	<50	<0.0037	<0.0037	<0.0037	<0.0075	<0.0037	
SB-26	8.5-9	21-May-08	<0.23	10	<50	<0.0047	<0.0047	<0.0047	<0.0093	<0.0047	
SB-27/ PCB-3	8.5-9	20-May-08	<0.27	<0.99	<49	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	
SB-20/ PCB-7 Dup	8-8.5	22-May-08	4,900	610	<250	99	64	300	340	<21	
SB-25/ PCB-2 Dup	8-8.5	20-May-08	NA	<1.0	<50	NA	NA	NA	NA	NA	

Notes:

NA = Not Analyzed
 EPA Method 8260 for BTEX and 1,2-DCA analyses of soil
 EPA Method 8015m for TPH-g, TPH-d, and TPM-mo analyses of soil

TABLE 1: ANALYTICAL RESULTS FOR SAMPLES FROM
FUEL TANK AREA, IN PPM

<u>Sample No.</u>	<u>TPH Gasoline</u>	<u>TPH Diesel</u>	<u>Benzene</u>	<u>Ethyl- benzene</u>	<u>Toluene</u>	<u>Xylene</u>	<u>Total Organic Lead</u>
Tank 1N	17000	280	200	130	660	580	BRL
Tank 1S	570	36	40	54	190	260	BRL
Tank 2N	12000	BRL*	50	44	190	200	BRL
Tank 2S	26000	570	200	BRL**	740	690	BRL
Tank 3N	31000	BRL*	300	BRL**	940	840	BRL
Tank 3S	9700	BRL*	20	36	110	50	BRL
Tank 4N	18000	BRL*	100	BRL	520	520	BRL
Tank 4S	38000	BRL*	200	200	910	850	BRL
Soil Pile 1	BRL***	6500	1.1	0.5	0.4	2.0	BRL
Water 1	1400	0.93	22	1.7	25	--	BRL

BRL = Below reporting limit.

* = Reporting limit 1000 ppm.

** = Reporting limit 200 ppm.

*** = Reporting limit 5000 ppm.

Reporting limit for Total Organic Lead for soil samples is 10 ppm.

Reporting limit for Total Organic Lead for water sample is 1 ppm.

[TABLE1.059, URRV2-14]

Table 1: Off Site Soil Analytical Results

Sample Location	Depth	TPH Gasoline	TPH Diesel	Oil & Grease	Total Hydrocarbons	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead	PCBs
Detection Limit	Feet	10 mg/kg	10 mg/kg	20 mg/kg	20 mg/kg	0.03 mg/kg	0.03 mg/kg	0.03 mg/kg	0.03 mg/kg	1.1 mg/kg	0.2 mg/kg
2089 MW-OS-25	2.5-3	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
2090 MW-OS-25	3.5-4	ND	ND	25	25	ND	ND	ND	ND	NA	ND
2091 MW-OS-25	5-5.5	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
2092 MW-OS-25	7-7.5	ND	ND	55	55	ND	ND	ND	ND	NA	ND
2093 MW-OS-25	7.5-8	BRL	BRL	50 mg/kg 240	25 mg/kg 29	0.05 mg/kg BRL	0.1 mg/kg BRL	0.2 mg/kg BRL	0.1 mg/kg BRL	1.1 mg/kg NA	20 mg/kg BRL
2094 MW-OS-25	9-9.5	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
2095 MW-OS-25	11.5-12	ND	ND	20	20	ND	ND	ND	ND	NA	ND
2096 MW-OS-25	13-13.5	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
2097 MW-OS-26	2-2.5	ND	ND	ND	NA	ND	ND	ND	ND	3.2	ND
2098 MW-OS-26	3-3.5	ND	ND	ND	NA	ND	ND	ND	ND	4.7	ND
2099 MW-OS-26	4-4.5	ND	ND	ND	NA	ND	ND	ND	ND	6.6	ND
2100 MW-OS-26	5-5.5	ND	ND	ND	NA	ND	ND	ND	ND	8.0	ND
2101 MW-OS-26	6-6.5	ND	ND	ND	NA	ND	ND	ND	ND	10.0	ND
2103 MW-OS-26	7.5-8	1110	110	945	NA	5.8	39	13	70	9.3	ND
2104 MW-OS-26	10-10.5	1170	70	80	NA	7.8	25	6	30	8.9	ND
2109 MW-OS-26	10.5-11	19	ND	260	NA	1.7	1.8	0.6	4.8	NA	ND
1172 MW-OS-27	6-6.5	ND	ND	80	NA	ND	ND	ND	ND	8.2	ND
1173 MW-OS-27	8.5-9	ND	ND	65	NA	ND	ND	ND	ND	9.3	ND
1176 MW-OS-28	3-3.5	ND	ND	ND	NA	0.01 mg/kg ND	0.01 mg/kg 0.014	0.01 mg/kg ND	0.02 mg/kg ND	5 mg/kg 29	0.01 mg/kg ND
1177 MW-OS-28	4.5-5	ND	ND	ND	NA	ND	0.021	ND	ND	10	ND
1178 MW-OS-28	5.5-6	ND	ND	ND	NA	ND	0.017	ND	ND	9.6	NA
1179 MW-OS-28	7-7.5	ND	ND	ND	NA	ND	ND	ND	ND	16	NA
1180 MW-OS-28	9-9.5	ND	ND	ND	NA	ND	ND	ND	ND	6.6	NA
1277 MW-OS-29	9.5-10	ND	ND	ND	NA	ND	0.14	ND	ND	40	NA

ND - Not Detected
 NA - Not Analyzed
 TPH - Total Petroleum Hydrocarbons
 BRL - Below Reporting Limit

Table 2. Petroleum Hydrocarbon Concentrations in Soil Samples

Harding Lawson Associates

Boring Number	Sample Depth (feet)	Sample Number	Hydrocarbon Concentrations (mg/kg)				
			TPH as gasoline	TPH as diesel	TPH as motor oil	Oil and Grease (Total)	Oil and Grease (Nonpolar)
SB-1	5.0 - 5.5	91061701	<1	26*	220	270	230
SB-1	10.0 - 10.5	91061702	<1	<1	<10	<50	<50
SB-1	12.5 - 13.0	91061703	<1	<1	<10	NT	NT
SB-1	15.0 - 15.5	91061704	<1	<1	<10	NT	NT
SB-1	20.0 - 20.5	91061705	<1	<1	<10	NT	NT
SB-2	5.0 - 5.5	91061819	<1	<1	<10	NT	NT
SB-2	10.0 - 10.5	91061820	<1	<1	<10	NT	NT
SB-2	12.5 - 13.0	91061821	<1	<1	<10	NT	NT
SB-2	15.0 - 15.5	91061822	<1	<1	<10	NT	NT
SB-2	20.0 - 20.5	91061823	<1	<1	<10	NT	NT
SB-4	5.0 - 5.5	91061801	<1	<1	<10	<50	<50
SB-4	10.0 - 10.5	91061802	<1	<1	<10	<50	<50
SB-4	12.5 - 13.0	91061804	<1	<1	<10	NT	NT
SB-4	15.0 - 15.5	91061805	<1	<1	<10	NT	NT
SB-4	20.0 - 20.5	91061806	<1	<1	<10	NT	NT
SB-5	5.0 - 5.5	91061706	<1	<1	<10	NT	NT
SB-5	10.0 - 10.5	91061707	<1	<1	<10	NT	NT
SB-5	12.5 - 13.0	91061708	<1	<1	<10	NT	NT
SB-5	15.0 - 15.5	91061709	<1	<1	<10	NT	NT
SB-5	20.0 - 20.5	91061710	<1	<1	<10	NT	NT
SB-6	5.0 - 5.5	91062012	600	15	<10	150	120
SB-6	10.0 - 10.5	91062013	1900	170	<10	330	250
SB-6	13.0 - 13.5	91062015	350	86	<10	NT	NT
SB-6	15.0 - 15.5	91062016	180	37	22	NT	NT
SB-6	20.0 - 20.5	91062017	<1	23	<10	NT	NT
SB-10	5.0 - 5.5	91061711	26	17*	<10	<50	<50
SB-10	10.0 - 10.5	91061712	1200	260*	<10	<50	<50
SB-10	12.5 - 13.0	91061713	<1	<1	<10	NT	NT
SB-10	15.0 - 15.5	91061714	<1	<1	<10	NT	NT

Table 2. Petroleum Hydrocarbon Concentrations in Soil Samples

Harding Lawson Associates

Boring Number	Sample Depth (feet)	Sample Number	Hydrocarbon Concentrations (mg/kg)				
			TPH as gasoline	TPH as diesel	TPH as motor oil	Oil and Grease (Total)	Oil and Grease (Nonpolar)
SB-10	20.0 - 20.5	91061715	<1	<1	<10	NT	NT
SB-11	5.0 - 5.5	91062018	NT	NT	NT	85	81
SB-11	11.0 - 11.5	91062019	NT	NT	NT	290	160
SB-12	5.0 - 5.5	91061807	<1	<1	<10	<50	<50
SB-12	10.0 - 10.5	91061808	<1	<1	<10	<50	<50
SB-12	12.5 - 13.0	91061810	<1	<1	<10	NT	NT
SB-12	15.0 - 15.5	91061811	<1	<1	<10	NT	NT
SB-12	20.0 - 20.5	91061812	<1	<1	<10	NT	NT
SB-13	5.0 - 5.5	91062007	320	27	<10	NT	NT
SB-13	12.5 - 13.0	91062009	2.0	<1	<10	NT	NT
SB-13	15.5 - 16.0	91062010	1.6	<1	<10	NT	NT
SB-13	20.0 - 20.5	91062011	<1	<1	<10	NT	NT
SB-14	5.0 - 5.5	91062001	2500	470	<10	NT	NT
SB-14	10.0 - 10.5	91062002	1400	670	<10	NT	NT
SB-14	12.5 - 13.0	91062004	6.9	6.6	<10	NT	NT
SB-14	15.0 - 15.5	91062005	1.1	<1	<10	NT	NT
SB-14	20.0 - 20.5	91062006	<1	<1	<10	NT	NT
SB-15	5.0 - 5.5	91SB1555	<1	<1	<10	NT	NT
SB-15	10.0 - 10.5	91SB1510	3.2	57	45	NT	NT
SB-15	13.0 - 13.5	91SB1513	<1	<1	<10	NT	NT
SB-15	15.0 - 15.5	91SB1515	<1	<1	<10	NT	NT
SB-15	20.0 - 20.5	91SB1521	<1	<1	<10	NT	NT
SB-16	5.0 - 5.5	91SB1655	550	21	<10	130	130
SB-16	10.0 - 10.5	91SB1610	6400	940	280	250	240
SB-16	13.0 - 13.5	91SB1613	100	45	<10	NT	NT
SB-16	15.0 - 15.5	91SB1615	1900	59	44	NT	NT
SB-16	20.0 - 20.5	91SB1621	260	2.8	<10	NT	NT
SB-17	6.0 - 6.5	91SB1765	1.1	110	80	NT	NT
SB-17	10.0 - 10.5	91SB1710	10000	810	<10	NT	NT
SB-17	12.5 - 13.0	91SB1713	88	45	37	NT	NT

Table 2. Petroleum Hydrocarbon Concentrations in Soil Samples

Harding Lawson Associates

Boring Number	Sample Depth (feet)	Sample Number	Hydrocarbon Concentrations (mg/kg)				
			TPH as gasoline	TPH as diesel	TPH as motor oil	Oil and Grease (Total)	Oil and Grease (Nonpolar)
SB-17	15.0 - 15.5	91SB1715	130	130	69	NT	NT
SB-17	20.0 - 20.5	91SB1721	<1	<1	<10	NT	NT
SB-18	5.0 - 5.5	91061813	<1	<1	<10	<50	<50
SB-18	10.0 - 10.5	91061815	<1	<1	<10	<50	<50
SB-18	12.5 - 13.0	91061816	<1	<1	<10	NT	NT
SB-18	15.0 - 15.5	91061817	<1	<1	<10	NT	NT
SB-18	20.0 - 20.5	91061818	<1	<1	<10	NT	NT
SB-19	5.0 - 5.5	91062103	<1	<1	<10	<50	<50
SB-19	10.0 - 10.5	91062104	<1	<1	<10	<50	<50
SB-19	12.5 - 13.0	91062105	<1	<1	<10	NT	NT
SB-19	15.5 - 16.0	91062106	<1	<1	<10	NT	NT
SB-19	20.0 - 20.5	91062107	<1	<1	<10	NT	NT
SB-20	5.0 - 5.5	91062108	<1	17	25	57	<50
SB-20	10.0 - 10.5	91062109	820	65	34	<50	<50
SB-20	12.5 - 13.0	91062110	<1	<1	<10	NT	NT
SB-20	15.5 - 16.0	91062111	<1	<1	<10	NT	NT
SB-20	20.0 - 20.5	91062112	<1	<1	<10	NT	NT

* Note: The analytical laboratory reported that for the results for petroleum hydrocarbons as diesel analyses for these samples, the actual hydrocarbon extracted appeared to be a lighter hydrocarbon than diesel (NET Laboratories, 1991).

<1 - Chemical not detected above reporting limit.

NT - Not Tested.

Table 3. PCB Concentrations in Soil and Product Samples

Boring Number	Sample Depth (feet)	Sample Number	PCB Concentrations (ug/kg)						
			Aroclor1016	Aroclor1221	Aroclor1232	Aroclor1242	Aroclor1248	Aroclor1254	Aroclor1260
SB-3	5.0 - 5.5	91061901	<100	<500	<200	<100	<100	<50	<50
SB-3	11.0 - 11.5	91061902	<100	<500	<200	<100	<100	<50	<50
SB-3	15.5 - 16.0	91061903	<100	<500	<200	<100	<100	<50	<50
SB-6	10.0 - 10.5	91062013	<100	<500	<200	<100	<100	100	<50
SB-7	5.0 - 5.5	91061911	<100	<500	<200	<100	<100	<50	<50
SB-7	11.0 - 11.5	91061912	<100	<500	<200	<100	<100	<50	<50
SB-7	15.0 - 15.5	91061913	<100	<500	<200	<100	<100	<50	<50
SB-8	5.5 - 6.0	91061907	<100	<500	<200	<100	<100	55	<50
SB-8	10.5 - 11.0	91061908	<100	<500	<200	<100	<100	130	<50
SB-8	15.0 - 15.5	91061909	<100	<500	<200	<100	<100	260	<50
SB-9	5.0 - 5.5	91061904	<100	<500	<200	<100	<100	<50	<50
SB-9	11.0 - 11.5	91061905	<100	<500	<200	<100	<100	<50	<50
SB-9	15.0 - 15.5	91061906	<100	<500	<200	<100	<100	<50	<50
SB-11	5.0 - 5.5	91062018	<100	<500	<200	<100	<100	<50	<50
SB-11	11.0 - 11.5	91062019	<100	<500	<200	<100	<100	<50	<50
SB-11	15.5 - 16.0	91062020	<100	<500	<200	<100	<100	<50	<50
Liquid	10.0 - 11.0	91061910	<1000	<1000	<1000	<1000	<1000	49,000	<1000
Product*									

* Note: Oily liquid sample from Boring SB-8 at approximately 10.0 to 11.0 feet bgs.

<500 - Chemical not detected above reporting limit.

Revised Site Conceptual Model
 Former Nestlé USA, Inc. Facility-Oakland, CA
 1310 14th Street, Oakland, CA

**Table 3: Soil Sample Results
 PCBs in Soil**

Boring Location	Sample Depth (feet bgs)	Date of Sample Collection	Analytical results (ug/kg)						
			PCB- 1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
PCB-4	8-8.5	21-May-08	<49	<49	<49	<49	<49	<49	<49
PCB-5	8-8.5	21-May-08	<50	<50	<50	<50	<50	<50	<50
PCB-6	8.5-9	21-May-08	<50	<50	<50	<50	<50	<50	<50
SB-20/ PCB-7	8-8.5	22-May-08	<50	<50	<50	<50	<50	<50	<50
SB-21/ PCB-8	8-8.5	21-May-08	<50	<50	<50	<50	<50	<50	<50
SB-24/ PCB-1	9-9.5	20-May-08	<50	<50	<50	<50	<50	<50	<50
SB-25/ PCB-2	8-8.5	20-May-08	<50	<50	<50	<50	<50	<50	<50
SB-27/ PCB-3	8.5-9	20-May-08	<49	<49	<49	<49	<49	<49	<49
PCB-4 Dup	8-8.5	21-May-08	<50	<50	<50	<50	<50	<50	<50
SB-20/ PCB-7 Dup	8-8.5	22-May-08	<50	<50	<50	<50	<50	<50	<50

Notes:

NA = Not Analyzed
 EPA method 8082 for PCB analyses of soil

1.4.2 Investigations in Vicinity of PR-12

In order to identify the aerial extent of PCB contamination, a drilling program was initiated in the vicinity of PR -12. Five product recovery probes were installed: PR Nos. 85, and 88 were located down gradient from PR-12 and PR Nos. 86, 87 and 89 were located up gradient of PR-12. The analytical results for the soil samples are listed below:

Date	PR No.	Sample Depth	PCB Level (ppb)
8/31/89	85	2.5	ND
8/31/89	85	4.5	ND
8/31/89	85	9.0	ND
	86	2.0	ND
	86	6.0	ND
	86	10.0	870
	87	2.0	ND
	87	6.0	ND
	87	9.0	ND
	87	14.0	ND
8/31/89	88	10.0	ND
8/31/89	88	14.0	ND
	89	2.0	ND

89	6.0	ND
89	9.5	ND

The analytical results for water samples taken from the product recovery probes in the vicinity of PR-12 are listed below:

Date	PR No.	PCB Level (ppb)
9/15/89	85	ND
9/15/89	86	ND
9/15/89	87	ND
9/15/89	88	ND
9/15/89	89	ND

The Chain of Custody forms and analytical results for the soil and water samples are attached in the appendices.

The analytical results indicate that there is no PCB contamination in the groundwater in any of the above product recovery probes. However, PR-86 indicates that PCB contamination exists at a depth of 10.9 feet. This is the only soil sample from the entire facility to indicate PCB contamination in the soil. It is very likely, that the source of PCB contamination is in the vicinity of PR-86. Significantly, PR-86 is up gradient of PR-12 and the tank excavation area. To date, AGE has been able to identify the exact source point for the PCB contamination. However, through a process of elimination several possible sources have been eliminated.

TABLE 2: ANALYTICAL RESULTS FOR SAMPLES FROM
UNDER THE PRODUCT LINES, IN PPM

<u>Sample</u>	<u>PL-001</u>	<u>PL-002</u>	<u>PL-003</u>	<u>PL-004</u>
TPH - Gasoline	651	ND<20	ND<20	ND<20
TPH - Diesel	ND<20	ND<20	7855	ND<20
Benzene	ND<0.5	ND<1	5	ND<0.5
Ethylbenzene	3	ND<1	<0.5	ND<0.5
Toluene	4	ND<1	9	ND<0.5
Xylene	10	ND<1	8	ND<0.5
Total Lead	10	13	180	7.1
Total Organic Lead*	<0.5	<0.5	<0.5	<0.5

ND = Not detected.

* = Values are reported as parts per billion (ug/g)

[TABLE2.059, URRV2-14]

Revised Site Conceptual Model
 Former Nestlé USA, Inc. Facility-Oakland, CA
 1310 14th Street, Oakland, CA

**Table 1b: Soil Gas Sampling Results
 Vapors in Soil - May 08**

Boring Location	Sample Depth (feet bgs)	Date of Sample Collection	Analytical results (ug/L) of Vapor							
			TPH g	TPH d	Benzene	Ethylbenzene	Toluene	Xylenes, Tot	1,2-DCA	Others
SB-16	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-17	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-18	5	19-May-08	630	<50	2.2	<0.10	0.44	<0.30	<0.10	
SB-19	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-20/ PCB-7	5	19-May-08	19	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-21/ PCB-8	5	19-May-08	25	<50	<0.10	<0.10	<0.20	<0.30	<0.10	Dichlorodifluoromethane: 0.39
SB-22	5	19-May-08	2,600	<50	40	7.7	32	19.1	<0.10	
SB-23	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-24/ PCB-1	5	19-May-08	<10	<50	<0.10	<0.10	0.22	<0.30	<0.10	
SB-25/ PCB-2	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	Dichlorodifluoromethane: 10
SB-26	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	
SB-27/ PCB-3	5	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	Dichlorodifluoromethane: 0.38
SB-22 dup	5	19-May-08	2,600	<50	40	7.5	32	18.0	<0.10	
Probe Blank	NA	19-May-08	<10	<50	<0.10	<0.10	<0.20	<0.30	<0.10	

Notes:

EPA Method 8260B for VOC Analyses of soil vapor
 EPA Mentod 8015m for TPH-g and TPH-d analyses of soil vapor

ATTACHMENT 5

Sub-slab Soil Gas Sampling and Analysis Report
 1310 14th Street, Oakland, California

Table 5. Results of Sub-slab Soil Gas Investigation

Chemical of Potential Concern	Risk-based Sub-slab Soil Gas Screening Level		Primary Sample Results																		QA/QC Sample Results		
			SSG-1			SSG-2			SSG-3			SSG-4			SSG-5			SSG-6			Trip Blank	SSG-2-DUJ	
	Cancer ($\mu\text{g}/\text{m}^3$)	Noncancer ($\mu\text{g}/\text{m}^3$)	Result ($\mu\text{g}/\text{m}^3$)	Risk	Hazard	Result ($\mu\text{g}/\text{m}^3$)	Risk	Hazard	Result ($\mu\text{g}/\text{m}^3$)	Risk	Hazard	Result ($\mu\text{g}/\text{m}^3$)	Risk	Hazard	Result ($\mu\text{g}/\text{m}^3$)	Risk	Hazard	Result ($\mu\text{g}/\text{m}^3$)	Risk	Hazard	Result ($\mu\text{g}/\text{m}^3$)	Result ($\mu\text{g}/\text{m}^3$)	

Notes:

(1) Laboratory data qualifying flags are as follows:

E = Exceeds instrument calibration range.

(2) "NC" indicates that the chemical is classified as a noncarcinogen for the inhalation pathway. "ND" indicates the chemical was not detected in any primary sub-slab soil gas sample.

TABLE 7 CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN SOIL VAPOR SAMPLES, NESTLE FACILITY, 1310 14TH STREET, OAKLAND, CALIFORNIA, 12-13 AUGUST 1999

Sample ID	Concentration (ppbv)																																									
	Ethy-		Total		TPH-g	TPH-d	Acetone	1,3-Butadiene	2-Butanone	Carbon Disulfide	Chloro-benzene	Chloro-form	Chloro-methane	Cyclohexane	1,2-Di-	1,3-Di-	1,4-Di-	1,1-Di-	1,2-Di-	1,1-Di-	cis-1,2-	Dichloro-ethane	1,4-Di-	4-Ethyl-	Freon 11	Freon 12	Freon 113	Hep-tane	Hex-ane	4-Methyl-	Methyl		Tetra-chloro-ethene	Tetra-hydro-furan	1,1,1-Trichloro-ethane	Tri-chloro-ethene	1,2,4-Trichloro-benzene	1,3,5-Trimethylbenzene				
	Benzene	Toluene	benzene	Xylenes											1,2-Di-	1,3-Di-	1,4-Di-	1,1-Di-	1,2-Di-	1,1-Di-	1,2-Di-		1,3-Di-							1,4-Di-	1,1-Di-	1,2-Di-			1,3-Di-		1,4-Di-	2-penta-	Methylene Chloride	n-butyl ether	2-Propanol	Styrene
SB1, 3'	4.3	3.1	<0.65	2.74	NA	NA	77 a	2.8	13	6.2	<0.65	<0.65	<0.65	<2.6	<0.65	<0.65	0.77	<0.65	<0.65	<0.65	<0.65	<2.6	63	<2.6	0.74	0.93	27	<2.6	4.4	3.8	3.7	<2.6	5.6	<0.65	1.2	<2.6	<0.65	<0.65	1.1	<0.65		
SB2, 3'	7.5	12	3.6	17.6	NA	NA	260 a	<2.7	24	9.0	<0.67	3.9	<0.67	12	<0.67	<0.67	1.8	<0.67	<0.67	<0.67	<0.67	<2.7	110	<2.7	1.2	200	<0.67	3.3	5.3	8.1	2.2	<2.7	<2.7	3.0	<0.67	<2.7	<0.67	<0.67	2.0	0.77		
SB3, 3'	9,900	230	68	67	NA	NA	<190	<190	<190	<190	<48	<48	<48	<190	<48	<48	<48	<48	<48	<48	<48	<190	<190	<190	<48	180	<48	<190	590	<190	<48	<190	<190	<48	<48	<190	<48	<48	<48	<48		
SB3, 3' dup	9,500	240	<140	<140	NA	NA	<580	<580	<580	<580	<140	<140	<140	<580	<140	<140	<140	<140	<140	<140	<140	<580	<580	<580	<140	160	<140	<580	580	<580	<140	<580	<580	<140	<140	<580	<140	<140	<140	<140	<140	
SB4, 3'	1,200	76	8.1	18.7	NA	NA	200 a	19	<14	<14	<3.5	<3.5	<3.5	32	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<14	1,400	<14	<3.5	100	<3.5	<14	19	15	340	<14	22	<3.5	160	<14	21	<3.5	<3.5	<3.5		
SB5, 3'	7.6	5.6	0.80	1.9	NA	NA	45 a	61	12	18	<0.71	<0.71	0.77	8.2	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	3.3	55	<2.8	4.4	1.2	3.4	<2.8	<2.8	<2.8	<0.71	<2.8	<2.8	<0.71	<0.71	<2.8	<0.71	<0.71	<0.71	<0.71
SB6, 3'	3.0	4.2	<0.68	2.52	NA	NA	11 a	<2.7	4.0	<2.7	<0.68	<0.68	<0.68	<2.7	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<2.7	35	<2.7	<0.68	<0.68	<0.68	<2.7	<2.7	<2.7	<0.68	<2.7	<2.7	<0.68	<0.68	<2.7	<0.68	<0.68	1.1	<0.68		
SB7, 3'	5.9	6.2	0.87	4.3	NA	NA	43 a	3.4	7.9	3.3	<0.73	<0.73	<0.73	5.1	<0.73	<0.73	2.0	<0.73	<0.73	<0.73	<0.73	<0.73	8.2	94	<2.9	0.74	1.1	<0.73	<2.9	6.8	4.4	<0.73	<2.9	3.8	1.0	2.0	<2.9	<0.73	<0.73	1.8	<0.73	
SB8, 3'	10	12	3.8	15.7	NA	NA	42 a	<11	<11	<11	<2.8	<2.8	<2.8	<11	<2.8	<2.8	<2.8	<2.8	<2.8	<2.8	<2.8	<11	62	<11	6.5	630	<2.8	<11	<11	<11	<2.8	<11	<11	<2.8	<2.8	<11	<2.8	<2.8	5.3	<2.8		
SB9, 3'	12	18	1.7	9.9	NA	NA	19 a	<2.7	6.0	<2.7	<0.68	1.1	<0.68	4.9	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<0.68	<2.7	47	<2.7	1.5	20	<0.68	<2.7	4.3	<2.7	<0.68	<2.7	<0.68	<0.68	<2.7	<0.68	<0.68	2.3	0.77			
SB10, 3'	3.5	2.8	<0.80	1.7	NA	NA	39 a	<3.2	9.7	<3.2	<0.80	1.6	<0.80	<3.2	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<3.2	40	<3.2	<0.80	1.4	<0.80	<3.2	3.9	<3.2	<0.80	<3.2	<3.2	<0.80	<0.80	<3.2	<0.80	<0.80	1.2	<0.80		
SB11, 3'	2.7	1.9	<0.82	0.91	NA	NA	38 a	<3.3	9.9	<3.3	<0.82	<0.82	3.7	<3.3	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<0.82	<3.3	22	23	<3.3	4.6	<0.82	<0.82	<3.3	<3.3	<3.3	1.2	<3.3	<3.3	<0.82	<0.82	<3.3	<0.82	<0.82	0.85	<0.82	
SB12, 3'	250	<70	<70	610	NA	NA	<280	<280	<280	<280	<70	<70	<70	<280	480	<70	76	<70	<70	<70	<70	<280	<280	760	<70	<70	<70	<280	18,000	<280	<70	<280	<280	<70	<70	<280	<70	<70	580	740		
SB13, 3'	0.91	8.5	<0.67	1.3	NA	NA	49 a	<2.7	5.5	6.4	<0.67	<0.67	<0.67	<2.7	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<2.7	4.3	410 b	<2.7	<0.67	<0.67	<0.67	3.4	<2.7	<2.7	5.6	<2.7	26	<0.67	<0.67	58	<0.67	<0.67	1.1	<0.67	
SB14, 3'	2.7	5.3	0.87	4.7	NA	NA	10 a	<2.8	3.5	<2.8	<0.70	<0.70	<0.70	<2.8	<0.70	<0.70	1.6	<0.70	<0.70	<0.70	<0.70	<2.8	67	<2.8	<0.70	<0.70	<0.70	<2.8	<2.8	2.8	1.3	2.9	<2.8	0.82	<0.70	<2.8	<0.70	<0.70	2.0	0.81		
SB15, 3'	42	12	1.6	6.7	NA	NA	51 a	13	13	<5.8	<1.4	<1.4	<1.4	<5.8	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<5.8	190	<5.8	<1.4	46	<1.4	<5.8	50	<5.8	4.8	<5.8	<5.8	<1.4	2.1	<5.8	<1.4	<1.4	1.8	<1.4		

Notes:

ppbv Parts per billion volumetric.

a Compound present in laboratory blank greater than ten times (10x) background subtraction not performed.

b Needs instrument calibration range.

c Not analyzed.

d Total petroleum hydrocarbons as gasoline.

e Total petroleum hydrocarbons as diesel.

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl- Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1- DCA µg/L	1,2- DCA µg/L	1,1,1- TCA µg/L	TCE µg/L	MTBE µg/L	Notes
MW-2	03/23/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	Non-diesel peak reported.
	07/27/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	11/05/93	--	--	--	--	--	--	--	--	--	--	--	
	02/25/94	<1	<1	<1	<1	<100	<1,000	--	--	--	--	--	
	06/03/94	<0.5	<0.5	<0.5	<0.5	<50	<20,000	--	--	--	--	--	
	08/31/94	<0.3	<0.3	<0.3	<0.6	<500	<500	--	--	--	--	--	
	12/22/94	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	
	03/13/95	0.8	<0.5	<0.5	<0.5	<50	<400	--	--	--	--	--	
	06/09/95	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	09/21/95	0.7	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	
	12/12/95	<0.5	<0.5	<0.5	<1.0	<100	<50	--	--	--	--	--	
	03/12/96	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	06/21/96	--	--	--	--	--	--	--	--	--	--	--	
	08/29/96	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	--	
	01/16/97	<0.5	<0.5	<0.5	<0.5	<50	<150	0.7	<0.5	<0.5	<0.5	--	
	07/07/97	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	<0.5	
	01/27/98	<0.5	<0.5	<0.5	<0.5	100	<150	--	--	--	--	<0.5	
07/22/98	<0.5	<0.5	<0.5	<0.5	<50	--	--	--	--	--	<0.5		
07/22/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5		
MW-3	03/23/93	35	2.9	2	3.2	300	ND	--	--	--	--	--	
	07/27/93	97	1	4	1.1	220	ND	--	--	--	--	--	
	11/05/93	4.9	ND	ND	1.2	170	ND	--	--	--	--	--	
	02/25/94	42	<1	<1	<1	100	<1,000	--	--	--	--	--	
	06/03/94	120	8.2	8.4	4.5	320	<20,000	--	--	--	--	--	
	08/31/94	83	1.1	5.3	2.9	<500	<500	--	--	--	--	--	
	12/22/94	1,460	18	100	50	3,800	270	--	--	--	--	--	
	03/13/95	3,600	260	270	280	14,000	1,700	--	--	--	--	--	
	06/09/95	4,700	58	140	71	3,700	120	--	--	--	--	--	
	09/21/95	9,800	58	600	95	14,000	300	--	--	--	--	--	
	12/12/95	330	2.1	47	5.3	700	<50	--	--	--	--	--	
	03/12/96	350	4.6	23	8.7	600	<50	--	--	--	--	--	
	06/21/96	940	76	98	57	1,900	<50	--	--	--	--	--	
	08/29/96	420	29	44	28	900	<150	--	--	--	--	--	
	01/16/97	1,600	270	120	194	3,600	700	<0.5	9.2	<0.5	<0.5	--	
	04/15/97	1,300	300	180	160	4,300	800	<0.5	16	<0.5	1.1	6.9	
	07/07/97	100	84	100	67	1,900	350	--	--	--	--	3.8	
	10/27/97	1,030	60	54	40	2,200	--	<0.5	2.4	<0.5	<0.5	3.1	
	01/27/98	1,070	96	73	69	3,200	--	--	--	--	--	3.9	
	04/22/98	610	56	49	54	1,800	--	<0.5	3.0	<0.5	<0.5	1.1	
	07/22/98	1,600	230	160	180	3,600	370	--	--	--	--	5.0	
	10/21/98	78	1.0	3.8	0.6	110	<250	<0.5	0.6	<0.5	<0.5	<0.5	
	07/23/99	1,500	140	76.0	260	4,000	790	<0.5	1.0	<0.5	<0.5	5.60	
	10/28/99	1,100	43	58	102	3,000	800	<0.5	0.9	--	<0.5	--	
02/10/00	690	22	36	49	1,400	520	<0.5	<0.5	<0.5	<0.5	2.20		
04/27/00	1,100	140	73	163	2,400	250	<0.5	0.6	<0.5	<0.5	<0.5		
08/03/00	520	7.7	21	27	1,100	750	<0.5	0.6	<0.5	<0.5	<0.5		
10/23/00	2,000	16	22	46	3,800	760	<0.5	0.7	<0.5	<0.5	<0.5		
01/31/01	360	8.6	14	28	860	300	<0.5	0.6	<0.5	<0.5	<0.5		
04/26/01	806	60.6	48.8	115	1,530	280	<0.5	0.8	<0.5	<0.5	<0.5		
07/30/01	788	23.3	44.6	80.7	1,400	350	<0.5	0.6	<0.5	<0.5	<0.5		
10/29/01	852	14.3	24.5	38.6	1,730	500	<0.5	0.5	<0.5	<0.5	<0.5		
01/29/02	1,250	85.3	64.7	95.7	4,240	490	<0.5	1.4	<0.5	<0.5	<0.5		
04/29/02	1,120	51.5	84.4	117	5,710	700	<0.5	1.1	<0.5	<0.5	<0.5		
MW-5	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-6	03/23/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	Non-diesel peak reported.
	07/27/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	11/05/93	ND	ND	ND	ND	ND	ND	--	--	--	--	--	
	02/25/94	<1	<1	<1	3.5	<100	<1,000	--	--	--	--	--	
	06/03/94	2.7	<0.5	<0.5	<0.5	69	<20,000	--	--	--	--	--	
	08/31/94	<0.3	8.7	1.6	3.5	<500	<500	--	--	--	--	--	
	12/22/94	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	
	03/13/95	1.2	<0.5	<0.5	<0.5	<50	<400	--	--	--	--	--	
	06/09/95	0.6	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	09/21/95	<0.5	<0.5	<0.5	<0.5	<50	<50	--	--	--	--	--	
	12/12/95	<0.5	<0.5	<0.5	<1.0	<100	<50	--	--	--	--	--	
	03/12/96	<0.5	<0.5	<0.5	<0.5	<100	<50	--	--	--	--	--	
	06/21/96	--	--	--	--	--	--	--	--	--	--	--	
	08/29/96	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	--	
	01/16/97	5.5	16	2.9	16	140	220	<0.5	6.3	<0.5	<0.5	--	
	07/07/97	<0.5	<0.5	<0.5	<0.5	<50	<150	--	--	--	--	<0.5	
	07/22/98	<0.5	<0.5	<0.5	<0.5	<50	<250	--	--	--	--	<0.5	
10/24/00	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	7.7	<0.5	<0.5	<0.5		
01/31/01	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	6.9	<0.5	<0.5	<0.5		

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
MW-7	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	430	--	--	--	--	<0.5	
PR-26	07/26/99 10/26/99	20,000 28,000	15,000 25,000	1,100 2,300	7,250 8,400	82,500 110,000	11,000 60,000	<0.5	24	--	<0.5	--	33.0
PR-45	07/26/99 10/28/99 02/09/00 04/27/00 08/04/00 10/23/00 04/27/01 07/30/01 10/29/01 01/29/02 05/16/02	13,200 12,000 24,000 17,000 20,000 28,000 16,200 14,500 12,600 8,930 14,300	8,200 8,200 25,000 9,500 8,800 12,000 8,600 8,900 6,650 4,860 2,630	2,600 1,700 10,000 16,000 2,600 4,000 3,220 4,400 2,260 2,640 1,580	15,600 8,500 53,000 92,000 16,000 20,000 19,000 24,700 12,400 12,700 7,780	82,500 45,000 360,000 1,300,000 73,000 36,000 178,000 132,000 86,100 114,000 125,000	39,000 25,000 82,000 20,300 54,500 36,000 22,700 29,700 50,000 19,400 15,600	-- <0.5 <0.5 <5.0 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	-- <0.5 <0.5 <5.0 1.0 1.2 14 11 7.8 30 1.0	-- -- -- <5.0 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	-- <0.5 <0.5 <5.0 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	35.0 -- 1,000 <5.0 <5.0 <25 <50 <25 <0.5 <0.5	Chloroethane detected at 6.0 µg/L. Chloroethane detected at 4.6 µg/L. Chloromethane detected at 0.6 µg/L. Chloroethane detected at 11 µg/L. Methylene chloride detected at 0.5 µg/L. Chloroethane detected at 6.0 µg/L. Chloroethane detected at 7.5 µg/L. Chloroethane detected at 7.3 µg/L.
PR-52	07/26/99 10/28/99 02/09/00 04/28/00 08/04/00 10/24/00 01/31/01 04/27/01 07/30/01 10/29/01 01/29/02 05/16/02	12,000 19,000 22,000 26,000 26,000 52,000 81,000 25,000 31,100 22,700 21,500 31,600	1,720 530 1,600 2,200 1,600 13,000 640 16,300 2,480 1,630 1,840 53,600	750 1,800 4,100 4,700 2,900 41,000 57,000 14,700 13,500 3,070 4,540 43,800	12,400 5,800 15,800 18,600 15,000 180,000 210,000 55,000 51,700 11,500 16,800 216,000	172,000 40,000 200,000 270,000 150,000 650,000 5,300,000 886,000 340,000 126,000 517,000 2,020,000	40,000 450,000 140,000 88,000 110,000 280,000 276,000 134,000 185,000 140,000 272,000 75,000	<0.5 <0.5 <0.5 <1.0 <0.5 <5.0 <0.5 <0.5 <0.5 <0.5 <0.5 <5.0	1.8 -- 1.3 -- 2.3 -- 1.0 1.3 -- 0.9 -- --	<0.5 -- <0.5 <1.0 <0.5 <5.0 <0.5 <0.5 <0.5 <0.5 <0.5 <5.0	<0.5 -- <0.5 <1.0 <0.5 <5.0 <0.5 <0.5 <0.5 <0.5 <0.5 <5.0	217 -- 430 <5.0 <0.5 <5.0 500 1,040 2,510 <50 44.1 63.5	Methylene chloride detected at 7.9 µg/L. Chloroethane detected at 2.4 µg/L. Methylene chloride detected at 0.6 µg/L. Chloroethane detected at 1.5 µg/L. Chloromethane detected at 13 µg/L. Chloroethane detected at 46 µg/L. Methylene chloride detected at 0.6 µg/L. Chloromethane detected at 0.6 µg/L. Chloroethane detected at 4.0 µg/L. Methylene chloride detected at 0.7 µg/L. Chloroethane detected at 1.5 µg/L. Chloroethane detected at 8.3 µg/L.
PR-53	07/26/99 10/27/99 02/09/00 04/28/00 08/04/00 10/24/00 01/31/01 04/27/01 10/29/01 01/29/02 05/16/02	31,000 17,000 21,000 34,000 35,000 99,000 66,000 55,500 46,500 33,000 35,800	12,000 3,900 5,000 30,000 17,000 110,000 15,000 10,000 9,520 7,340 10,500	1,900 890 1,200 9,300 3,800 80,000 28,000 23,700 12,900 10,300 18,700	8,800 3,320 5,300 51,000 24,000 640,000 140,000 137,000 74,000 41,800 130,000	110,000 54,000 65,000 730,000 180,000 580,000 2,400,000 4,240,000 1,630,000 495,000 3,280,000	98,000 16,000 9,400 104,000 69,500 380,000 960,000 806,000 130,000 462,000 113,000	<0.5 <0.5 0.6 <1.0 <0.5 <5.0 <0.5 <0.5 <0.5 <0.5 <5.0	43 18 20 -- 1.7 5.0 1.5 0.8 -- 1.8 --	<0.5 -- <0.5 <1.0 <0.5 <5.0 <0.5 <0.5 <0.5 <0.5 <5.0	<0.5 -- <0.5 <1.0 <0.5 <5.0 <0.5 <0.5 <0.5 <0.5 <5.0	43.0 -- 67.0 340 110 380 660 <5,000 <500 122 242	Methylene chloride detected at 6.2 µg/L. Methylene chloride detected at 0.8 µg/L. Chloroethane detected at 1.7 µg/L. Methylene chloride detected at 0.9 µg/L. Chloroethane detected at 1.7 µg/L. Methylene chloride detected at 1.1 µg/L. Chloroethane detected at 3.0 µg/L. Methylene chloride detected at 0.9 µg/L. Chloroethane detected at 3.2 µg/L.
PR-54	07/26/99 10/26/99 02/09/00 04/28/00 08/04/00 10/24/00 01/31/01 04/27/01 07/30/01 10/30/01 01/29/02 05/16/02	32,000 27,000 27,000 24,000 27,000 23,000 30,000 26,100 31,700 25,400 13,300 27,900	22,000 10,000 23,000 14,000 7,600 4,400 8,300 8,650 18,000 11,300 9,850 34,500	1,600 3,700 9,900 1,200 1,400 2,000 3,300 2,120 9,880 3,500 4,240 5,630	21,800 19,500 50,000 9,000 11,000 13,000 21,000 15,900 58,400 18,800 33,100 36,400	170,000 190,000 960,000 76,000 120,000 140,000 220,000 51,300 320,000 222,000 108,000 324,000	28,000 350,000 110,000 80,000 54,500 96,000 236,000 108,000 71,200 530,000 48,000 172,000	<0.5 <0.5 <0.5 <1.0 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <5.0	3.0 -- 3.9 1.6 2.0 2.3 2.6 -- 3.9 1.2 7.5 43	<0.5 -- <0.5 <1.0 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <5.0	<0.5 -- <0.5 <1.0 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <5.0	56.0 -- 1,000 300 200 <100 480 <500 2,750 276 51.3 251	Methylene chloride detected at 2.5 µg/L. Chloroethane detected at 5.3 µg/L. Methylene chloride detected at 2.3 µg/L. Chloroethane detected at 2.8 µg/L. Methylene chloride detected at 1.7 µg/L. Chloroethane detected at 3.0 µg/L. Chloromethane detected at 2.2 µg/L. Chloroethane detected at 22 µg/L. Methylene chloride detected at 2.6 µg/L. Chloroethane detected at 7.4 µg/L. Methylene chloride detected at 2.0 µg/L. Chloroethane detected at 6.2 µg/L. Chloroethane detected at 9.8 µg/L.
PR-64	07/26/99 10/27/99 02/09/00 04/28/00 05/16/02	22,000 11,000 22,000 19,000 18,300	18,000 7,400 20,000 16,000 40,100	1,700 1,200 6,000 1,800 10,400	10,300 3,900 17,000 13,900 104,000	110,000 66,000 120,000 130,000 30,600,000	-- 50,000 40,000 78,000 419,000	<0.5 <0.5 <0.5 <1.0 <5.0	130 110 -- 67 --	<0.5 -- <0.5 <1.0 <5.0	<0.5 -- <0.5 <1.0 <5.0	35.0 -- 110 300 <500	Methylene chloride detected at 1.4 µg/L.
PR-65	07/26/99 10/26/99	12,000 14,000	1,400 2,300	1,300 1,800	13,000 11,000	68,000 65,000	16,500 50,000	<0.5 <0.5	2.6 --	<0.5 --	<0.5 <0.5	20.0 --	
PR-68	07/26/99 10/26/99	1,900 2,800	24.0 36	27.0 86	62.0 62	4,900 8,000	11,000 2,800	<0.5 <0.5	1.2 --	<0.5 --	<0.5 <0.5	4.40 --	

Table 3: Historical Groundwater Sample Results (1993 - 2008)

Well Number	Date Sampled	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Xylenes µg/L	TPH-G µg/L	TPH-D µg/L	1,1-DCA µg/L	1,2-DCA µg/L	1,1,1-TCA µg/L	TCE µg/L	MTBE µg/L	Notes
30 (CC-2) (cont.)	10/29/01	<0.5	<0.5	<1.0	<0.5	<200	<500	<0.5	<0.5	<0.5	<0.5	<0.5	Dichlorodifluoromethane detected at 3.8 µg/L. Dichlorodifluoromethane detected at 3.6 µg/L. Chloroform detected at 0.6 µg/L. Chloroform detected at 0.5 µg/L.
	01/28/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	1.9	<0.5	<0.5	<0.5	
	04/29/02	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	2.5	<0.5	<0.5	0.66	
	10/10/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	11/15/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	05/06/03	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
81	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	<150	<0.5	<0.5	<0.5	<0.5	<0.5	
	07/22/99	0.70	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
94	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	170	--	--	--	--	<0.5	
	07/22/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
210	02/05/99	<0.5	<0.5	<0.5	<0.5	<50	960	--	--	--	--	<0.5	
223	10/26/99	<0.5	<0.5	<0.5	<0.5	<100	<200	<0.5	<0.5	--	<0.5	--	Chlorobenzene detected at 0.9 µg/L. 1,2-Dichlorobenzene detected at 0.5 µg/L. Dichlorodifluoromethane detected at 0.5 µg/L. Chloroform detected at 0.6 µg/L.
	02/10/00	<0.5	<0.5	<0.5	<0.5	<50	640	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/00	<0.5	<0.5	<0.5	<0.5	<100	250	<0.5	<0.5	<0.5	<0.5	<0.5	
	08/03/00	<0.5	<0.5	<0.5	<0.5	<50	660	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/23/00	1.30	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	01/31/01	<0.5	<0.5	<0.5	<0.5	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/26/01	<0.5	<0.5	<0.5	<0.5	<200	390	<0.5	<0.5	<0.5	<0.5	<0.5	
	07/30/01	<0.5	<0.5	<0.5	<0.5	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/30/01	<0.5	<0.5	<0.5	<1.0	<200	<500	<0.5	<0.5	<0.5	<0.5	<0.5	
	01/29/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5	
04/29/02	<0.5	<0.5	<0.5	<1.0	<200	<250	<0.5	<0.5	<0.5	<0.5	<0.5		
224	07/26/99	<0.5	<0.5	<0.5	<0.5	<50	640	<0.5	<0.5	<0.5	<0.5	<0.5	
239	07/26/99	55,000	85.0	1,500	190	30,000	--	<0.5	<0.5	<0.5	<0.5	5.30	Chloroethane detected at 0.6 µg/L.
	10/26/99	23,000	53	1,500	103.2	28,000	10,000	<0.5	<0.5	--	<0.5	--	
	02/10/00	40,000	48	1,900	52	44,000	21,000	<0.5	1.0	<0.5	<0.5	14.0	
	04/28/00	25,000	540	2,000	710	36,000	12,500	<5.0	<5.0	<5.0	<5.0	<5.0	
	08/04/00	25,000	220	1,900	920	45,000	32,500	<0.5	0.6	<0.5	<0.5	<0.5	
	10/24/00	24,000	100	1,500	390	50,000	50,000	<0.5	<0.5	<0.5	<0.5	<5.0	
	01/31/01	23,000	84	1,900	200	52,000	112,000	<0.5	0.9	<0.5	<0.5	<0.5	
	04/26/01	23,900	113	1,990	590	298,000	143,000	<0.5	<0.5	<0.5	<0.5	<25	
	07/30/01	30,200	384	2,000	668	66,500	19,100	<0.5	<0.5	<0.5	<0.5	<0.5	
	10/30/01	41,200	273	1,470	215	54,300	120,000	<0.5	<0.5	<0.5	<0.5	<50	
	01/28/02	24,500	228	1,670	352	112,000	6,900	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/29/02	25,900	280	1,380	491	71,600	9,400	<0.5	<0.5	<0.5	<0.5	<0.5	
241	04/07/99	<0.5	<0.5	<0.5	<0.5	<50	<250	--	--	--	--	<0.5	
249	07/22/99	<0.5	<0.5	<0.5	<0.5	<50	<200	<0.5	<0.5	<0.5	<0.5	<0.5	
SB-18	05/20/08	<0.50	<0.50	<0.50	530	<50	530	NA	<0.50	NA	NA	NA	
SB-17	05/22/08	12,000	3,200	17,000	560,000	120,000	560,000	NA	<0.50	NA	NA	NA	
SB-18	05/22/08	50,000	2,300	46,000	23,000	190,000	23,000	NA	2,200	NA	NA	NA	
SB-19	05/22/08	<12	220	<12	1,600	8,200	1,600	NA	<12	NA	NA	NA	
SB-20/ PCB-7	05/22/08	41,000	3,000	30,000	47,000	170,000	47,000	NA	930	NA	NA	NA	
SB-21/ PCB-8	05/23/08	12,000	2,600	20,000	3,500	110,000	3,500	NA	<250	NA	NA	NA	
SB-22	05/22/08	27,000	13,000	39,000	73,000	870,000	73,000	NA	<2,500	NA	NA	NA	
SB-24/ PCB-1	05/21/08	1.1	<0.50	<0.50	360	<50	360	NA	<0.50	NA	NA	NA	
SB-25/ PCB-2	05/21/08	<0.50	<0.50	<0.50	140	<50	140	NA	<0.50	NA	NA	NA	
SB-26	05/22/08	<0.50	<0.50	<0.50	270	<50	270	NA	<0.50	NA	NA	NA	
SB-27/ PCB-3	05/20/08	<0.50	<0.50	<0.50	NA	NA	NA	NA	<0.50	NA	NA	NA	

Notes:
 ND Not detected.
 NA Not analyzed or not sampled.
 µg/L Micrograms per liter.
 TPH-G Total Petroleum Hydrocarbons as gasoline.
 TPH-D Total Petroleum Hydrocarbons as diesel.
 1,1-DCA 1,1-Dichloroethane.
 1,2-DCA 1,2-Dichloroethane.
 cis-1,1-DCE 1,1-Dichloroethane.
 1,1,1-TCA 1,1,1-Trichloroethane.
 1,2-DCE cis 1,2-Dichloroethylene.
 TCE Trichloroethane.
 MTBE Methyl tertiary butyl ether.

10/28/02 Data was confirmed anomalous by resampling on 11/15/02.

Table 7. Petroleum Hydrocarbon Concentrations in Groundwater Samples

Well Number	Sample Number	Hydrocarbon Concentrations (ug/l)									
		TPH as gasoline	TPH as diesel	TPH as motor oil	Oil and Grease (Total)	Oil and Grease (Nonpolar)	Benzene	Toluene	Ethyl-Benzene	Xylenes (Total)	Other 8240 Compounds
MW-1	91062501	<50	<50	<500	<5000	<5000	<5.0	<5.0	<5.0	<5.0	<5.0-<10
MW-2	91062510	<50	<50	<500	<5000	<5000	<0.5	<0.5	<0.5	<0.5	NT
MW-3	91062605	<50	<50	<500	<5000	<5000	22	<0.5	0.5	<0.5	NT
MW-3 dup	91062606	100	<50	<500	<5000	<5000	25	<0.5	0.6	<0.5	NT
MW-4	91062502	<50	<50	<500	<5000	<5000	<5.0	<5.0	<5.0	<5.0	<5.0-<10
MW-5	91062509	<50	<50	<500	<5000	<5000	<5.0	<5.0	<5.0	<5.0	<5.0-<10
MW-9	91062503	<50	<50	<500	NT	NT	<0.5	<0.5	<0.5	<0.5	NT
MW-10	91062504	<50	<50	<500	NT	NT	<0.5	<0.5	<0.5	<0.5	NT
MW-11	91062505	<50	<50	<500	NT	NT	<0.5	<0.5	<0.5	<0.5	NT
MW-12	91062512	<50	<50	<500	NT	NT	<0.5	<0.5	<0.5	<0.5	NT
MW-13	91062506	<50	<50	<500	<5000	<5000	<5.0	<5.0	<5.0	<5.0	<5.0-<10
MW-14	91062507	<50	<50	<500	NT	NT	<5.0	<5.0	<5.0	<5.0	<5.0-<10
MW-15	91062508	<50	<50	<500	NT	NT	<5.0	<5.0	<5.0	<5.0	<5.0-<10
MW-16	91062513	<50	<50	<500	<5000	<5000	NT	NT	NT	NT	NT
MW-25	91062607	<50	<50	<500	NT	NT	0.8	<0.5	<0.5	<0.5	NT
MW-26	91062608	300000	2100	1600	<5000	<5000	4400	3600	260	4600	470 (1,2-DCA)
MW-26 dup	91062609	85000	1100	1000	5400	5100	3700	2700	160	3100	480 (1,2-DCA)
MW-27	91062610	<50	<50	<500	NT	NT	1.8	<0.5	<0.5	<0.5	NT
MW-28	91062601	<50	<50	<500	NT	NT	<0.5	<0.5	<0.5	<0.5	NT
MW-29	91062602	<50	<50	<500	<5000	<5000	<5.0	<5.0	<5.0	<5.0	<5.0-<10
MW-31	91062603	<50	<50	<500	NT	NT	<0.5	<0.5	<0.5	<0.5	NT
MW-32	91062604	690	<50	<500	<5000	<5000	550	<5.0	7.6	11	14 (1,2-DCA)
Field Blank	91062511	<50	<50	<500	<5000	<5000	<0.5	<0.5	<0.5	<0.5	NT
Field Blank	91062611	<50	<50	<500	<5000	<5000	<5.0	<5.0	<5.0	<5.0	<5.0-<10
Trip Blank	Trip Blank	<50	NT	NT	NT	NT	<0.5	<0.5	<0.5	<0.5	NT

Notes: <50 - Chemical not detected above reporting limit. NT- Not Tested.

Table 2: September Off Site Groundwater Sampling Analytical Results

	MW-OS-25			MW-OS-26			MW-OS-27			MS-OS-28			MW-OS-29		
	Sample #	Results $\mu\text{g/l}$	Detection Limit $\mu\text{g/l}$	Sample #	Results $\mu\text{g/l}$	Detection Limit $\mu\text{g/l}$	Sample #	Results $\mu\text{g/l}$	Detection Limit $\mu\text{g/l}$	Sample #	Results $\mu\text{g/l}$	Detection Limit $\mu\text{g/l}$	Sample #	Results $\mu\text{g/l}$	Detection Limit $\mu\text{g/l}$
TPH Diesel	1190	80	50	1196	590	50	1202	100	50	1208	ND	50	1214	ND	50
TPH Gasoline	1189	ND	50	1195	6000	3000	1201	ND	50	1207	ND	50	1213	ND	50
Benzene	1189	14	0.4	1195	1400	20	1201	ND	0.4	1207	ND	0.4	1213	ND	0.4
Toluene	1189	0.4	0.3	1195	1300	20	1201	ND	0.3	1207	ND	0.3	1213	ND	0.3
Ethylbenzene	1189	ND	0.3	1195	110	6	1201	ND	0.3	1207	ND	0.3	1213	ND	0.3
Xylenes	1189	ND	0.7	1195	1100	20	1201	ND	0.7	1207	ND	0.7	1213	ND	0.7
Oil & Grease	1194	ND	1000	1200	1000	1000	1206	ND	1000	1212	ND	1000	1219	ND	1000
Lead		NA		1199	ND	50	1205	ND	50	1211	ND	50	1217	ND	50
Pesticides*	1192	ND	0.1	1198	ND	0.1	1204	ND	0.1	1210	ND	0.1	1216	ND	0.1
PCBs	1192	ND	1	1198	ND	1	1204	ND	1	1210	ND	1	1216	ND	1

ND - Not Detected
 NA - Not Analyzed

*Detection Limit for chlordane and toxaphene were 0.5 and 5 $\mu\text{g/l}$ respectively

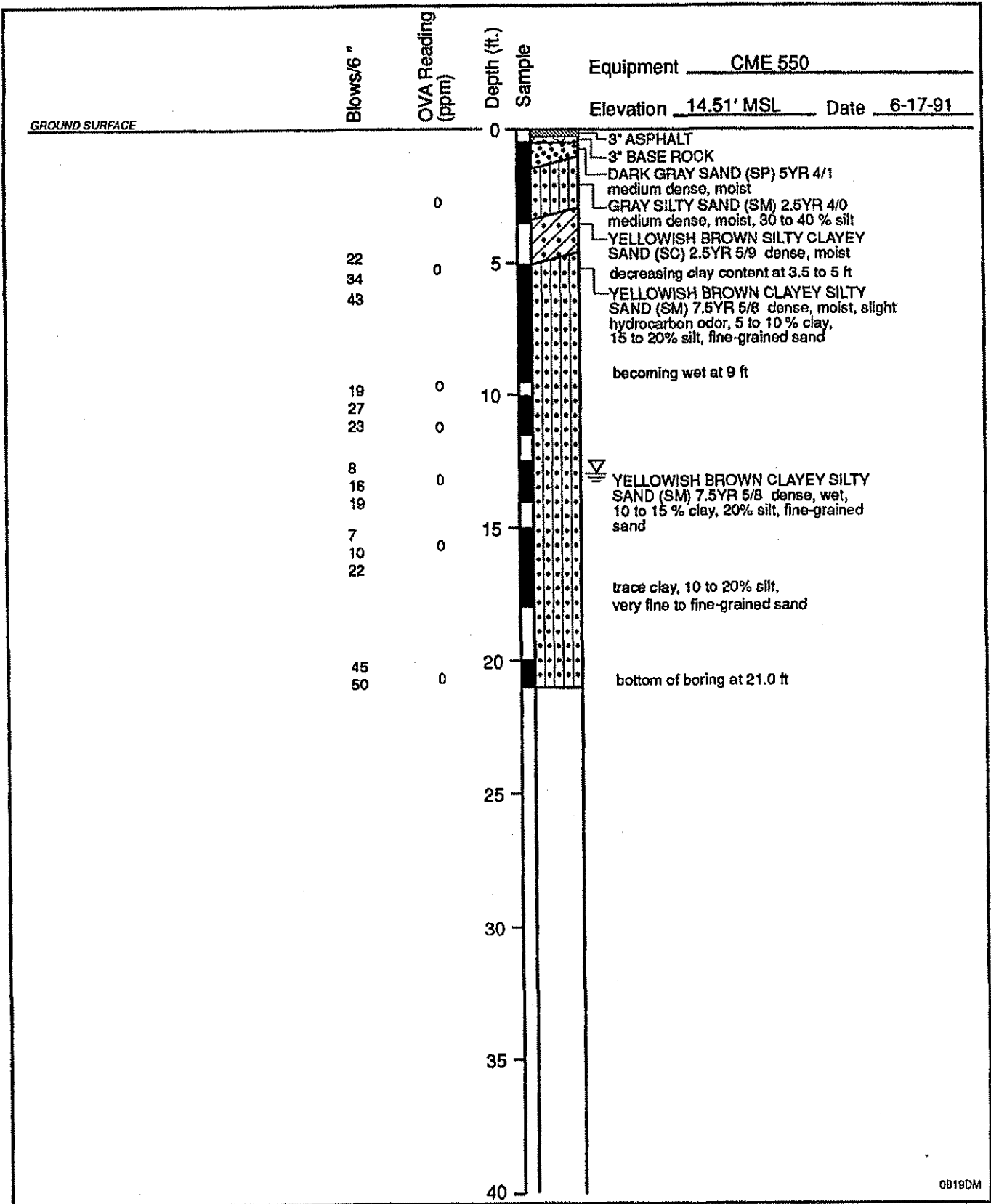
Revised Site Conceptual Model
 Former Nestlé USA, Inc. Facility, Oakland, CA
 1310 14th Street, Oakland, CA

**Table 5: Groundwater Sample Results
 PCB's in Groundwater**

Boring Location	Sample Depth (feet bgs)	Date of Sample Collection	Analytical results (µg/l)						
			PCB- 1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
PCB-5	15	21-May-08	<0.53	<0.53	<0.53	<0.53	<0.53	<0.53	<0.53
PCB-6	15	21-May-08	<0.77	<0.77	<0.77	<0.77	<0.77	<0.77	<0.77
SB-20/ PCB-7	15	22-May-08	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
SB-21/ PCB-8	15	23-May-08	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56
SB-24/ PCB-1	15	21-May-08	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
SB-25/ PCB-2	15	21-May-08	<0.79	<0.79	<0.79	<0.79	<0.79	<0.79	<0.79
SB-27/ PCB-3	15	21-May-08	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56
EQ Blank	NA	21-May-08	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72

Notes:

NA = Not Analyzed
 EPA method 8082 for PCB analyses of groundwater



0818DM



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Log of Boring SB-1
Carnation Facility
Oakland, California

PLATE

B1

DRAWN
PMc

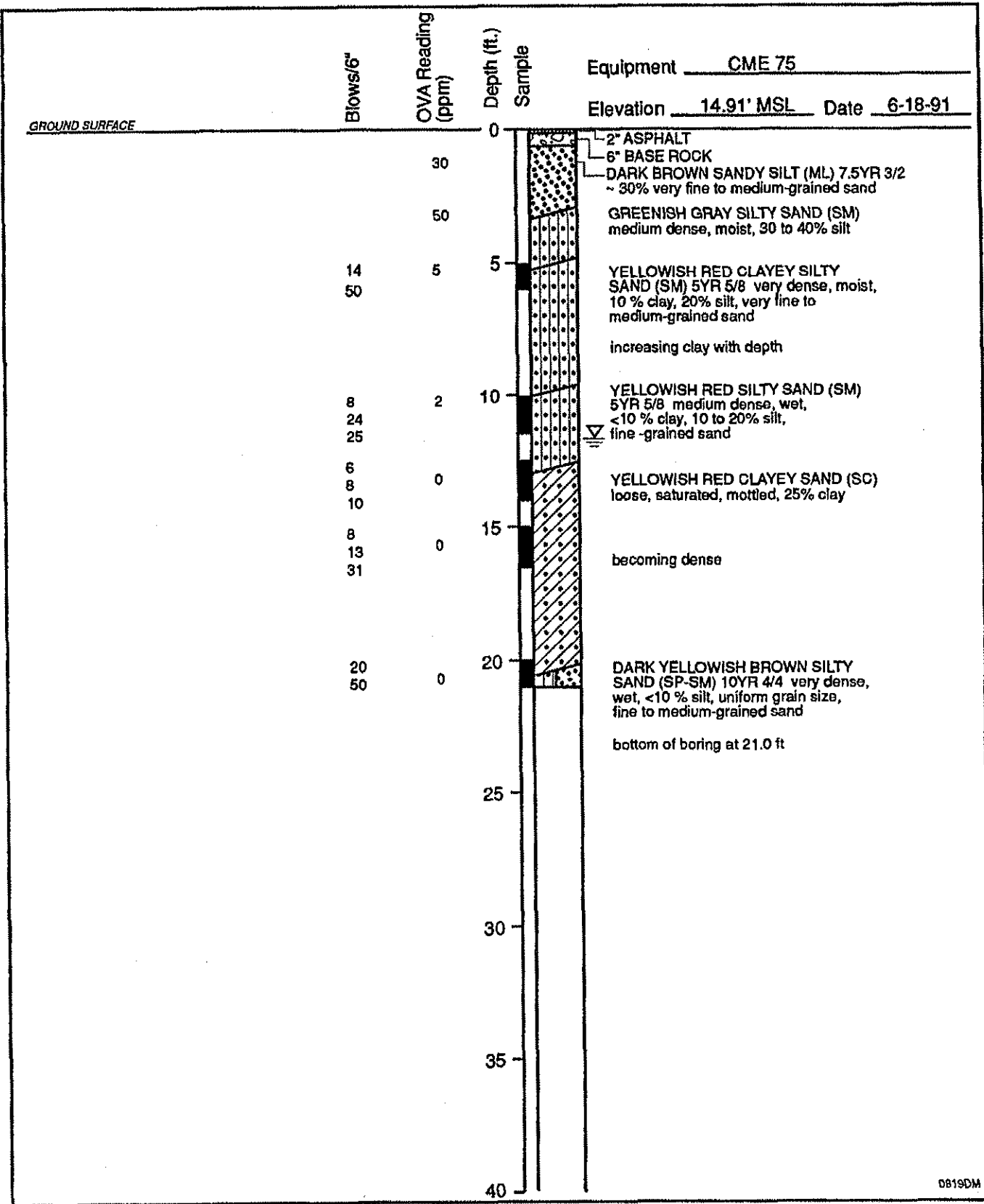
JOB NUMBER
20294.006.02

APPROVED
D. A. Cronin

DATE
7/91

REVISED DATE

ATTACHMENT 7



Harding Lawson Associates
 Engineering and
 Environmental Services

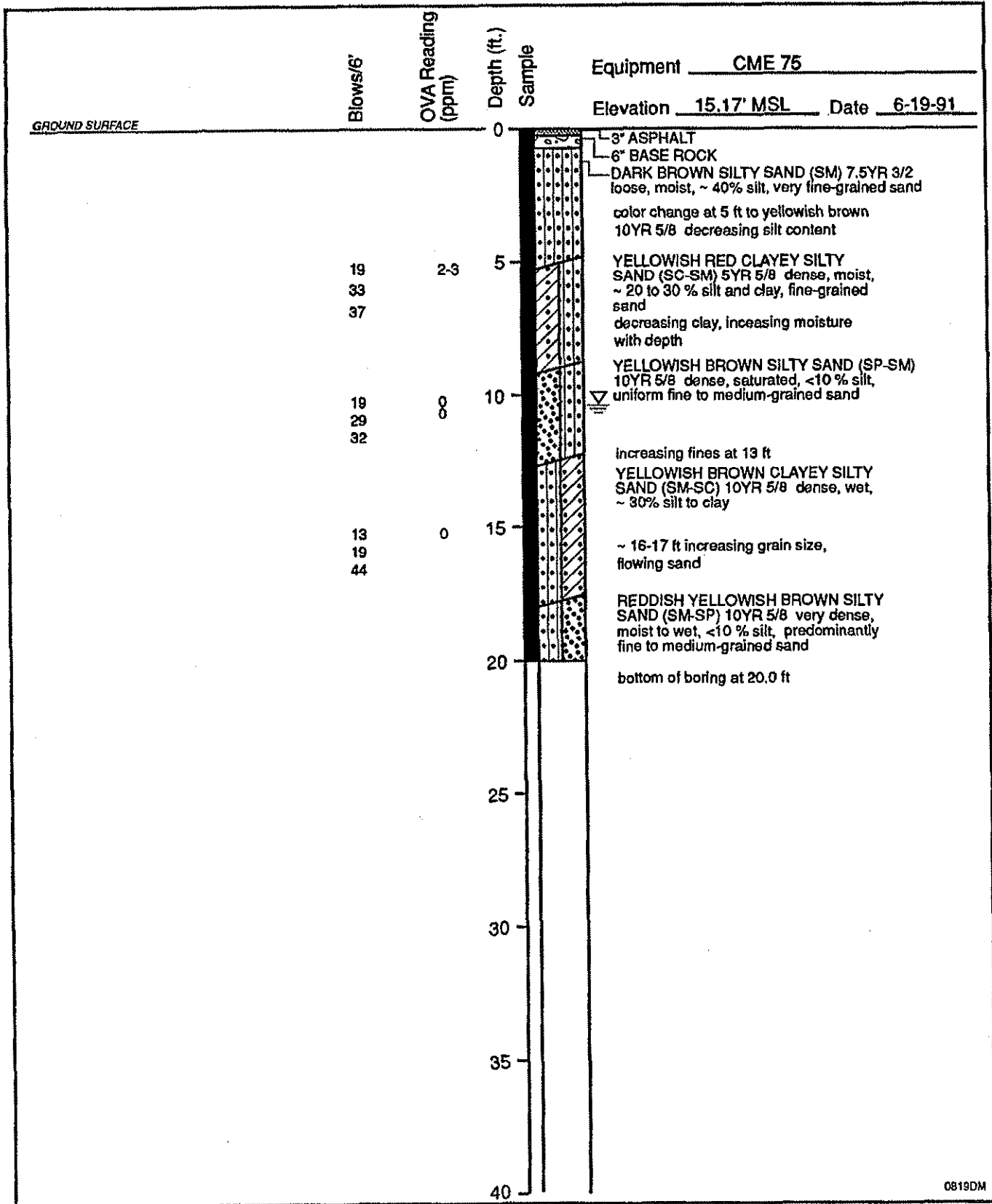
Log of Boring SB-2
 Carnation Facility
 Oakland, California

PLATE

B2

DRAWN PMc	JOB NUMBER 20294,006.02	APPROVED <i>D. J. Crum</i>	DATE 7/91	REVISED DATE
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0819DM



0819DM



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Log of Boring SB-3
Carnation Facility
Oakland, California

PLATE

B3

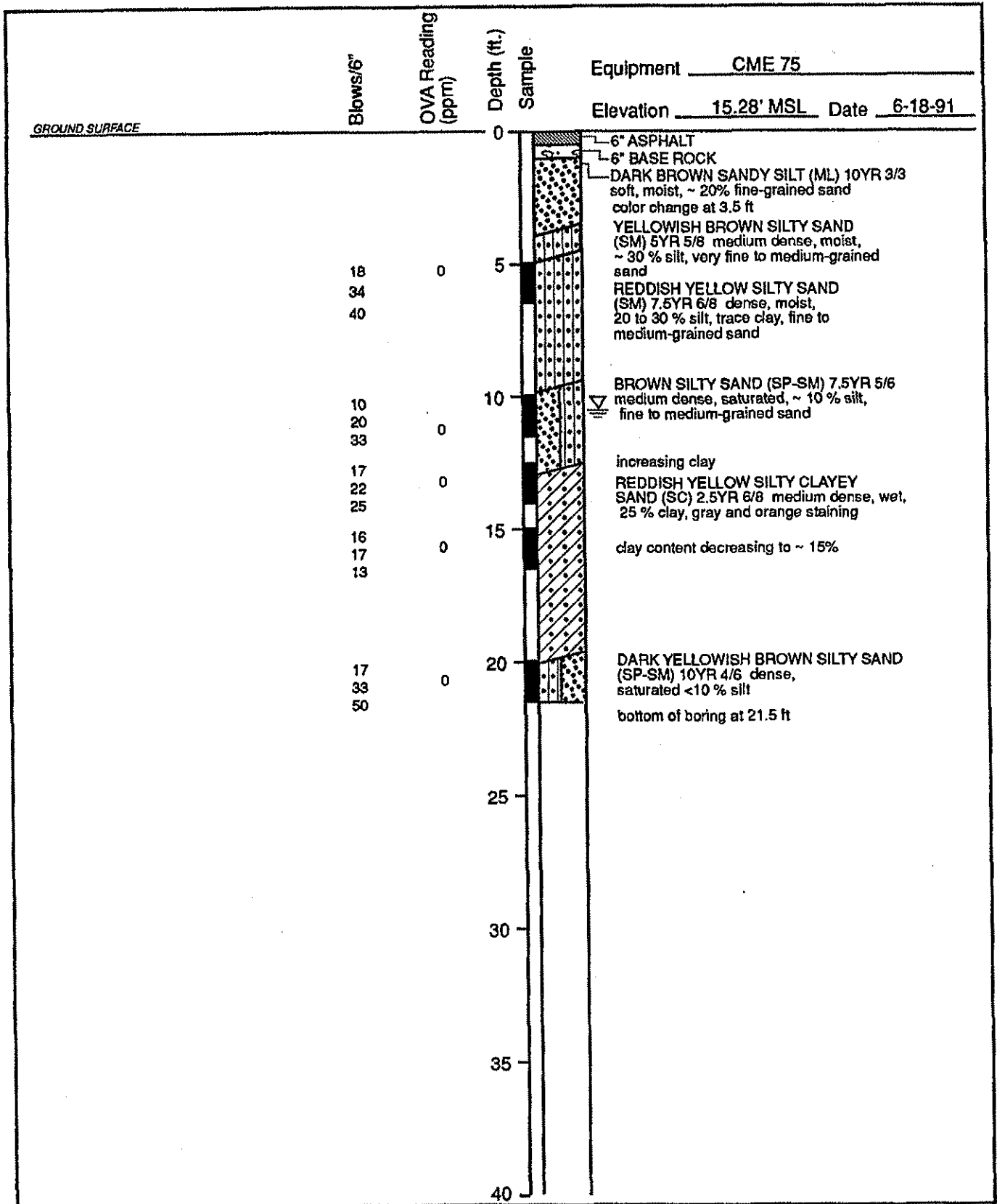
DRAWN
PMc

JOB NUMBER
20294.006.02

APPROVED
D.A. Crum

DATE
7/91

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Log of Boring SB-4
Carnation Facility
Oakland, California

PLATE

B4

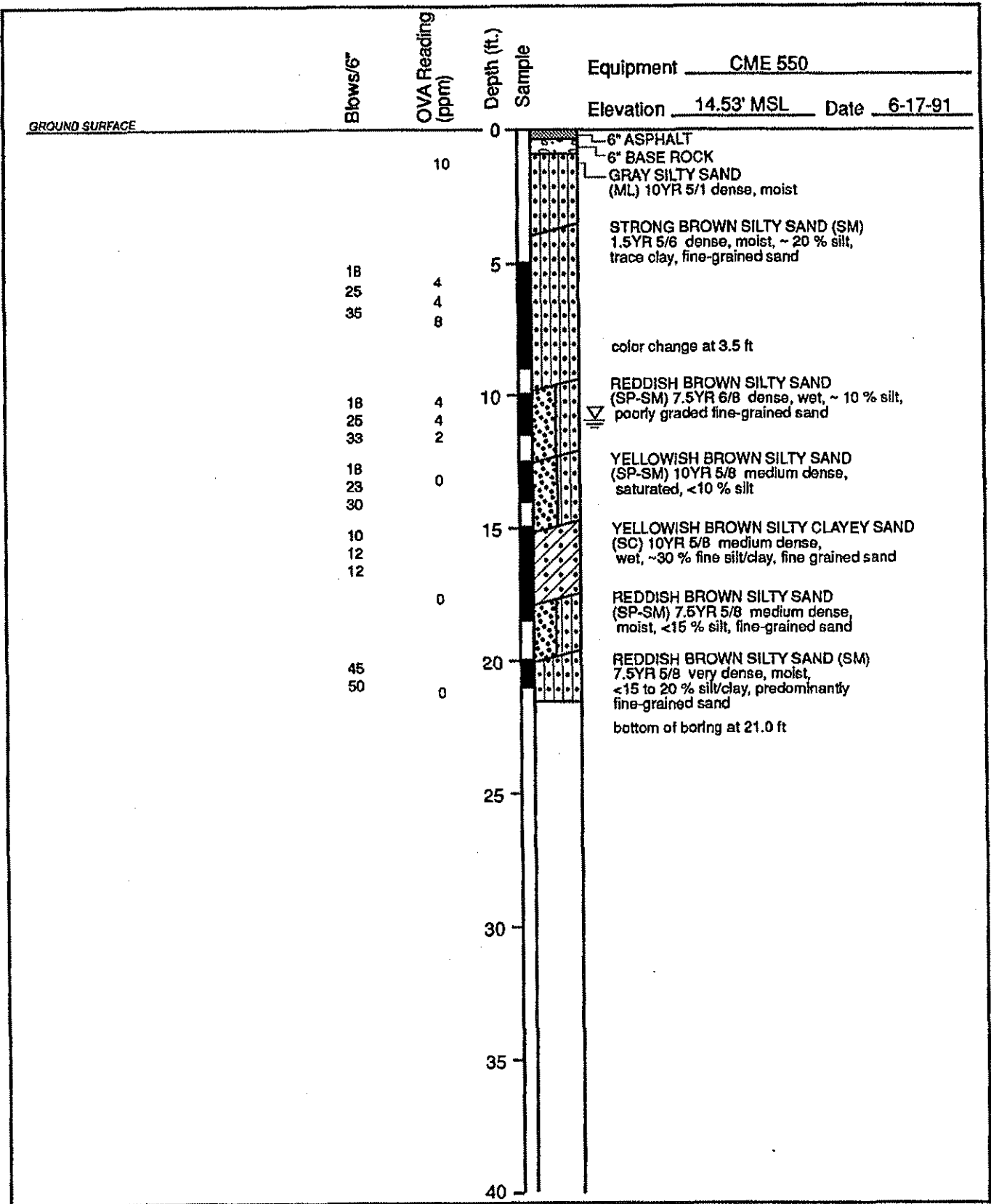
DRAWN
PMc

JOB NUMBER
20294,006.02

APPROVED
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DATE
7/91

REVISED DATE



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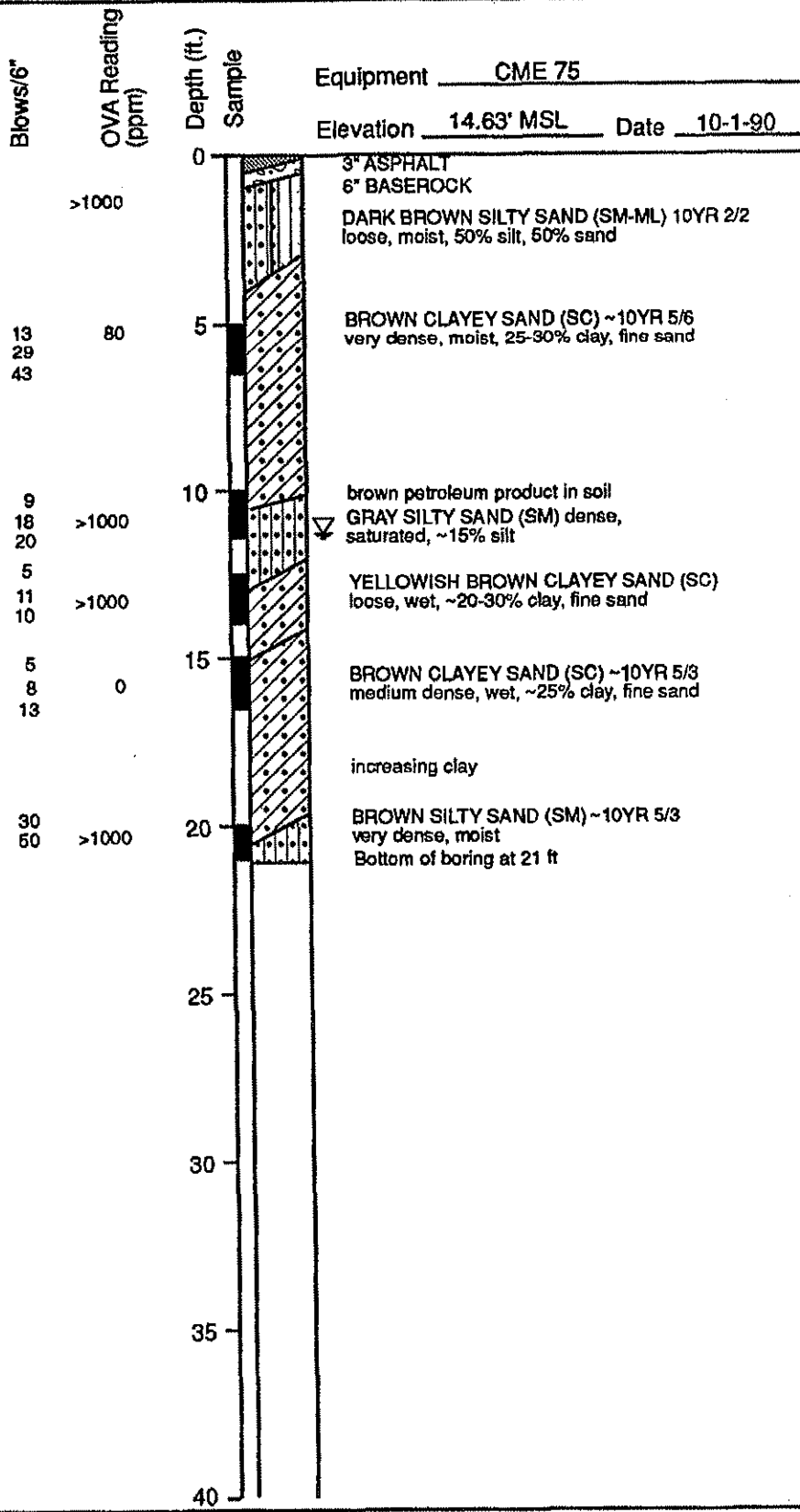
Log of Boring SB-5
Carnation Facility
Oakland, California

PLATE

B5

DRAWN PMc	JOB NUMBER 20294.006.02	APPROVED <i>D. A. Craig</i>	DATE 7/91	REVISED DATE
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Laboratory Tests



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Log of Boring SB-6
 Carnation Facility
 Oakland, California

PLATE

B6

DRAWN NJBC	JOB NUMBER 20294,006.02	APPROVED <i>D.A. Craig</i>	DATE 7/91	REVISED DATE
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Laboratory Tests

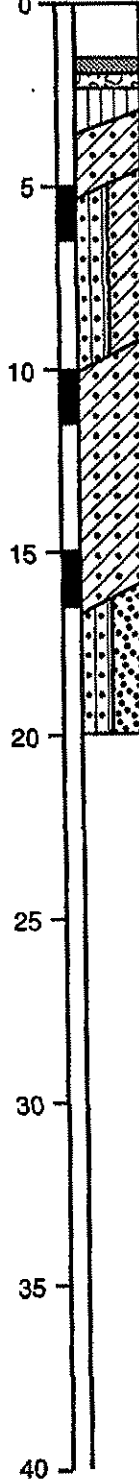
Blows/6"

OVA Reading (ppm)

Depth (ft.)
Sample

Equipment CME 75

Elevation 15.68' MSL Date 6-19-91



1.5 ft SOIL - Excavated pile

3" ASPHALT
6" BASEROCK
BLACK SANDY SILT (ML) 10YR 2/1 loose, moist grades to
GRAYISH BROWN CLAYEY SAND (SC) ~10YR 5/2 ~30% clay

REDDISH YELLOWISH BROWN SILTY CLAYEY SAND (SM-SC) dense, moist, 20% clay, ~15% silt, predominantly very fine- to medium-grained sand

increasing clay content with depth
increasing moisture to wet at 9 ft

REDDISH BROWN CLAYEY SAND (SC) medium dense, saturated, ~15-20% clay, fine-grained sand

~16-16.5 ft less clay
BROWN SILTY SAND (SM-SP) ~10YR/5/8 very dense, moist, ~10% silt and clay

Bottom of boring at 20 ft



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Log of Boring SB-7
Carnation Facility
Oakland, California

PLATE

B7

DRAWN NJbc JOB NUMBER 20294,006.02

APPROVED D. J. Craig

DATE 7/91

REVISED DATE

Laboratory Tests

Blows/6"

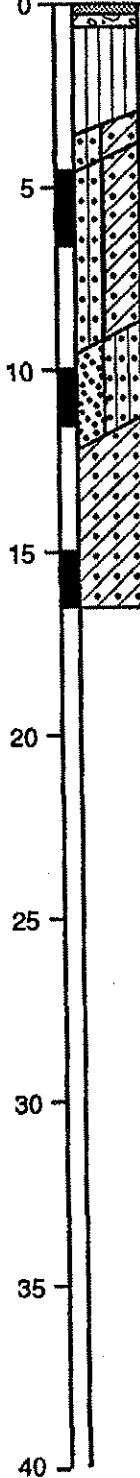
OVA Reading (ppm)

Depth (ft.)
Sample

Equipment CME 75

Elevation 15.15' MSL Date 6-19-91

	200
	200
1	>1000
18	
34	
44	
	>1000
	>1000
23	
33	>1000
35	
8	
10	>1000
15	



3" ASPHALT
6" BASEROCK

BLACK SANDY SILT (ML) 10YR 2/1 loose, moist, 30-40% very fine-grained sand

GRAYISH BROWN SILTY CLAYEY SAND (SM-SC) medium dense, moist, ~25% silt-clay, fine-grained sand

YELLOWISH BROWN CLAYEY SILTY SAND (SM-SC) ~10YR 5/8 very dense, moist pockets of gray clay ~15-20% silt, fine-grained sand

increasing moisture, wet at 9 ft
brown petroleum product in soil at 10 ft

GRAYISH YELLOWISH BROWN SILTY SAND (SM-SP) ~10YR 5/8 dense, saturated
change ~ 12 ft increase clay to ~15%

BROWN SILTY CLAYEY SAND (SC) 10YR 5/8 loose, medium dense, saturated

Bottom of boring at 16.5 ft



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Log of Boring SB-8
Carnation Facility
Oakland, California

PLATE

B8

DRAWN NJBc
JOB NUMBER 20294,006.02

APPROVED
D. J. Crowl

DATE 7/91

REVISED DATE

Laboratory Tests

Blows/6"

Depth (ft.)
Sample

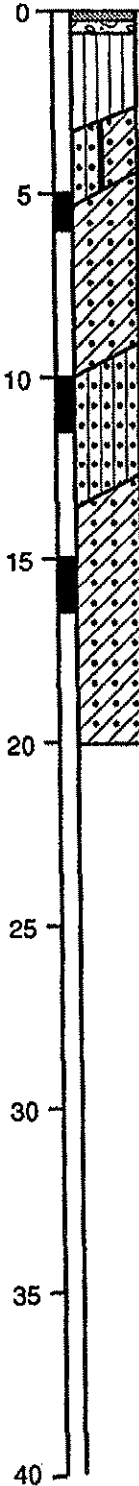
Equipment CME 75

Elevation 15.25' MSL Date 6-19-91

25
50

27
37
40

6
8
11



3" ASPHALT
6" BASEROCK
BLACK SANDY SILT (ML) 10YR 2/1 loose, moist

GRAYISH SILTY CLAYEY SAND (SM-SC)

GRAYISH BROWN CLAYEY SAND (SC) ~10YR 5/8
very dense, moist, ~30-40% clay, predominantly
fine- to medium-grained sand

decreasing clay with depth
increasing moisture

YELLOWISH BROWN SILTY SAND (SM)
10YR 6/8 dense, saturated, ~15% silt,
fine- to medium-grained sand

increasing clay

YELLOWISH BROWN CLAYEY SAND (SC)
~10YR 5/8 loose to medium dense, wet,
~25% clay, very fine to medium sand

Bottom of boring at 20 ft



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Log of Boring SB-9
Carnation Facility
Oakland, California

PLATE

B9

DRAWN
NJBc

JOB NUMBER
20294.006.02

APPROVED
M. J. Cronin

DATE
7/91

REVISED DATE

Laboratory Tests

Blows/6"

OVA Reading (ppm)

Depth (ft.)
Sample

Equipment CME 550

Elevation 14.56' MSL Date 6-17-91

16
45
47

0

5

6" CONCRETE
6" BASE ROCK
BLACK SILTY SAND (SM)
color change at 2 ft to GRAY SILTY SAND (SM)
2.5 YR N5/ medium dense, moist

REDDISH BROWN CLAYEY SAND (SC)
5YR 5/8 very dense, moist ~30-40% clay, gray mottling

20
32
45

5
>1000

10

REDDISH BROWN SAND (SP) 5 YR 5/8
dense, wet, trace silt, predominantly fine-grained sand

REDDISH BROWN SILTY SAND (SM-SP) 5YR 5/8
medium dense, wet

24
25
17

10
8
3

15

BROWN CLAYEY SAND (SC) 7.5YR 5/8
~20% clay, fine- to medium-grained sand, gray mottling

12
17
18

0

20

BROWN SILTY SAND (SP-SM) 7.5YR 5/8
very dense, wet, <10% silt, very fine- to medium-grained sand
Bottom of boring at 21 ft

38
50

0

25

30

35

40



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Log of Boring SB-10
Carnation Facility
Oakland, California

PLATE

B10

DRAWN NJBc	JOB NUMBER 20294.006.02	APPROVED <i>[Signature]</i>	DATE 7/91	REVISED DATE
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Laboratory Tests

Blows/6"

OVA Reading
(ppm)

Depth (ft.)

Sample

Equipment CME 75

Elevation 14.62' MSL Date 6-20-91

0
5
10
15
20
25
30
35
40

6" ASPHALT
18" BASE ROCK
YELLOWISH BROWN SILTY SAND (SM) 10YR 6/8
medium dense, moist
BROWNISH GRAY SILTY SAND (SM) 10YR 4/1
very dense, moist, ~20% silt
increasing clay, moisture
GRAYISH BROWN CLAYEY SILTY SAND (SC-SM)
10 YR 5/2 dense, saturated 5-10% clay,
~15-20% silt, fine sand

Bottom of boring at 20 ft

31
31
46

>1000

>1000

8
23
28

>1000

7
7
7

>1000



Harding Lawson Associates
Engineering and
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Log of Boring SB-11
Carnation Facility
Oakland, California

PLATE

B11

DRAWN
NJBc

JOB NUMBER
20294,006.02

APPROVED
D. J. Craig

DATE
7/91

REVISED DATE

Laboratory Tests

Blows/6"

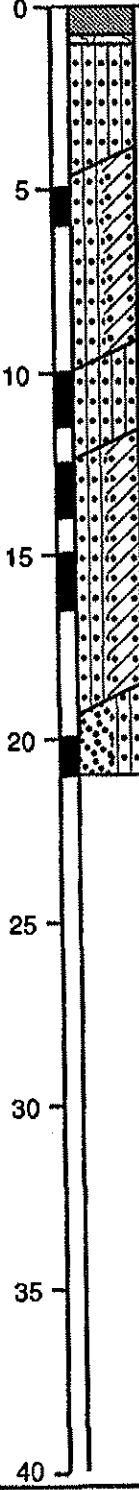
OVA Reading (ppm)

Depth (ft.)

Sample

Equipment CME 75

Elevation 14.89' MSL Date 6-18-91



8" ASPHALT
4" BASEROCK

YELLOW SILTY SAND (SM) 10YR 6/8
medium dense, moist, 20-30% silt, very fine-
to medium-grain sand

REDDISH YELLOW CLAYEY SILTY SAND (SM-SC)
7.5 YR 6/8 very dense, moist, ~10% clay, 10-20% silt
predominantly fine-grained sand

decreasing clay

REDDISH YELLOW SILTY SAND (SM) 7.5 YR 6/8
dense, wet, 20-30% silt, trace clay in gray pockets

▽ BROWN SILTY CLAYEY SAND (SM-SC)
7.5 YR 5/8 ~30% silt-clay, fine- to medium-grained
sand

orange staining, pockets of gray clayey sand

BROWN SILTY SAND (SP-SM) 7.5YR 4/6
very dense, wet, <10% silt, predominantly
fine-to medium-grained sand
Bottom of boring at 21 ft



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Environmental Services

Log of Boring SB-12
Carnation Facility
Oakland, California

PLATE

B12

DRAWN NJBC	JOB NUMBER 20294.006.02	APPROVED <i>D.J. Crum</i>	DATE 7/91	REVISED DATE
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Laboratory Tests

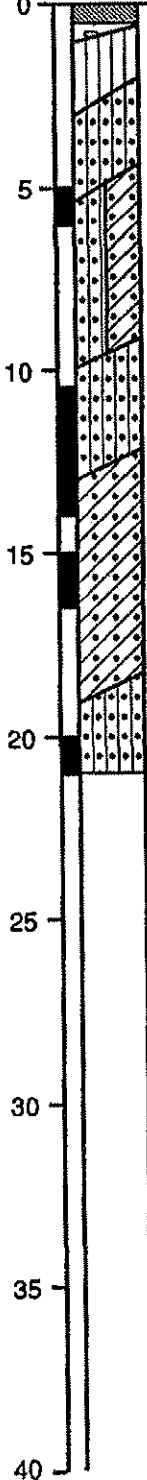
Blows/6"

OVA Reading (ppm)

Depth (ft.)
Sample

Equipment CME 75

Elevation 14.56' MSL Date 6-20-91



6" CONCRETE
6" BASEROCK
BLACK SANDY SILT (ML) 10YR 7/1 loose, moist
GREENISH GRAY SILTY SAND (SM)
medium dense, moist, 20% silt

BROWN CLAYEY SILTY SAND (SM-SC)
10YR 4/6 very dense, moist, fine-grained sand

YELLOWISH BROWN SILTY SAND (SM)
~10YR 6/8 dense, saturated

YELLOWISH BROWN CLAYEY SAND (SC)
10YR 6/8 loose, saturated, ~20-30% clay,
fine-grained sand
decreasing clay to ~20% clay at 16 ft

GREENISH GRAY SILTY SAND (SM) dense, wet

Bottom of boring at 21 ft



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Environmental Services

Log of Boring SB-13
Carnation Facility
Oakland, California

PLATE

B13

DRAWN
NJbc

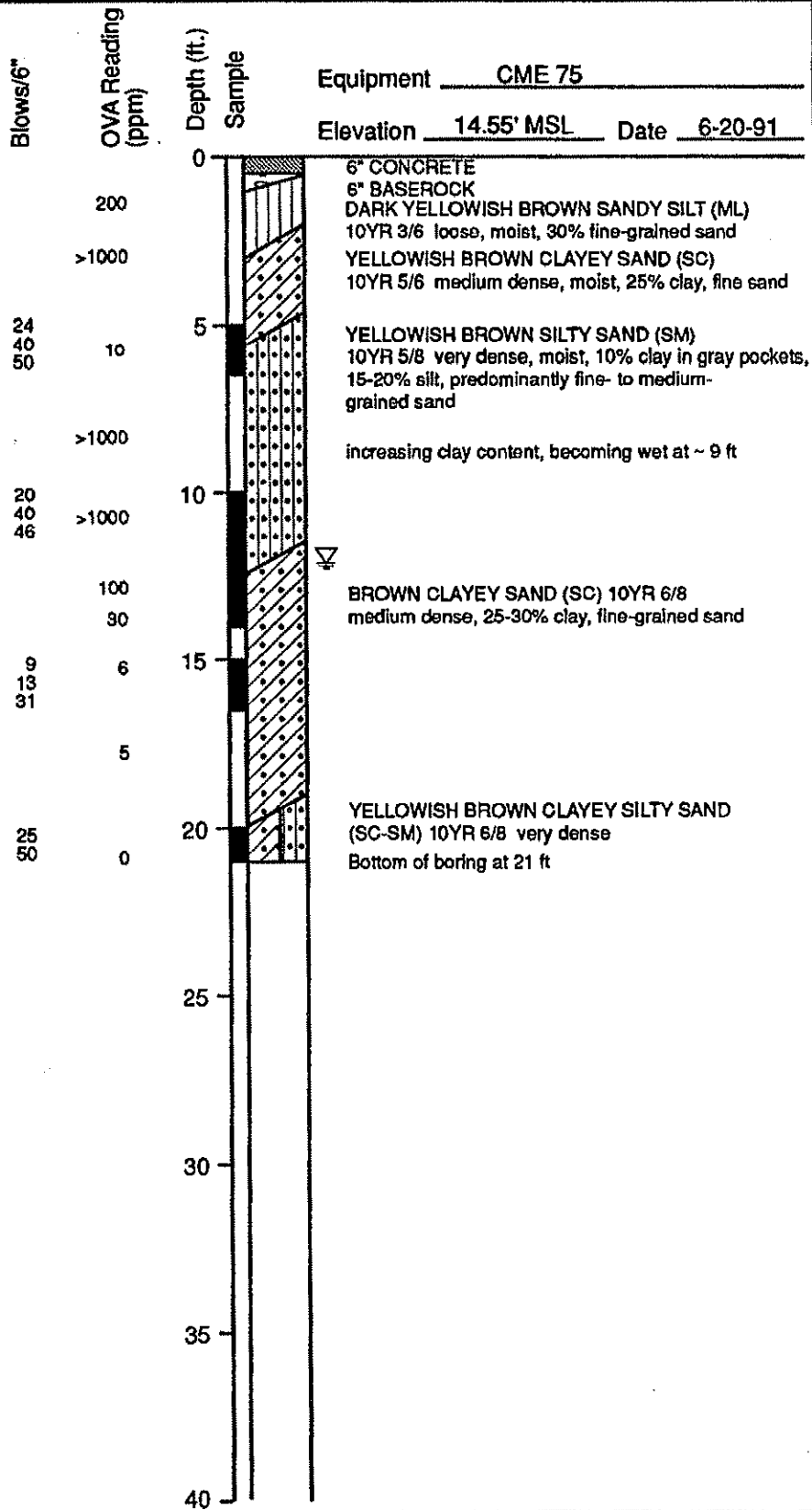
JOB NUMBER
20294,006.02

APPROVED
D. A. Chang

DATE
7/91

REVISED DATE

Laboratory Tests



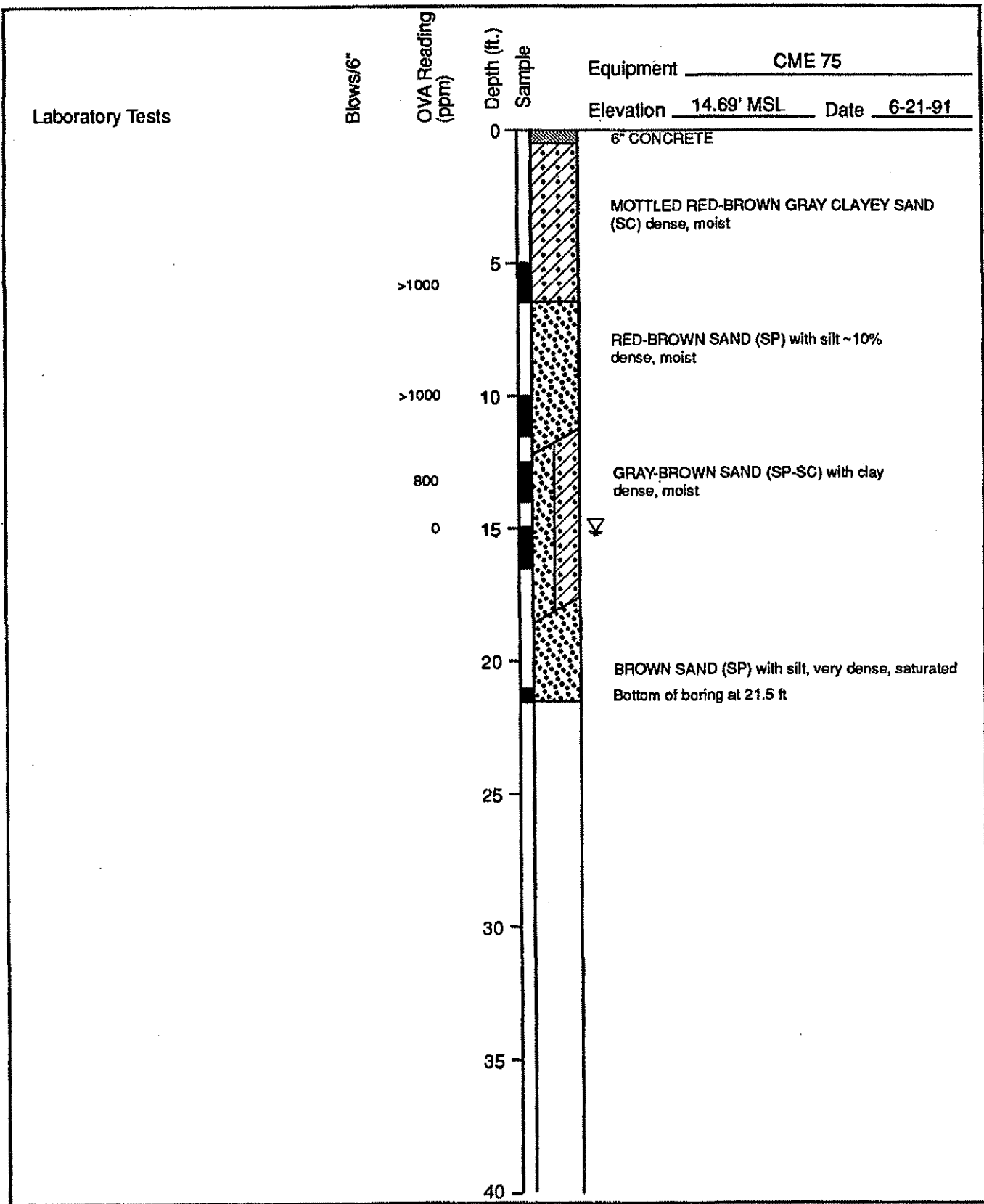
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 Engineering and
 Environmental Services

Log of Boring SB-14
 Carnation Facility
 Oakland, California

PLATE

B14

DRAWN NJBc	JOB NUMBER 20294,006.02	APPROVED <i>D. A. Cray</i>	DATE 7/91	REVISED DATE
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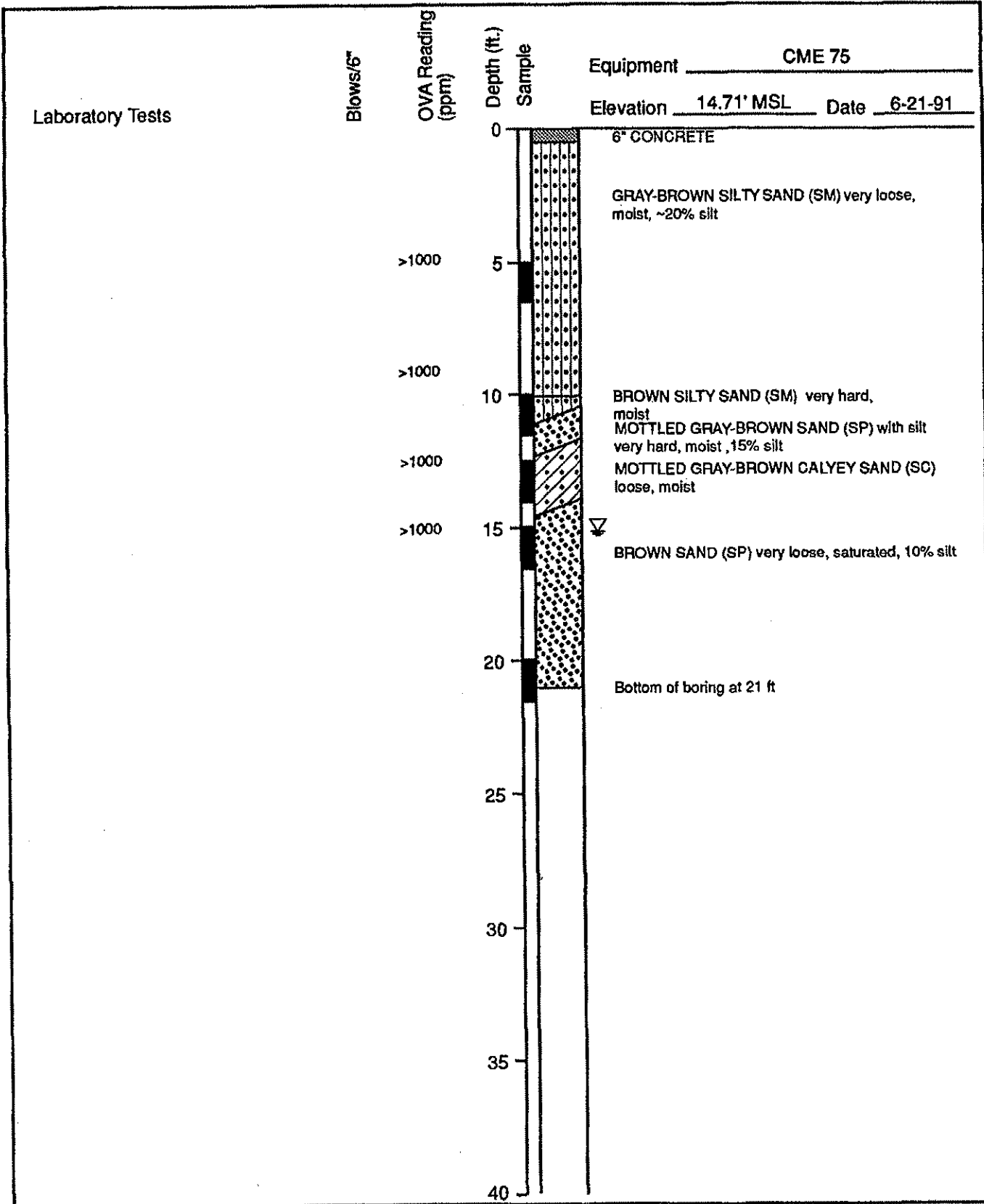
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Engineering and Environmental Services

Log of Boring SB-15
Carnation Facility
Oakland, California

PLATE

B15

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
NJBc	20294,006.02	<i>D. A. Crang</i>	7/91	



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Environmental Services

Log of Boring SB-16
Carnation Facility
Oakland, California

PLATE

B16

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
NJBc	20294,006.02	<i>D.A. Crivello</i>	7/91	

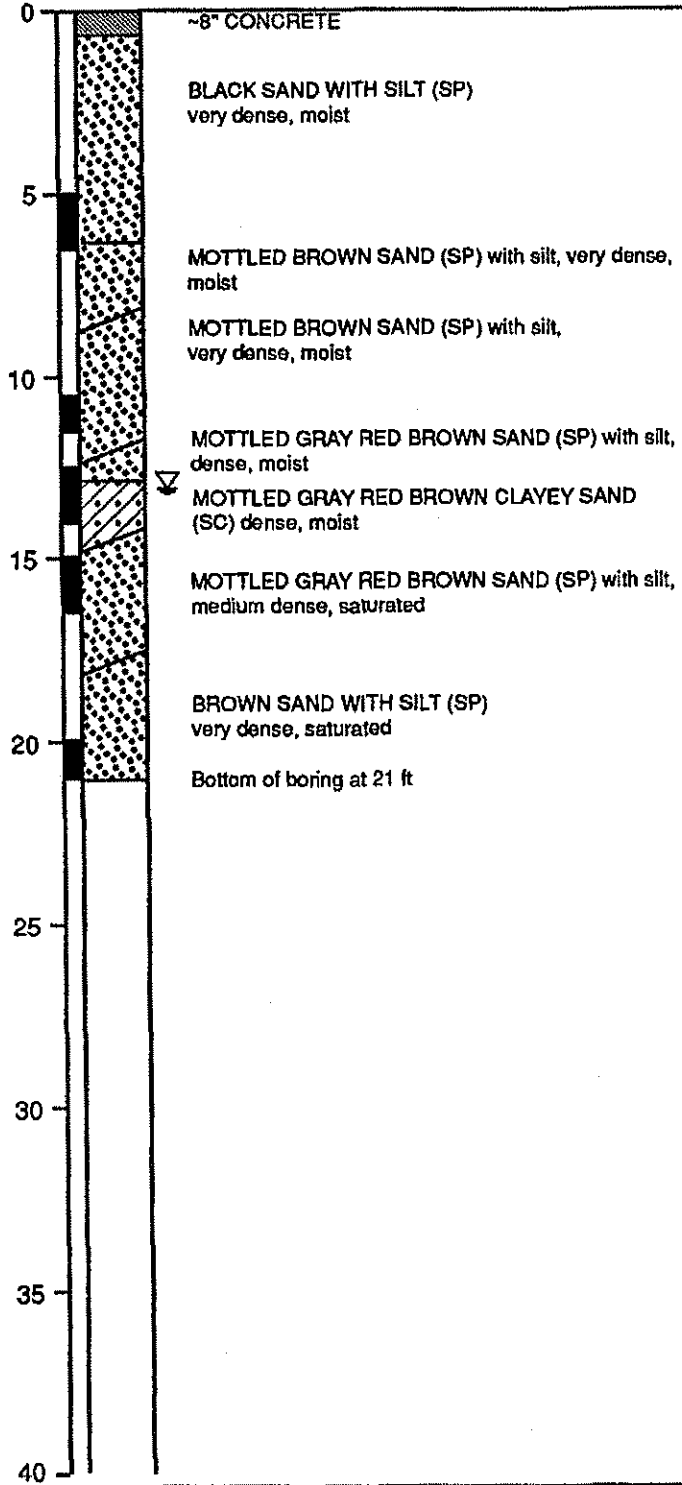
Laboratory Tests

Blows/6"

OVA Reading (ppm)

Depth (ft.)
Sample

Equipment CME 75
Elevation 14.73' MSL Date 6-21-91



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Log of Boring SB-17
Carnation Facility
Oakland, California

PLATE

B17

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
NJBc	20294.006.02	<i>[Signature]</i>	7/91	

Laboratory Tests

Blows/6"

OVA Reading (ppm)

Depth (ft.)

Sample

Equipment

CME 75

Elevation

14.71' MSL

Date

6-18-91

30
30
30

0
0

5

6" CONCRETE
DARK BROWN SANDY SILT (ML) 10YR 3/4
loose, moist, ~40% fine-grained sand
YELLOWISH BROWN SILTY SAND (SM)
10YR 5/6 10-20% silt
increasing clay
REDDISH BROWN SILTY SAND (SM) 7.5YR 5/6
dense, moist, 10-20% silt, trace clay

31
33
30

0
0

10

YELLOWISH RED SILTY CLAYEY SAND (SC)
5YR 5/8 dense, moist, 20% clay, predominantly
fine- to medium-grained sand
sample saturated at 13 ft

6
8
9

0

15

decreasing clay content

4
6
7

0

15

GRAYISH BROWN SILTY SAND (SM) 10YR 5/8
medium dense, wet, decreasingly fines,
increasing sand with depth

45
50

0

20

Bottom of boring at 20.8 ft

25

30

35

40



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Engineering and
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Log of Boring SB-18
Carnation Facility
Oakland, California

PLATE

B18

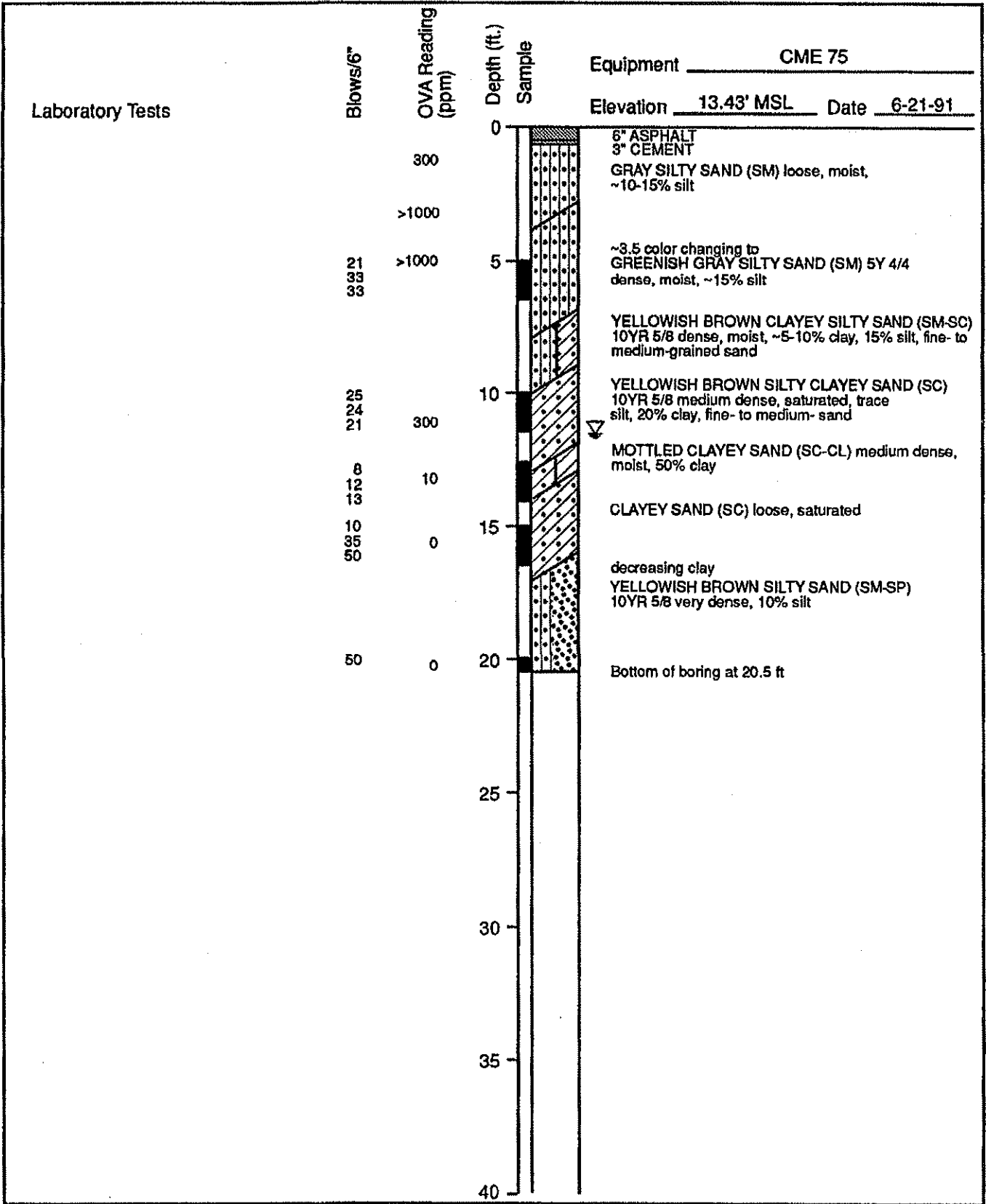
DRAWN
NJBc

JOB NUMBER
20294,006.02

APPROVED
D. J. Cray

DATE
7/91

REVISED DATE



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Log of Boring SB-19
Carnation Facility
Oakland, California

PLATE

B19

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
NJBc	20294,006.02	<i>D.A. Craig</i>	7/91	

Laboratory Tests

Blows/6"

OVA Reading (ppm)

Depth (ft.)

Sample

Equipment CME 75

Elevation 13.72' MSL Date 6-21-91

>1000

>1000

25
42
42

>1000

25
27
27

>1000

>1000

7
7
8

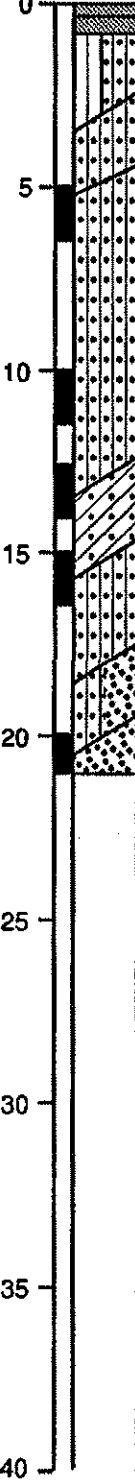
120

6
10
40

0

40
50

0



3" ASPHALT
6" CEMENT
DARK BROWN SILTY SAND (ML-SM) 10YR 2/1
loose, moist

GREENISH GRAY SILTY SAND (SM)
medium dense, moist to wet

GREEN GRAY SILTY SAND (SM) 5Y 4/2
dense, moist 15% silt trace clay, fine-
to medium-grained sand

YELLOWISH BROWN SILTY CLAYEY SAND (SC)
~10YR 5/8 loose, saturated ~25% silt to clay,
fine- to medium-grained sand

YELLOWISH BROWN SILTY SAND (SM) 10YR 6/8
very dense, wet, trace clay ~20-30% silt, fine sand

YELLOWISH BROWN SILTY SAND (SM-SP) dense

REDDISH BROWN SAND (SP) 5YR 5/8 ~10%
silty, very dense, wet
Bottom of boring at 21 ft



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Environmental Services

Log of Boring SB-20
Carnation Facility
Oakland, California

PLATE
B20

DRAWN NJBC	JOB NUMBER 20294,006.02	APPROVED <i>[Signature]</i>	DATE 7/91	REVISED DATE
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LOCATION OF BORING		SITE/LOCATION CARNATION/OAKLAND				BORING NO.	
		PROJECT NO. 004-88-068				MW-1	
		WATER LEVEL				SHEET 1	
		TIME				OF 3	
		DATE				DRILLER	
CASING DEPTH ESTIMATED				START		FINISH	
DRILLING CONTRACTOR PC EXPLORATION				TIME 8:50		TIME 11:50	
DRILLER MIKE MOORE				DATE 3-15-89		DATE 3-15-89	
DRILLING METHOD HOLLOW STEM AUGER				SAMPLING METHOD MPS			
LOGGER ERIC HOLM				H/S N 2227.7 E/W E 3067.1 ELEV. 16.82			
BORING DIAMETER: 10 INCHES				WELL CASING DIAMETER: 4 INCHES			
REVIEWED BY:				DATE			

DIST. FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1		1/4" BENTONITE CEMENT SLURRY				X	5	GP	ASPHLT
2				0		X	5		GRAVELY SAND- BLACKISH BROWN, CLASTS ARE ANGULAR 3/4" GRAY, QUARTZ, WAFICS, SLIGHTLY MOIST, SLIGHTLY PLASTIC, MEDIUM DENSE, NO OODR.
3						X	5		
4						X	6		
5				0		X	7		
6	BLANK					X	6		
7		3/8" BENT. PELLETS				X	8		SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, WAFICS, SLIGHTLY MOIST, SLIGHTLY PLASTIC, MEDIUM DENSE, NO OODR.
8				0	3648	X	5		
9						X	7		
10						X	7		
11				0		X	7		
12						X	7		SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, WAFICS, SLIGHTLY MOIST, SLIGHTLY PLASTIC, MEDIUM DENSE, NO OODR.
13				0	3650	X	8		
14						X	10		
15						X	10		
16						X	10		
17						X	10		
18						X	15		SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, WAFICS, WET, MEDIUM DENSE, NO OODR.
19						X	9		
20						X	11		
21	0.030 INCH SLOT					X	14		
22						X	6		
23						X	7		
24						X	7		
25						X	5		
26						X	5		
27						X	7		
28						X	8		
29						X	6		
30						X	7		
31						X	7		
32						X	8		
33						X	8		
34						X	7		
35						X	7		
36						X	8		
37						X	8		
38						X	7		
39						X	7		
40						X	8		

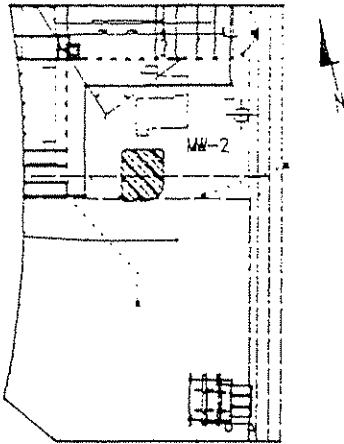
LOCATION OF BORING		SITE/LOCATION CARNATION/OAKLAND		BORING NO.	
		PROJECT NO. 004-88-058		MW-1	
		WATER LEVEL		SHEET 2 OF 3	
TIME		DRILLER		DRILLER	
DATE		START		FINISH	
CASING DEPTH ESTIMATED		TIME 8:50		TIME 11:50	
DRILLING CONTRACTOR PC EXPLORATION		DATE 3-15-89		DATE 3-15-89	
DRILLER MIKE MOORE		DATE		DATE	
DRILLING METHOD HOLLOW STEM AUGER		DATE		DATE	
SAMPLING METHOD UPS		DATE		DATE	
LOGGER ERIC HOLM		DATE		DATE	
N/S N 2227.7		E/W E 3057.1		ELEV. 76.02	
BORING DIAMETER: 7 INCHES		WELL CASING DIAMETER: 4 INCHES			
REVIEWED BY:		DATE			

DIST. FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS								
21						X	78	SP	MEDIUM/COARSE SAND- TRACE OF SILT, GREENISH BROWN, AREAS OF OXIDATION, QUARTZ, MAFICS, WET, NON-PLASTIC, DENSE, NO ODOR.	
						X	79			
							20			
22						X	20	SM	SILTY SAND- LIGHT BROWN, AREAS OF OXIDATION, QUARTZ, MAFICS, WET, NON-PLASTIC, DENSE, NO ODOR.	
						X	25			
23						X	20			
						X	21			
24						X	27			
						X	20			
25						X	20			
						X	20			
26						X	20			
						X	21			
27						X	23			
						X	25			
28						X	30			
						X	30			
29	0.030 INCH SLOT					X	32			
						X	33			
30						X	33			
						X	32	SP	MEDIUM SAND- BROWN, SOME SILT, QUARTZ, MAFICS, WET, NON-PLASTIC, VERY DENSE, NO ODOR.	
31						X	33			
						X	30	SM	SILTY SAND- LIGHT BROWN, QUARTZ, MAFICS, WET, NON-PLASTIC, VERY DENSE, NO ODOR.	
32						X	36			
						X	33			
33						X	38			
						X	30			
34						X	31			
							32			
35							28			
						X	32			
36						X	34			
						X	29			
37						X	22			
						X	29			
38						X	30			
						X	30			
39						X	31			
						X	32			
40						X	30			
								SILTY SAND- LIGHT BROWN, QUARTZ, MAFICS, WET, NON-PLASTIC, VERY DENSE, NO ODOR.		

LOCATION OF BORING		SITE/LOCATION CARNATION/OAKLAND				BORING NO.	
		PROJECT NO. 004-88-069				MW-1	
		WATER LEVEL				SHEET 3	
		TIME				OF 3	
		DATE				DRILLER	
CASING DEPTH ESTIMATED		DRILLING CONTRACTOR PC EXPLORATION				START TIME	FINISH TIME
		DRILLER MIKE MOORE				8:50	11:50
		DRILLING METHOD HOLLOW STEM AUGER				DATE	DATE
		SAMPLING METHOD MPS				3-15-89	3-15-89
		LOGGER ERIC HOLM					
N/S N 2227.7		E/W E 3067.1		ELEV. 16.82			
BORING DIAMETER: 10 INCHES						WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY:				DATE			

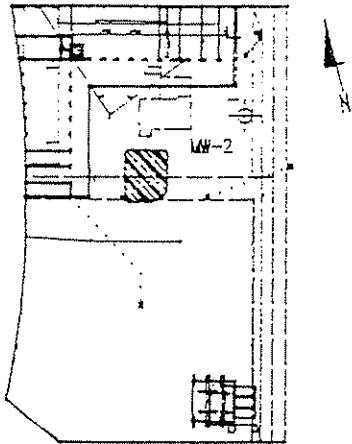
DIST. FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL			
	CASING	ANNULUS										
41	0.030 INCH SLOT	#3 SAND	[Dotted pattern]			X	29	SM				
42									X	32		
									X	31		
									X	31		
43									X	28		
									X	29		
											31	
											34	
45					X	27		SILTY SAND- LIGHT BROWN, QUARTZ, WAFICS, WET, NON-PLASTIC, VERY DENSE, NO ODOR.				
46					X	29						
					X	30						
47					X	33		SILTY SAND- LIGHT BROWN, QUARTZ, WAFICS, WET, NON-PLASTIC, VERY DENSE, NO ODOR.				
								TD				
									SAMPLE COULD NOT BE RETAINED AFTER 4 ATTEMPTS WITH SAND CATCHER.			
									2 BAGS OF CEMENT			
									7-8 GAL. BUCKET OF BENTONITE PELLETS.			
									14 1/2 BAGS OF #3 SAND.			


LOCATION OF BORING



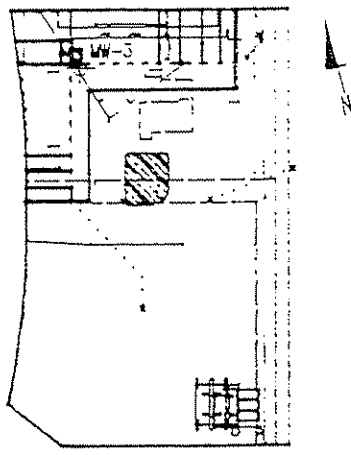
SITE/LOCATION	CARNATION/OAKLAND	BORING NO.	MW-2
PROJECT NO.	004-88-059	SHEET	1
WATER LEVEL		OF	2
TIME		DRILLER	
DATE		START	FINIS
CASING DEPTH		TIME	TIME
DRILLING CONTRACTOR	PC EXPLORATION	7:30	12:00
DRILLER	MIKE MOORE	DATE	DATE
DRILLING METHOD	HOLLOW STEM AUGER	3-17-89	3-17-
SAMPLING METHOD	MPS		
LOGGER	ERIC HOLM		
N/S	N 2500.9	E/W	E 3233.9
		ELEV.	3.92
BORING DIAMETER:	10 INCHES	WELL CASING DIAMETER:	4 INCHES
REVIEWED BY:		DATE	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1								GM	ASPHALT
2		14 BENTONITE CEMENT SLURRY		120		X	5		GRAVEL
3						X	5		FINE SAND- GREENISH GRAY, QUARTZ, WAFICS, SLIGHTLY MOIST, NON-PLASTIC, LOOSE, SLIGHT ODOOR.
4	BLANK					X	5		
5		3/8" BENT. PELL.		320	3636	X	6		SILTY SAND- VEINS OF GRAY CLAY, ORGANICS (?) CENTER OF VEINS, CLAY VEINS ARE VERTICAL, QUARTZ, WAFICS, MOIST, SLIGHTLY PLASTIC, MEDIUM DENSE, ODOOR.
6						X	7		
7				140		X	14		SILTY SAND- REDDISH BROWN, QUARTZ, WAFICS, SLIGHTLY MOIST, NON-PLASTIC, MEDIUM DENSE, ODOOR.
8						X	8		
9				190		X	9		
10					3639	X	10	SM	
11				70		X	12		
12						X	5		
13				50		X	9		SILTY SAND- TRACES OF CLAY, REDDISH BROWN, QUARTZ, WAFICS, SLIGHTLY MOIST, NON-PLASTIC, MEDIUM DENSE, ODOOR.
14	0.000 INCH SLOT					X	6		
15				50		X	7		SILTY SAND- REDDISH BROWN, AREAS OF GRAY SAND, AREAS OF OXIDATION, QUARTZ, WAFICS, WET, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOOR.
16						X	7		
17				20		X	7		SILTY SAND- REDDISH BROWN, AREAS OF GRAY SAND, AREAS OF OXIDATION, SOME SMALL AREAS OF GRAY CLAY, QUARTZ, WAFICS, WET, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOOR.
18						X	6		
19				20		X	5		
20						X	7		
21						X	8		
22				25		X	9		
23						X	7		
24						X	9		

LOCATION OF BORING 	SITE/LOCATION			CARNATION/OAKLAND		BORING NO.	
	PROJECT NO.			004-88-069		MW-2	
	WATER LEVEL					SHEET 2	
	TIME					OF 2	
	DATE					DRILLER	
	CASING DEPTH					START	FINISH
	DRILLING CONTRACTOR			PC EXPLORATION		TIME	TIME
	DRILLER			MIKE MOORE		7:30	12:00
	DRILLING METHOD			HOLLOW STEM AUGER		DATE	DATE
	SAMPLING METHOD			MPS		3-22-89	3-22-89
LOGGER			ERIC HOLM				
N/S		R 2500.9	E/W		E 3233.9	ELEV. 15.52	
BORING DIAMETER:			10 INCHES		WELL CASING DIAMETER: 4 INCHES		
REVIEWED BY:					DATE		

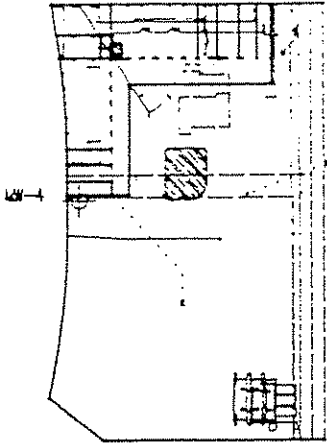
DIST. FROM SURF.	WELL CONST.		LEGEND	TV. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL			
	CASING	ANNULUS										
21	0.030 INCH SLOT	#3 SAND					9	SM				
						X	9					
						X	9					
22										8		
										9		
23							10		X	10		MEDIUM SAND- TRACE OF SILT, REDDISH BROWN. AREAS OF GRAY SAND, AREAS OF OXIDATION, QUARTZ, WAFICS, WET, NON-PLASTIC, MEDIUM DENSE, NO ODOR.
									X	11		
24					X	8						
				12	X	8						
25					X	9						
								TD	7 BAGS OF #3 SAND			
									2 BAGS OF CEMENT			
									1-5 GALLON BUCKET OF BENTONITE			

LOCATION OF BORING

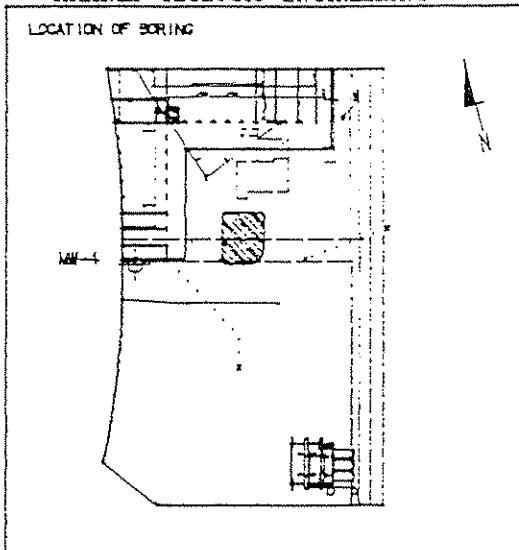


SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-059		MW-3	
WATER LEVEL				SHEET 2	
TIME				OF 2	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER		MIKE MOORE		1:15	4:20
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		MPS		3-21-89	3-21-89
LOGGER		ERIC HOLM			
N/S	N 28° D 2	E/W	E 314.7	ELEV. 14.66	
BORING DIAMETER:		10 INCHES		BORING DIAMETER: 4 INCHES	
REVIEWED BY:				DATE	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL		
	CASING	SPILLING									
21	0.03 INCH SLOT	#3 SAND	[Pattern]					SM			
22											
23											
24									X	5	
25						X	5				
						X	6		SILTY SAND- REDDISH BROWN, MINOR LAMINATIONS, MAFICS, QUARTZ.		
								TD	WET, NON-PLASTIC, MEDIUM DENSE, NO COOR.		
									7 1/2 BAGS OF #3 SAND		
									1 1/2 BAGS OF CEMENT		
									1-5 GALLON BUCKET OF BENTONITE		

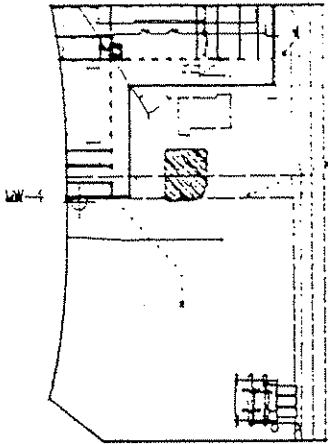
LOCATION OF BORING 	SITE/LOCATION CAPRATON/OAKLAND		BORING NO. MW-4	
	PROJECT NO. 004-88-059		SHEET 1 OF 3	
	WATER LEVEL		DRILLER	
	TIME		START	FINISH
	DATE		TIME	TIME
	CASING DEPTH ESTIMATED		7:30	4:20
	DRILLING CONTRACTOR PC EXPLORATION		DATE	DATE
	DRILLER MIKE MOORE		3-15-89	3-15-89
	DRILLING METHOD HOLLOW STEM AUGER			
	SAMPLING METHOD MPS			
LOGGER ERIC HOLM				
N/S N 2484.9		E/W E 3023.1	ELEV. 14.84	
BORING DIAMETER: 70 INCHES		WELL CASING DIAMETER: 4 INCHES		
REVIEWED BY:		DATE		


DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLDWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEND						
1	4" BENTONITE CEMENT SLURRY	ANNULUS	LEND			X	7	GM	ASPHLT
2				X	8	GRAVEL AND SAND- (FILL)			
3				X	7	CERAMIC PIPE PIECES			
4	BLANK	3/8" BENT. PELLETS	LEND	25	3681	X	9	SM	SILTY SAND- REDDISH BROWN, ORGANICS, QUARTZ, MAFICS, SLIGHTLY
5						X	8		MOIST, NON-PLASTIC, MEDIUM DENSE, NO ODOR.
6						X	7		
7						X	8		
8						X	8		
9				19	3682	X	10		
10						X	10		
11						X	8		
12				18	3688	X	8	SP	MEDIUM SAND- SOME SILT, REDDISH BROWN, AREAS OF GRAY, QUARTZ, MAFICS,
13						X	7		WET, NON-PLASTIC, MEDIUM DENSE, NO ODOR.
14						X	8		
15	0.030 INCH SLOT	COURSE AQUARIUM SAND	LEND			X	9	SM	SILTY SAND- REDDISH BROWN, AREAS OF GRAY CLAY, QUARTZ, MAFICS,
16						X	8		WET, NON-PLASTIC, MEDIUM DENSE, NO ODOR.
17						X	8		
18						X	8		
19				0		X	7	SP	MEDIUM SAND- SOME SILT, REDDISH BROWN, AREAS OF OXIDATION, QUARTZ,
20						X	7		MAFICS, WET, NON-PLASTIC, MEDIUM DENSE, NO ODOR.

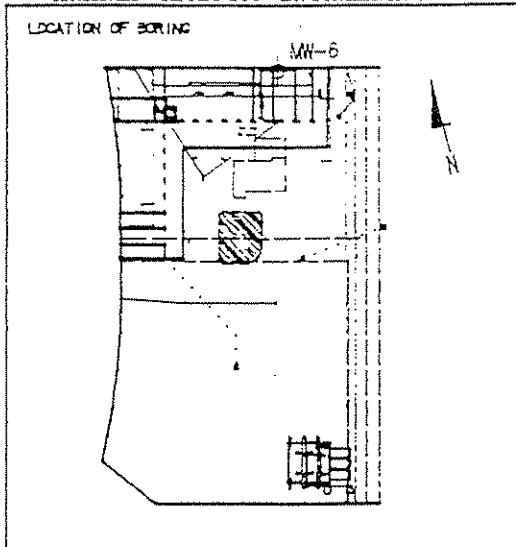


SITE/LOCATION		CARWATON/OAKLAND		BORING NO.	
PROJECT NO.		004-85-059		W-4	
WATER LEVEL				SHEET 2	
TIME				OF 3	
DATE				DRILLER	
CASING DEPTH ESTIMATED				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		7:30	4:20
DRILLER		MIKE WOOPE		DATE	DATE
DRILLING METHOD		HOLLOW STEM AUGER		3-20-89	3-20-89
SAMPLING METHOD		LPS			
LOGGER		ERIC HOLM			
N/S	N 2484.9	E/W	E 3023.1	ELEV. 14.24	
BORING DIAMETER:		70 INCHES		WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY:				DATE	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	SPALLS								
21			#3 SAND			X	8	SP		
						X	9			
				0		X	9			
						X	10			
22						X	11	SM		
						X	9			
				3		X	8			
23						X	7			SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, WAFICS, WET, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOR.
						X	9			
24							10			
						X	5			
25							5			
						X	5			
26							5			
						X	5			
27							5			
						X	5			
28							5	SP	MEDIUM SAND- REDDISH BROWN, AREAS OF GREEN GRAY SAND, QUARTZ, WAFICS, WET, NON-PLASTIC, MEDIUM DENSE, NO ODOR.	
						X	6			
29							6			
						X	7			
30							6			
						X	7			
31							5	SM		
						X	5			
32							5			SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, WAFICS, WET, SLIGHTLY PLASTIC, LOOSE, MEDIUM DENSE, NO ODOR.
						X	5			
33							6			
						X	5			
34							5			TRACE OF PEBBLES
						X	5			
35							5			
						X	5			
36							6	SM	FINE SAND- GREENISH GRAY, AREAS OF OXIDATION, QUARTZ, WAFICS, WET, NON-PLASTIC, MEDIUM DENSE, NO ODOR.	
						X	6			
37							5			
						X	5			
38							6			SILTY SAND- GREENISH GRAY, AREAS OF OXIDATION, QUARTZ, WAFICS, WET, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOR.
						X	6			
39							5			
					X	5				
40						6				

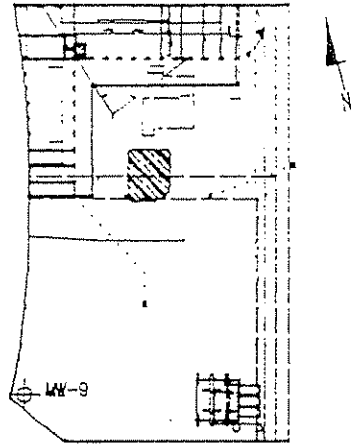
LOCATION OF BORING 	SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
	PROJECT NO.		004-88-059		MW-4	
	WATER LEVEL				SHEET 3	
	TIME				OF 3	
	DATE				DRILLER	
	CASING DEPTH ESTIMATED				START	FINISH
	DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
	DRILLER		MIKE MOORE		7:30	4:20
	DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
	SAMPLING METHOD		MPS		3-20-89	3-20-89
LOGGER		ERIC HOLM				
N/S		N 2484.9	E/W	E 3023.1	ELEV. 14.84	
BORING DIAMETER:		70 INCHES		WELL CASING DIAMETER:		4 INCHES
REVIEWED BY:						DATE

DIST. FROM SURF.	WELL CONST.		LEGGED	TVL READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	SPILLER								
				0		X	6	SM		
41	0.030 INCH SLOTTED	#3 SAND				X	7			
42										5
43							0		X	7
44								X	6	
45						X	6	SM	MEDIUM SAND- SOME SILT, REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, MAFICS, WET, NON-PLASTIC, MEDIUM DENSE, NO ODOR.	
46						X	6			
47								TD	SAMPLE COULD NOT BE RETAINED AFTER 4 ATTEMPTS WITH SAND CATCHER.	
48									2 BAGS OF CEMENT	
49									1-5 GAL. BUCKET OF BENTONITE PELLETS.	
50									14 1/2 BAGS OF #3 SAND.	

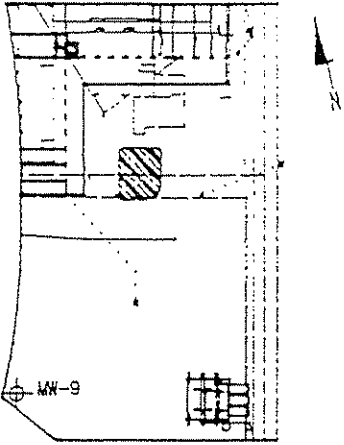


SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-86-059		MW-6	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		ENSCO SERVICES		TIME	TIME
DRILLER		J R		14:00	14:30
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		MPS		3-17-89	3-17-89
LOGGER		NICK COFFEE			
N/S	N 2834.0	E/W	E 3259.1	ELEV. 14.79	
BORING DIAMETER:		6 INCHES		WELL CASING DIAMETER: 2 INCHES	
REVIEWED BY:				DATE	

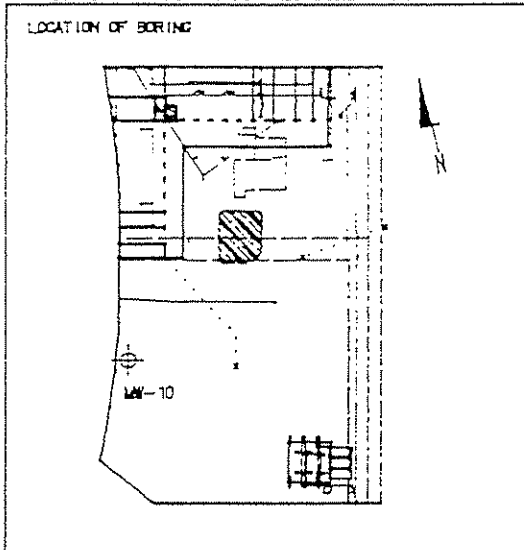
D.IST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1	BLANK	4% BENTONITE CEMENT SLURRY						SP	CONCRETE
2									SAND- OLIVE, VERY FINE TO FINE, ANGULAR TO SUB-ANGULAR GRAINS, LOOSE, HUMID, OILY ODOR.
3									
4							6	SM	SILTY SAND- OLIVE, FINE, SUB-ANGULAR TO SUB-ROUNDED SAND, 15-20% SILT, MEDIUM DENSE, HUMID.
5		3/8" BENT. PELLET			3184		11		3'10" - 4'2" : BLACK, OILY ODOR.
6							19	SC	5'10" - APPROX. 8'0" : BLACK OILY ODOR WITH 10% CLAY.
7									
8								SP	SAND- OLIVE, VERY FINE TO FINE, SUB-ANGULAR TO SUB-ROUNDED, UP TO 3% SILT + CLAY.
9							8		
10							11		SILTY SAND- LIGHT YELLOWISH BROWN AND OLIVE, MOTTLED, FINE, SUB-ROUNDED TO ROUNDED SAND, 15-20% SILT, LOOSE, WET, LITTLE TO NO ODOR.
11	0.000 INCH SLOT	3/4 SAND			3185		18		
12									
13									
14									
15									
16					3186		3		SILTY SAND- LIGHT YELLOWISH BROWN AND OLIVE, MOTTLED, FINE, SUB-ROUNDED TO ROUNDED SAND, 15-20% SILT, LOOSE, WET, LITTLE TO NO ODOR, OXIDIZED ZONES 1/4" X 1/64-1/32".
17							5		
							9		
								TD	4 BAGS OF #3 SAND 1 BAG OF CEMENT 2/3-5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING		SITE/LOCATION CARNATION/OAKLAND		BORING NO. MW-9	
		PROJECT NO. 004-86-059		SHEET 1 OF 2	
		WATER LEVEL		DRILLER	
TIME		DATE		START	FINISH
CASING DEPTH		DRILLING CONTRACTOR PC EXPLORATION		TIME 7:30	TIME 12:00
DRILLING METHOD HOLLOW STEM AUGER		DRILLER MIKE MOORE		DATE 3-17-89	DATE 3-17-89
SAMPLING METHOD UPS		LOGGER ERIC HOLM			
N/S N 2289.9		E/W E 2856.1		ELEV. 15.77	
BORING DIAMETER: 10 INCHES		WELL CASING DIAMETER: 4 INCHES			
REVIEWED BY:		DATE			

DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLDG'S PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1	FL								ASPHLT
2		1/4 BENTONITE CEMENT SLURRY							
3							7		
4	BLANK						8	SM	
5		3/8" BENT. CEMENT PELLET		0	3661		9		SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, WAFICS, MOIST, PLASTIC, MEDIUM DENSE, NO ODOOR.
6									
7									
8							9		
9				0	3662		10		MEDIUM SAND- REDDISH BROWN, SOME SILT, AREAS OF OXIDATION, QUARTZ, WAFICS, MOIST, NON PLASTIC, MEDIUM DENSE, NO ODOOR.
10									
11		AS SAND							
12									
13									
14	0.030 INCH SLOT						10		
15							12		
16				0			13		MEDIUM SAND- REDDISH BROWN, SOME SILT, AREAS OF OXIDATION, QUARTZ, WAFICS, MOIST, NON PLASTIC, MEDIUM DENSE, NO ODOOR.
17									
18									
19							9		
20				0			11		MEDIUM SAND- REDDISH BROWN, SOME SILT, AREAS OF OXIDATION, QUARTZ, WAFICS, MOIST, NON PLASTIC, MEDIUM DENSE, NO ODOOR.

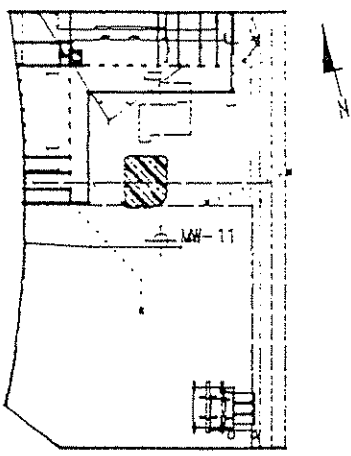
LOCATION OF BORING 	SITE/LOCATION CARNATION/OAKLAND		BORING NO. MW-9	
	PROJECT NO. 004-86-059		SHEET 2 OF 2	
	WATER LEVEL		DRILLER	
	TIME		START	FINISH
	DATE		TIME	TIME
	CASING DEPTH		7:30	12:00
	DRILLING CONTRACTOR PC EXPLORATION		DATE	DATE
	DRILLER MIKE MOORE		3-17-89	3-17-89
	DRILLING METHOD HOLLOW STEM AUGER		SAMPLING METHOD MPS	
	LOGGER ERIC HOLM			
N/S N 2289.9		E/W E 2956.1	ELEV. 15.77	
BORING DIAMETER: 30 INCHES		WELL CASING DIAMETER: 4 INCHES		
REVIEWED BY:		DATE		

DIST. FROM SURF.	WELL CONST.		LEND	TV. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL		
	CASING	ANNULUS									
21	BLANK	#3 SAND	[Pattern]					SP			
22											
23											
24									X	7	
25							0		X	9	
								TD	MEDIUM SAND- REDDISH BROWN, SOME SILT, AREAS OF OXIDATION, QUARTZ, MAFICS, MOIST, NON PLASTIC, MEDIUM DENSE, NO COOR.		
									7 BAGS OF #3 SAND		
									1 1/2 BAGS OF CEMENT		
									1-5 GALLON BUCKET OF BENTONITE		

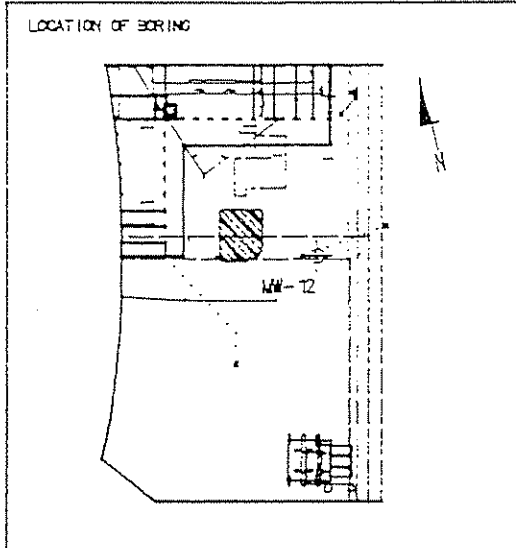


SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-059		MW-10	
WATER LEVEL				SHEET 1	
TIME				OF 2	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER		MIKE MOORE		1215	510
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		MPS		3-16-89	3-16-89
LOGGER		ERIC HOLM			
N/S	N 2373.5	E/W	E 2833.0	ELEV. 18.04	
BORING DIAMETER:		10 INCHES		WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY:				DATE	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDN'S PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1								GP	ASPHLT GRAVELY SAND- GRAYISH BROWN GRAVEL ANGULAR 1/2" 10 & 1 1/2" QUARTZ MAFICS, SLIGHTLY MOIST, SOME ORGANICS, NON- PLASTIC MEDIUM DENSE, NO ODOR.
2									
3									
4	BLANK	4% BENTONITE CEMENT SLURRY				X	8		BRICK PIECES
5		3/8" BENT. PELL.		0	3887	X	7	SM	SILTY SAND- TANNISH BROWN, SOME GRAVEL, QUARTZ, MAFICS, SLIGHTLY MOIST, NON-PLASTIC, MEDIUM DENSE, NO ODOR.
6									
7									
8									
9						X	5	SP	
10				0	3658	X	6		MEDIUM SAND- SOME SILT, BROWN, TRACE OF QUARTZ, MAFICS, LAMINATIONS HORIZONTAL, MOIST, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOR.
11									
12									
13									
14						Y	8		SILTY SAND- GRAY AND BROWN AREAS OF OXIDATION, QUARTZ, MAFICS, WET, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOR.
15				0		X	8		
16									
17								SM	
18									
19						Y	5		
20				0		X	7		SILTY SAND- GRAY AND BROWN AREAS OF OXIDATION, QUARTZ, MAFICS, WET, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOR.

LOCATION OF BORING 	SITE/LOCATION CARNATION/OAKLAND		BORING NO. NW-11	
	PROJECT NO. 004-88-059		SHEET 1 OF 2	
	WATER LEVEL		DRILLER	
	TIME		START	FINISH
	DATE		TIME	TIME
	CASING DEPTH		7:15	10:10
	DRILLING CONTRACTOR PC EXPLORATION		DATE	DATE
	DRILLER MIKE MOORE		3-21-89	3-21-89
	DRILLING METHOD HOLLOW STEM AUGER			
	SAMPLING METHOD MPS			
LOGGER ERIC HOLM				
N/S N 2431.9		E/W E 3727.6	ELEV. 15.06	
BORING DIAMETER: 10 INCHES		CASING DIAMETER: 4 INCHES		
REVIEWED BY:		DATE		

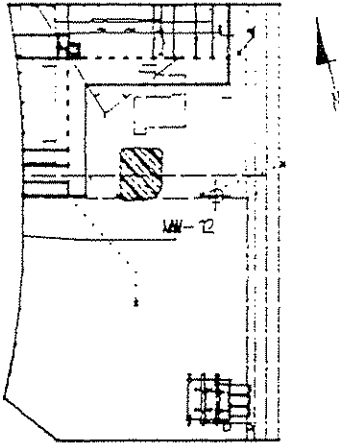
DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEND						
1								GM	ASPHALT
2									GRAVEL
3		4% BENTONITE CEMENT SLURRY					6		
4	BLANK						7		
5		3/8" BENT. PELL.					7		SILTY SAND- REDDISH BROWN, QUARTZ, WAFICS, MOIST, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOOR.
6				J	3671		7		
7							8		
8							9		
9							8		
10							9		
11							7	SM	SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, WAFICS, QUARTZ, SLIGHTLY MOIST, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOOR.
12							6		
13							7		
14	0.000 INCH SLOT						7		
15							8		
16							7		
17							7		
18							7		
19							7		
20							8		SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, WAFICS, QUARTZ, WET, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOOR.



SITE/LOCATION		CARNATION/DAYLAND		BORING NO.	
PROJECT NO.		004-88-059		WM-12	
WATER LEVEL				SHEET 1	
TIME				OF 2	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER		MIKE MOORE		10:00	1:00
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		MPS		3-21-89	3-21-89
LOGGER		ERIC HOLM			
N/S	N 2450.8	E/W	E 3230.5	ELEV. 15.70	
BORING DIAMETER:		10 INCHES		WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY:				DATE	

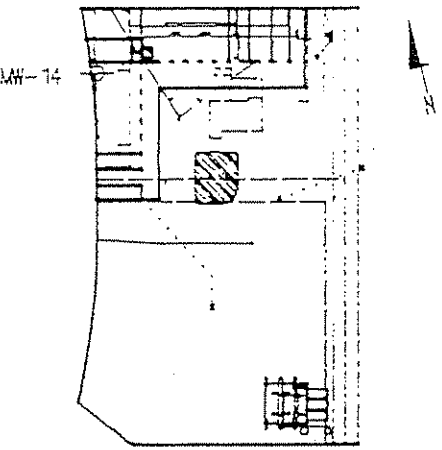
DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									ASPHALT
2								GM	GRAVEL
3									
4	BLANK					X	5		
5		4" BLENDED CEMENT SLURRY				X	5		
5		3/4" REPT. PELL.		11	3679	X	5		SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, WAFICS, MOIST, SLIGHTLY PLASTIC, LOOSE, NO ODOOR.
6						X	6		
7						X	7		
7						X	9		SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, WAFICS, MOIST, SLIGHTLY PLASTIC, LOOSE, MEDIUM DENSE, NO ODOOR.
8						X	8		
9						X	8		
9				9	3680	X	9	SM	SILTY SAND- REDDISH BROWN, AREAS OF OXIDATION, QUARTZ, WAFICS, MOIST, SLIGHTLY PLASTIC, LOOSE, MEDIUM DENSE, NO ODOOR.
10									
11									
12									
13									
14							7		
14	0.020 INCH SLOT					X	8		
15						X	8		SILTY SAND- REDDISH BROWN, QUARTZ, WAFICS, WET, SLIGHTLY PLASTIC, MEDIUM DENSE, NO ODOOR.
16									
17									
18									
19							8	SP	
19							9		
20							9		NO SAMPLE RECOVERED.

LOCATION OF BORING

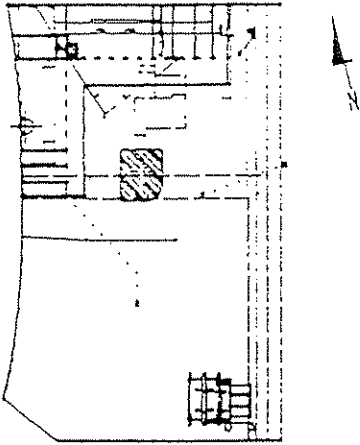


SITE/LOCATION		CARRATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-058		MW-12	
WATER LEVEL				SHEET 2	
TIME				OF 2	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER		MIKE MOORE		10:30	1:00
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		MPS		3-21-89	3-21-89
LOGGER		ERIC HOLM			
N/S	H 2450 JB	E/W	E 3230 JB	ELEV. 15.70	
BORING DIAMETER:			10 INCHES	WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY:			DATE		

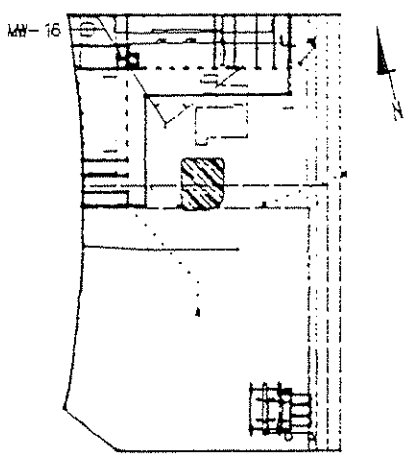
DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWNS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	WALLS	LEND						
21								SM	
22	0.030 INCH SLOT	#3 SAND	[Pattern]					SP	
23									
24						X	8		
25				7		X	9	TD	MEDIUM SAND- SOME SILT, GRAYISH BROWN, QUARTZ, WAFICS, WET, NON-PLASTIC, MEDIUM DENSE, NO OOR.
									7 1/2 BAGS OF #3 SAND
									1 1/2 BAGS OF CEMENT
									1-5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING 	SITE/LOCATION CARNATION/OAKLAND		BORING NO. NW-14		
	PROJECT NO. 004-88-059		SHEET 1 OF 2		
	WATER LEVEL		DRILLER		
	TIME		START FINISH		
	DATE		TIME TIME		
	CASING DEPTH		07:50 08:50		
	DRILLING CONTRACTOR ENSCO SERVICES		DATE DATE		
	DRILLER J R		3-17-89 3-17-89		
	DRILLING METHOD HOLLOW STEM AUGER				
	SAMPLING METHOD MPS				
LOGGER NICK COFFEY					
N/S N 28 19 .1		E/W E 3055.0		ELEV. 14.80	
BORING DIAMETER: 6 INCHES		WELL CASING DIAMETER: 2 INCHES			
REVIEWED BY:		DATE			

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1								SC	CONCRETE
2		4% BENTONITE CEMENT SLURRY						SC	CLAYEY SAND- GREY FINE TO MEDIUM SAND, HUMID.
3								SC	
4	BLANK					0	4	SC	
5		3/8" BENT. PELLET			3149	8	5	SC	CLAYEY SAND- YELLOWISH BROWN, MEDIUM TO COARSE SAND WITH 10-15% CLAY, DAMP.
6						8	8	SC	
7								SC	
8								SC	
9						4	18	SP	SAND- REDDISH BROWN WITH MEDIUM GREY MOTTLING IN 1/4"-1/2" OVALS.
10					3150	6	25	SP	FINE TO MEDIUM SAND, 5-10% CLAY, DENSE, DAMP.
11						6	35	SP	
12								SP	SAND- REDDISH BROWN WITH MEDIUM GREY MOTTLING IN 1/4"-1/2" OVALS,
13	0.030 INCH SLOT					0	10	SM-ML	FINE TO MEDIUM SAND, 5-10% CLAY, DENSE, LOOSE, WET.
14					3151	6	12	SM-ML	SILTY SAND- REDDISH BROWN AND OLIVE, MOTTLED, FINE TO COARSE SAND,
15						6	14	SM-ML	30-50% SILT WITH TRACE CLAY, MEDIUM DENSE, WET.
16								SM-ML	
17								SM-ML	
18								SM-ML	
19								SM-ML	
20								SM-ML	

LOCATION OF BORING 	SITE/LOCATION		CAPNATION/OAKLAND		BORING NO.	
	PROJECT NO.		004-88-059		MW-15	
	WATER LEVEL				SHEET 1	
	TIME				OF 2	
	DATE				DRILLER	
	CASING DEPTH				START	FINISH
	DRILLING CONTRACTOR		ENSCO SERVICES		TIME	TIME
	DRILLER		J R		09:00	10:00
	DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
	SAMPLING METHOD		MPS		3-17-89	3-17-89
LOGGER		NICK COFFEY				
N/S		R 2565 J		ELEV. 14.82		
E/W		E 3041.5				
BORING DIAMETER:		6 INCHES		WELL CASING DIAMETER: 2 INCHES		
REVIEWED BY:				DATE		

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									CONCRETE
2								ML	SANDY SILT- DARK REDDISH BROWN, 30 TO 50% VERY FINE TO FINE, SUB-ANGULAR SAND, LOOSE, HUMID.
3									
4	BLANK				6		8	CL	CLAY- GREY, 3-10% SILT, SOFT, MOIST.
5					3-157	6	11	SP	SAND- YELLOWISH BROWN, FINE, ANGULAR TO SUB-ANGULAR, MEDIUM DENSE, DRY.
6						6	12	SP	SAND- REDDISH BROWN, FINE, ANGULAR TO SUB-ANGULAR, WITH UP TO 5% CLAY, MEDIUM DENSE, HUMID.
7								SP-	
8								SC	GRADING TO CLAYEY SAND, 10-20% CLAY.
9									
10									
11						6	11		SILTY SAND- YELLOWISH BROWN AND LIGHT OLIVE, MOTTLED, FINE
12					3-158	6	21		SUB-ANGULAR SAND WITH 20% SILT + CLAY, LOOSE, MOIST.
13					3-159	6	17		
14									
15									
16									
17									
18									
19									
20							13		
							21		

LOCATION OF BORING 	SITE/LOCATION CARNATION/OAKLAND			BORING NO. MW-16	
	PROJECT NO. 004-85-059			SHEET 1 OF 2	
	WATER LEVEL			DRILLER	
	TIME			START	
	DATE			FINISH	
	CASING DEPTH			TIME	TIME
	DRILLING CONTRACTOR ENSCO SERVICES			13:20	18:20
	DRILLER FRANK BARTOLVICH			DATE	DATE
	DRILLING METHOD HOLLOW STEM AUGER			3-22-89	3-22-89
	SAMPLING METHOD				
LOGGER KARL ANANIA					
N/S N 2689.0		E/W E 3067.6	ELEV. 14.78		
BORING DIAMETER: 6 INCHES			WELL CASING DIAMETER: 2 INCHES		
REVIEWED BY:			DATE		

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL		
	CASING	ANNULUS	LEAD								
1		4# BENTONITE CEMENT SLURRY	LEAD					FILL	ASPHALT		
2									BLACK DARK BROWN SOIL.		
3											
4	2" PVC BLANK									SANDY SILT- LIGHT BROWN WITH MINOR CLAY, SOFT, MOIST TO DRY, NO odor.	
5		3/8" BENT. PELL.									
6		#3 SAND	SAND				6	ML			
6				0	3973		12				
7							21				
8											
9											
10											
11					0	3974			9		SANDY SILT- LIGHT BROWN, BECOMING VERY WET.
11									11		
11									21		
12											
13											
14	0.030 INCH SLOT										
15											
16											
17											
18											
19											
20											

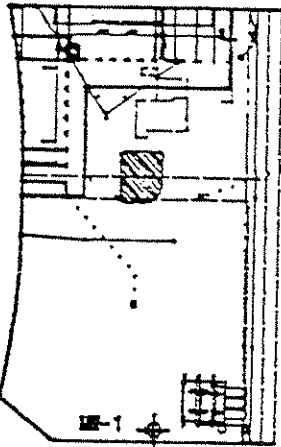
Appendix A

AGE BORING LOGS AND WELL COMPLETION DETAILS

FROM Harding Lawson Associates Site
Characterization Report, 17 September 1991

MW1 - MW16, MW-0525 - MW-0530, PR1 - PR8,
some of the
logs in this
group are
missing

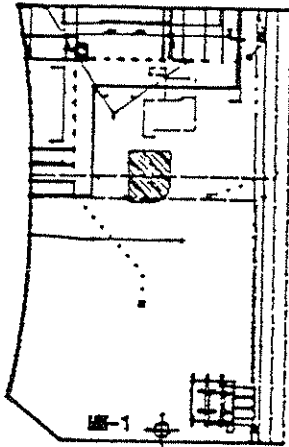
LOCATION OF BORING



SITE/LOCATION		OAKRIDGE/OAKLAND				BORING NO.	
PROJECT NO.		004-05-000				MW-1	
WATER LEVEL ELEVATION		5.55	5.50	5.54	5.28	SHEET 1	
TIME						OF 3	
DATE		4-25-89	6-7-89	7-6-89	7-31-89	DRILLER	
CASING DEPTH ESTIMATED						START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION				TIME	TIME
DRILLER		MIKE MOORE				8:50	11:50
DRILLING METHOD		HOLLOW STEM AUGER				DATE	DATE
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER				3-15-89	3-15-89
LOGGER		ERIC HOLM					
N/S		N 2227.7		E/N		E 3057.1	
						ELEV. 18.82	
BORING DIAMETER:		10 INCHES		WELL CASING DIAMETER:		4 INCHES	
REVIEWED BY:		M.A.M.				DATE 7-6-89	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLY READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1		4% BENTONITE CEMENT SLURRY	[Cross-hatched pattern]			X	5	GP	REFLECTIVE CONCRETE
2				0		X	5	GP	SANDY GRAVEL- BLACK-BROWN, DRY TO MOIST, CLASTS ARE ANGULAR 3/4" GRAY QUARTZ, MAFICS, MEDIUM DENSE, NO HYDROCARBON ODOOR.
3				0		X	6	SM	
4						X	7		
5	BLANK	3/8" BENT. PELLETS	[Diagonal hatched pattern]	0	3640	X	5		SILTY SAND- RED-BROWN, MOIST, MEDIUM DENSE, AREAS OF OXIDATION, QUARTZ, MAFICS, NO HYDROCARBON ODOOR.
6						X	7		
7						X	7		
8						X	8		
9						X	10		
10				0	3650	X	7		NO HYDROCARBON ODOOR.
11						X	8		
12						X	10		
13						X	10		
14						X	10		
15						X	10		
16						X	10		
17						X	10		
18						X	10		
19						X	10		
20						X	10		
21						X	10		
22						X	10		
23						X	10		
24						X	10		
25						X	10		
26						X	10		
27						X	10		
28						X	10		
29						X	10		
30						X	10		
31						X	10		
32						X	10		
33						X	10		
34						X	10		
35						X	10		
36						X	10		
37						X	10		
38						X	10		
39						X	10		
40						X	10		
41						X	10		
42						X	10		
43						X	10		
44						X	10		
45						X	10		
46						X	10		
47						X	10		
48						X	10		
49						X	10		
50						X	10		
51						X	10		
52						X	10		
53						X	10		
54						X	10		
55						X	10		
56						X	10		
57						X	10		
58						X	10		
59						X	10		
60						X	10		
61						X	10		
62						X	10		
63						X	10		
64						X	10		
65						X	10		
66						X	10		
67						X	10		
68						X	10		
69						X	10		
70						X	10		
71						X	10		
72						X	10		
73						X	10		
74						X	10		
75						X	10		
76						X	10		
77						X	10		
78						X	10		
79						X	10		
80						X	10		
81						X	10		
82						X	10		
83						X	10		
84						X	10		
85						X	10		
86						X	10		
87						X	10		
88						X	10		
89						X	10		
90						X	10		
91						X	10		
92						X	10		
93						X	10		
94						X	10		
95						X	10		
96						X	10		
97						X	10		
98						X	10		
99						X	10		
100						X	10		

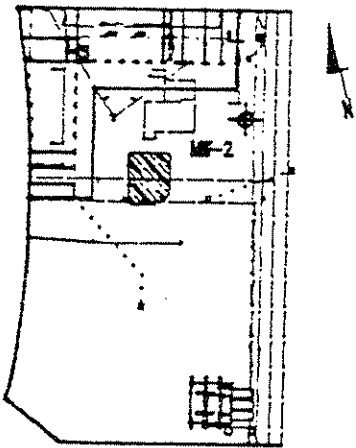
LOCATION OF BORING



SITE/LOCATION				CANNATION/OAKLAND		BORING NO.	
PROJECT NO.				004-88-088		MW-1	
WATER LEVEL ELEVATION		5.56	5.28	5.54	5.28	SHEET 2	
TIME						OF 3	
DATE		4-25-88	6-7-88	7-6-88	7-31-88	DRILLER	
CASING DEPTH EST DATED						START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION				TIME	TIME
DRILLER		MIKE MOORE				8:50	11:50
DRILLING METHOD		HOLLOW STEM AUGER				DATE	DATE
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER				3-15-88	3-15-88
LOGGER		ERIC HOLM					
N/S		N 2227 J		E/W		E 3057.1	
						ELEV. 11.82	
BORING DIAMETER:		10 INCHES		WELL CASING DIAMETER:		4 INCHES	
REVISED BY:		M.A.M.				DATE 7-6-88	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLY READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS								
21			AS SAND			X	18	SP	SAND- GREEN-BROWN, WET, DENSE, MEDIUM TO COARSE GRAINED WITH TRACE SILT, AREAS OF OXIDATION, QUARTZ, MAFICS, NO HYDROCARBON ODOOR.	
						X	19			
							20	SM	SILTY SAND- LIGHT BROWN, WET, DENSE, AREAS OF OXIDATION, QUARTZ, MAFICS, NO HYDROCARBON ODOOR.	
22						X	20			
						X	25			
23						X	20			
						X	21			
24						X	27			
						X	28			
25						X	28			
						X	28			
26						X	28			
						X	21			
27						X	21			
						X	28			
28						X	28			
						X	28			
29						X	21			
						X	28			
30						X	28			
						X	21			
31						X	21		SP	SAND- BROWN, WET, VERY DENSE, MEDIUM GRAINED WITH SOME SILT, QUARTZ, MAFICS, NO HYDROCARBON ODOOR.
						X	26		SM	SILTY SAND- LIGHT BROWN, WET, VERY DENSE, QUARTZ & MAFICS, NO HYDROCARBON ODOOR.
32						X	26			
						X	23			
33						X	26			
						X	26			
34						X	26			
						X	30			
35						X	31			
						22				
36						28				
					X	22				
37					X	28				
					X	28				
38					X	28				
					X	28				
39					X	31				
					X	22				
40					X	30			NO HYDROCARBON ODOOR.	

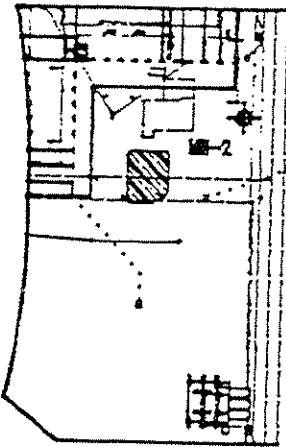
LOCATION OF BORING



SITE/LOCATION				CARNATION/DAYLAND		BORING NO.	
PROJECT NO.				004-86-050		MW-2	
WATER LEVEL ELEVATION		8.36	8.57	5.28	SHEET 1		
TIME						OF 2	
DATE		4-25-88	6-7-88	7-5-88	DRILLER		
CASING DEPTH						START	FINISH
						TIME	TIME
						7:30	12:00
DRILLING CONTRACTOR				PC EXPLORATION			
DRILLER				MIKE MOORE			
DRILLING METHOD				HOLLOW STEM AUGER			
SAMPLING METHOD				140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER				ERIC HELM			
N/S		E 2500.0		E/W		E 3233.0	
						ELEV. 15.52	
BORING DIAMETER:				10 INCHES		WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY: M.A.M.				DATE 7-5-88			

DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1								GP	ASPHALTIC CONCRETE
2				120		X	5	SM	SANDY GRAVEL - BROWN, MOIST, MEDIUM DENSE
3						X	5		
4	BLANK					X	4		
5						X	5		
6				130	3838	X	6		
7						X	7		
8						X	10		
9				140		X	14		COLOR CHANGE TO REDDISH BROWN, HYDROCARBON ODOOR.
10						X	8		
11						X	9		
12				150		X	9		
13					3838	X	10		
14						X	11		
15				70		X	12		
16						X	8		
17						X	9		
18				85		X	9		
19						X	8		
20				85		X	8		
21						X	7		GRADES WITH LENSES OF GRAY SAND; AREAS OF OXIDATION.
22						X	7		
23				150		X	7		
24						X	7		REDDISH BROWN, NO HYDROCARBON ODOOR.
25						X	8		
26				20		X	7		
27						X	8		
28						X	8		
29				20		X	8		NO HYDROCARBON ODOOR.
30						X	7		
31						X	8		
32						X	9		
33						X	7		
34						X	8		
35						X	9		
36						X	7		
37						X	8		
38						X	9		
39						X	7		
40						X	8		
41						X	9		
42						X	7		

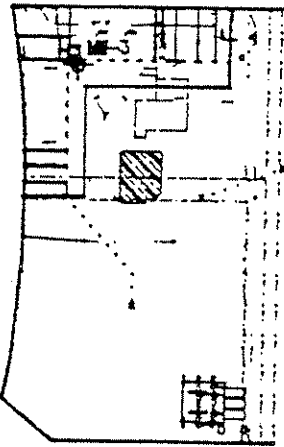
LOCATION OF BORING



SITE/LOCATION CARNATION/DAKLAND				BORING NO. MW-2	
PROJECT NO. 004-85-054				SHEET 2 OF 2	
WATER LEVEL	8.34	8.57	8.28	DRILLER	
TIME				START	FINISH
DATE	4-25-80	6-7-80	7-6-80	7:00	12:00
CASING DEPTH				DATE	DATE
DRILLING CONTRACTOR PC EXPLORATION				3-22-80	3-22-80
DRILLER MIKE MOORE					
DRILLING METHOD HOLLOW STEM AUGER					
SAMPLING METHOD 140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER ERIC HELM					
N/S	N 2800.9	E/W	E 3203.9	ELEV. 15.52	
BORING DIAMETER: 10 INCHES			WELL CASING DIAMETER: 4 INCHES		
REVIEWED BY: M.J.M.				DATE: 7-10-80	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLY READING	SAMPLE NO.	RECOVERY	BLDG PER 6 IN.	USCS	LOG OF MATERIAL		
	CASING	ANNULAR									
21	0.030 INCH SLIT	#3 SAND				X	9	SP	SAND - BROWN, BET. MEDIUM DENSE, MEDIUM GRAINED WITH AREAS OF OXIDATION AND GRAY SAND NO ODOR.		
22						X	9				
23											9
24						10				X	10
25										X	11
26						12				X	8
28										X	8
								TD	TEST BORING ELIMINATED @ 25' ON 3-22-80		
									MATERIALS: 7 BAGS OF #3 SAND		
									2 BAGS OF CEMENT		
									1-5 GALLON BUCKET OF BENTONITE		

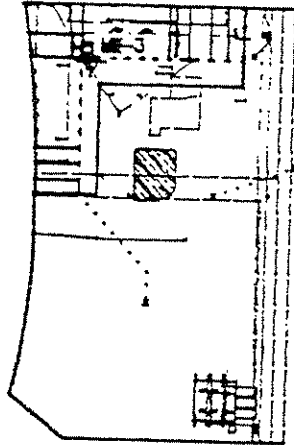
LOCATION OF BORING



SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-058		MW-3	
WATER LEVEL ELEVATION		4.22	4.75	SHEET 1	
TIME				OF 2	
DATE		7-5-89	7-31-89	DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER		MIKE MOORE		1:15	4:20
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		1404 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		3-21-89	3-21-89
LOGGER		ERIC HOLM			
M/S	N2813.2	E/W	E314.7	ELEV. 14.86	
BORING DIAMETER:		10 INCHES		WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY:		M.A.W.		DATE: 7-10-89	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									ASPHALTIC CONCRETE
2								GM	SILTY GRAVEL- GRAY, MOIST, MEDIUM DENSE.
3						X	5		
4	BLANK			150	3829	X	6		SILTY SAND- GREENISH GRAY, SLIGHTLY MOIST, MEDIUM DENSE WITH MAFICS, QUARTZ, HYDROCARBON ODOOR.
5		3/8" BENT. PELL.			3830	X	6		
6					3831	X	7	SM	
7				220	3832	X	7		COLOR CHANGES TO REDDISH BROWN
8						X	8		HYDROCARBON ODOOR
9				660	3833	X	8		
10					3834	X	9	ML	SANDY SILT- MOTTLED AND REDDISH BROWN, GRAY, MOIST, MEDIUM STIFF, HYDROCARBON ODOOR.
11									
12									
13									
14	0.000 INCH LOT				3835	X	8		
15				45	3836	X	8		SILTY SAND- RED BROWN, WET, MEDIUM DENSE WITH MINOR LAMINATIONS, MAFICS, NO HYDROCARBON ODOOR.
16					3837	X	8		
17						X	7	SM	
18						X	7		
19						X	5		
20						X	5		
21						X	6		NO HYDROCARBON ODOOR.

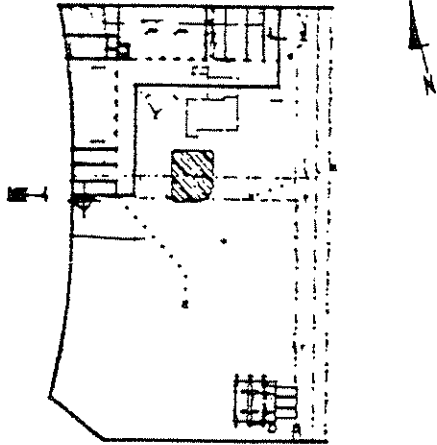
LOCATION OF BORING



SITE/LOCATION		CARMATION/DAKLAND		BORING NO.	
PROJECT NO.		004-88-058		MW-3	
WATER LEVEL ELEVATION		4.22	4.75	SHEET 2	
TIME				OF 2	
DATE		7-5-88	7-31-88	DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER		MIKE MOORE		1:15	4:20
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		3-21-88	3-21-88
LOGGER		ERIC HOLM			
N/S	N 28° 13' 2"	E/W	E 31° 14' 7"	ELEV. 14.86	
BORING DIAMETER: 10 INCHES		BORING DIAMETER: 4 INCHES			
REVIEWED BY: M.A.M.		DATE: 7-10-88			

DIST. FROM SURF.	WELL CONST.		LEGEND	TLY. READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS								
21	0.25 INCH SLIT	#3 SAND	[Pattern]					SM		
22										
23										
24									X	6
25					X	6				
								TD	WITH MINOR LAMINATIONS, MAFICS & QUARTZ, NO HYDROCARBON ODOR.	
									TEST BORING TERMINATED @ 25'	
									MATERIALS: 7 1/2 BAGS OF #3 SAND	
									1 1/2 BAGS OF CEMENT	
									1.5 GALLON BUCKET OF BENTONITE	

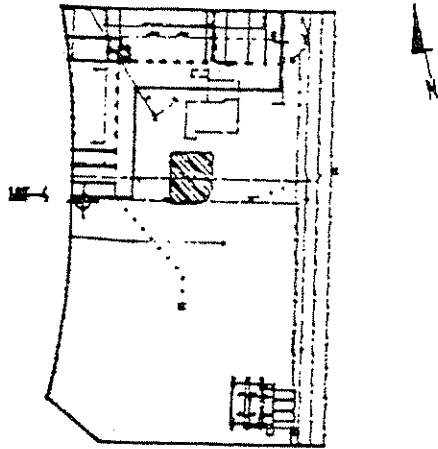
LOCATION OF BORING



SITE/LOCATION				CARNATION/OAKLAND		BORING NO.	
PROJECT NO.				004-88-059		MM-4	
WATER LEVEL ELEVATION		8.29	8.57	5.57	4.92	SHEET 1	
TIME						OF 3	
DATE		4-25-89	6-7-89	7-6-89	7-31-89	DRILLER	
CASING DEPTH ESTIMATED						START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION				TIME	TIME
DRILLER		MIKE MOORE				7:30	4:20
DRILLING METHOD		HOLLOW STEM AUGER				DATE	DATE
SAMPLING METHOD		1/4" HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER				3-15-89	3-15-89
LOGGER		ERIC HOLM					
N/S		N 2484.9		E/W		E 3023.1	
						ELEV. 14.84	
BORING DIAMETER:				10 INCHES		WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY:				M.A.M.		DATE: 8-15-89	

D. DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	WALLS	LEGEND						
1		4" BENTONITE CEMENT SLURRY				X			HYDRAULIC CONCRETE
2						X	7	GM	SANDY GRAVEL- MOIST, MEDIUM DENSE WITH DEBRIS (CERAMIC PIPE PIECES) FILL.
3						X	7		
4	BLANK			25	3681	X	9	SM	
5		3/8" BENT. PELLETS				X	7		SILTY SAND- RED BROWN, DRY TO MOIST, MEDIUM DENSE WITH ORGANICS, QUARTZ, MAFICS, NO HYDROCARBON ODOR.
6						X	8		
7						X	8		
8						X	8		
9						X	7		
10						X	8		
11						X	8	SM-	SILTY SAND/CLAYEY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ, MAFICS, NO HYDROCARBON ODOR.
12						X	7	SC	
13	0.030 INCH SLIT					X	8		
14						X	7		
15						X	8	SM	SILTY SAND- MOTTLED RED BROWN TO GRAY, WET, MEDIUM DENSE, QUARTZ WITH MAFICS, NO HYDROCARBON ODOR.
16						X	8		
17						X	7		SAND- RED BROWN, WET, MEDIUM GRAINED WITH SOME SILT AND AREAS OF OXIDATION, QUARTZ, MAFICS, NO HYDROCARBON ODOR.
18						X	7		
19						X	8	SP	
20						X	8		

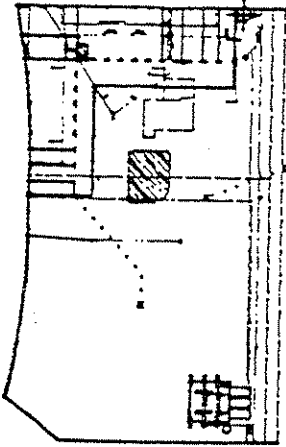
LOCATION OF BORING



SITE/LOCATION		CARBATION/DANLAND				BORING NO.	
PROJECT NO.		004-88-050				MW-4	
WATER LEVEL ELEVATION		8.20	5.57	3.37	4.32	SHEET 2	
TIME						OF 3	
DATE		4-25-88	6-7-88	7-5-88	7-31-88	DRILLER	
CASING DEPTH ESTIMATED						START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION				TIME	TIME
DRILLER		MIKE MOORE				7:30	4:20
DRILLING METHOD		HOLLOW STEM AUGER				DATE	DATE
SAMPLING METHOD		"40# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER				3-20-88	3-20-88
LOGGER		ERIC HOLM					
N/S	N 2444.9	E/W	E 3023.1	ELEV. 14.84			
BORING DIAMETER:		10 INCHES		WELL CASING DIAMETER:		4 INCHES	
REVIEWED BY: M.A.M.				DATE: 7-10-88			

DIST. FROM SURF.	WELL CONST.		LEND	TLY READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
21			DRY SAND			X	8	SP	
						X	9		
						X	10		
22						X	11	SM	
23					3	X	8		
						X	8		
24						X	7		
					5	X	9		
25							10		
26							8		
26				0	X	8	SP		
					X	8			
27					X	8			
				2	X	8			
28						8	SP		
28				0	X	8			
					X	8			
30					X	7			
31						8	SM		
31				0	X	8			
					X	8			
32					X	7			
33						8	SM		
33				0	X	8			
					X	8			
34					X	8			
35						8	SM		
35				3	X	8			
					X	8			
36					X	8			
37						8	SM		
37				2	X	8			
					X	8			
38					X	8			
39						8	SM		
39				7	X	8			
40						8			
40					X	8			

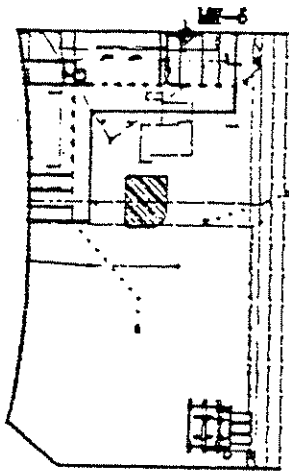
LOCATION OF BORING



SITE/LOCATION				CARRINGTON/DAKLAND		BORING NO.	
PROJECT NO.				004-88-058		MW-5	
WATER LEVEL ELEVATION		6.78	6.41	5.04	4.82	SHEET 2	
TIME						OF 2	
DATE		4-25-88	6-7-88	7-6-88	7-31-88	DRILLER	
CASING DEPTH						START	FINISH
DRILLING CONTRACTOR		ENSICO SERVICES				TIME	TIME
DRILLER		FRANK BARTOLYICH				7:45	11:30
DRILLING METHOD		HOLLOW STEM AUGER				DATE	DATE
SAMPLING METHOD		140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER				3-21-88	3-21-88
LOGGER		KARL AMANTA					
N/S		N 28° 15'		E/W		E 33° 10.7'	
						ELEV. 16.82	
BORING DIAMETER:				10 INCHES		WELL CASING DIAMETER:	
						4 INCHES	
REVISED BY:				M.A.M.		DATE:	
						8-17-88	

DIST. FROM SURF.	WELL CONST.		LEGEND	T.V. READING	SAMPLE NO.	RECOVERY	BLOBS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS								
21	0.100 INCH SLIT	#3 SAND	[Pattern]					ML	SANDY SILT-BROWN, WET, STIFF WITH LENSES OF LIGHT BROWN SILT, CLAY AND FINE SAND.	
22										
23										
24										
25								TD	TEST BORING TERMINATED @ 25' ON 3-21-88 MATERIALS: 4 BAGS OF #3 SAND 1 BAG OF CEMENT 2/3-5 GALLON BUCKET OF BENTONITE	
26										
27										
28										
29										
30										
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39										
40										

LOCATION OF BORING

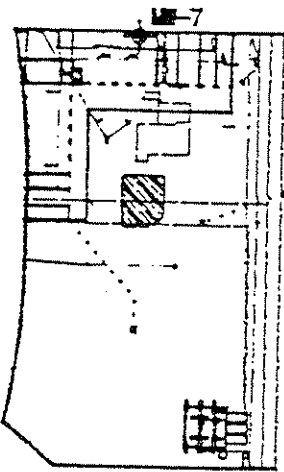


SITE/LOCATION		CARRATION/OAKLAND		BORING NO.
PROJECT NO.		004-88-008		MW-6
WATER LEVEL ELEVATION	8.07			4.08
TIME				
DATE	4-25-88	6-7-88	7-5-88	7-31-88
CASING DEPTH				
DRILLING CONTRACTOR				ENSCO SERVICES
DRILLER				J.R.
DRILLING METHOD				HOLLOW STEM AUGER
SAMPLING METHOD				140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER
LOGGER				KICK COFFEE
N/S	N 284.0	E/W	E 3250.1	ELEV. 14.79
BORING DIAMETER:		6 INCHES		WELL CASING DIAMETER: 2 INCHES
REVIEWED BY:				K.A.M.
				DATE: 8-17-88

DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLOBS PER 6 IN.	USES	LOG OF MATERIAL
	CASING	ANALLIS	LEGEND						
1									PORTLAND CEMENT CONCRETE
2								SP	SAND- OLIVE, MOIST, LOOSE, VERY FINE GRAINED, ANGULAR TO SUB-ANGULAR GRAINS, OILY COOR.
3									
4	BLANK	4" BENTONITE CEMENT SLURRY							
5									
6		3/8" TERT. PELLET			3184		8	SW	SILTY SAND- OLIVE, MOIST, MEDIUM DENSE, FINE GRAINED WITH LITTLE SILT, SUB-ANGULAR TO SUB-ROUNDED SAND.
7									
8									
9									
10									
11	0.000 INCH BLUR								
12									
13									
14									
15									
16					3185		8	SW	SAND- OLIVE, VERY FINE TO FINE GRAINED, SUB-ANGULAR TO SUB-ROUNDED, TRACE SILT.
17									
18									
19									
20									
21									
22									
23									
24					3186		3		LITTLE TO NO COOR, OXIDIZED ZONES 1/4" X 1/8"-1/32".
25									
26									
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--- WATER LEVEL NOT MEASURED, WELL CONTAINED FREE PRODUCT.

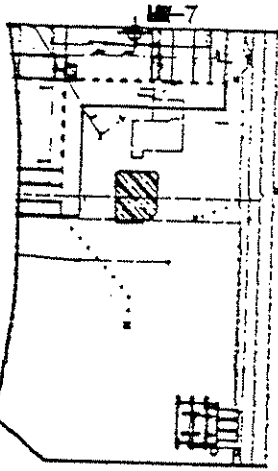
LOCATION OF BORING



SITE/LOCATION				ORRINGTON/DAKLAND		BORING NO.	
PROJECT NO.				004-86-008		MW-7	
WATER LEVEL ELEVATION		---		---		SHEET 1	
TIME		---		---		OF 2	
DATE		4-25-88		6-7-88		DRILLER	
CASTING DEPTH		---		---		START FINISH	
DRILLING CONTRACTOR		ENSCO SERVICES		---		TIME TIME	
DRILLER		J R		---		13:00 13:00	
DRILLING METHOD		HOLLOW STEM AUGER		---		DATE DATE	
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		---		3-18-88 3-18-88	
LOGGER		NICK COFFEY		---		---	
N/S		N 2850.0		E/E		E 3189.2	
BORING DIAMETER:		8 INCHES		WELL CASING DIAMETER:		2 INCHES	
ELEV.		14.74		---		---	
REVIEWED BY: M.A.M.				DATE: 6-17-88			

DIST. FROM SURF.	WELL CONST.			TLY READING	SAMPLE NO.	RECOVERY	BLOBS PER 8 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1		4" BENTONITE CEMENT SLURRY						SM	PORTLAND CONCRETE CEMENT
2									SILTY SAND- GRAY, MOIST, LOOSE TO MED IUM DENSE, FINE GRAINED.
3									
4	BLANK								
5		3/8" BENT. PELLET			323	8	7		GRADES MED IUM DENSE
6						8	10		
7									
8									
9									
10					324	8	21		COLOR CHANGE TO YELLOW BROWN, SILT WITH LITTLE CLAY, SLIGHT GASOLINE ODOR.
11	0.000 INCH SLOT					8	30		
12									
13									
14									
15						N/R	4		
16						N/R	5		
17						N/R	8		
18					325	8	4	SC	CLAYEY SAND- LIGHT YELLOW BROWN, MOIST, LOOSE TO MEDIUM DENSE, FINE GRAINED WITH SOME SILT.
19						8	5		
20						4	8		
21								SP	
22								SC	SAND- YELLOW BROWN, WET, MEDIUM DENSE, FINE GRAINED WITH TRACE SILT.

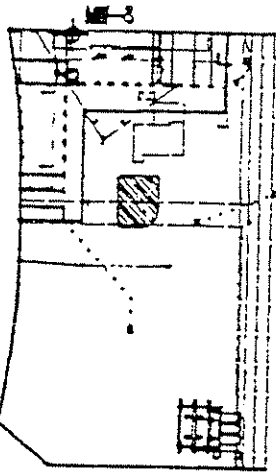
LOCATION OF BORING



SITE/LOCATION				CARPENTON/DAYLAND				BORING NO.	
PROJECT NO.				004-88-008				LAW-7	
WATER LEVEL ELEVATION								SHEET 2	
TIME								OF 2	
DATE		4-25-88		6-7-88		7-6-88		DRILLER	
CASING DEPTH								START FINISH	
DRILLING CONTRACTOR		ENSCO SERVICES						TIME TIME	
DRILLER		J R						13:00 13:50	
DRILLING METHOD		HOLLOW STEM AUGER						DATE DATE	
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER						3-18-88 3-18-88	
LOGGER		KICK COFFEE							
N/S		N 2850.0		E/W		E 3188.2		ELEV. 14.74	
BORING DIAMETER:		6 INCHES		WELL CASING DIAMETER:		2 INCHES			
REVIEWED BY:		M.A.M.						DATE: 8-17-88	

DIST. FROM SURF.	WELL CONST.		LEND	TLY READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
21					384			SC	CLAYEY SAND- YELLOW BROWN, WET, MEDIUM DENSE.
22								SP	SAND- LIGHT YELLOW BROWN, WET, MEDIUM DENSE, FINE GRAINED WITH TRACE SILT.
								TD	TEST BORING TERMINATED @ 22' ON 3-18-88
									MATERIALS: 4 BAGS OF #3 SAND
									1 BAG OF CEMENT
									2/3-5 GALLON BUCKET OF BENTONITE
									----- WATER LEVEL NOT MEASURED, WELL CONTAINED FREE PRODUCT.

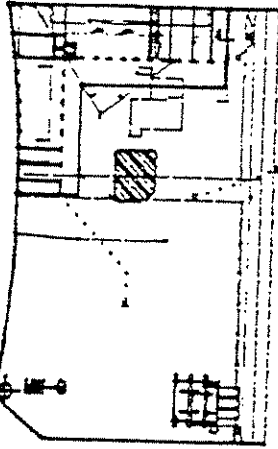
LOCATION OF BORING



SITE/LOCATION		CAPITATION/DARLAND			BORING NO.	
PROJECT NO.		004-88-058			MW-8	
WATER LEVEL ELEVATION					SHEET 1	
TIME		14:30			OF 1	
DATE		3-17-88	4-25-88	6-7-88	DRILLER	
CASING DEPTH		UNCASED			START	FINISH
DRILLING CONTRACTOR		ENESCO SERVICES			TIME	TIME
DRILLER		J R			13:40	14:20
DRILLING METHOD		HOLLOW STEM AUGER			DATE	DATE
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			3-17-88	3-17-88
LOGGER		KICK COFFEE				
N/S	M 2872 J	E/W	E 3128 J	ELEV. 14.77		
BORING DIAMETER:		8 INCHES		WELL CASING DIAMETER: 2 INCHES		
REVIEWED BY:		M.A.M.			DATE: 8-17-88	

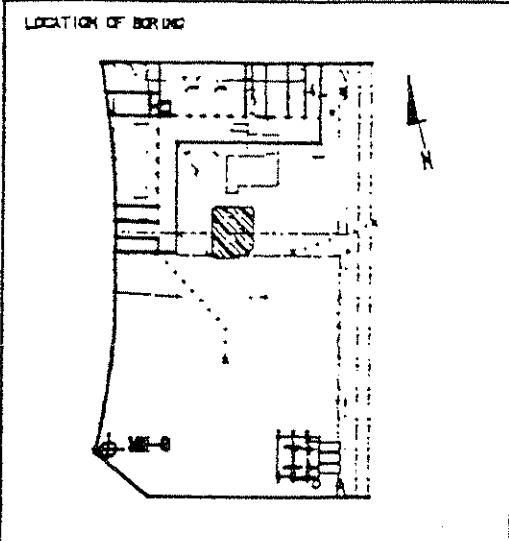
DIST. FROM BLUFF.	WELL CONST.			LEGEND	TLY READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS									
1										PORTLAND CEMENT CONCRETE	
2									ML	SANDY SILT DARK RED BROWN, MOIST, LOOSE WITH FINE ANGULAR TO SUB-ANGULAR SAND FRAGMENTS.	
3									SC	CLAYEY SAND- GREEN-BROWN, MOIST, LOOSE WITH LITTLE SUB-ROUNDED GRAVELS TO 1 1/2" DIAMETER.	
4	BLANK										
5							3181		4	SP	SAND- OLIVE, MOIST, LOOSE, VERY FINE GRAINED.
6									5		
7									6		
8									7	SC	CLAYEY SAND- LIGHT YELLOW BROWN, MOIST, MEDIUM DENSE, SUB-ANGULAR TO SUB-ROUNDED SAND.
9											
10						10.000	3182		12	SM	SILTY SAND- LIGHT YELLOW BROWN, MOIST, MEDIUM DENSE, SUB-ROUNDED SAND WITH TRACE CLAY, BASELINE ODR.
11									13		
12									14		
13									15		
14									16	SC	CLAYEY SAND- MOTTLED LIGHT YELLOW BROWN AND OLIVE, WET, LOOSE WITH SOME SILT, SLIGHT HYDROCARBON ODR.
15									17		
16							3183		4		
17									6		
								8			
										TEST BORING TERMINATED @ 17' ON 3-17-88	
										WATER LEVEL NOT MEASURED, WELL CONTAINED FREE PRODUCT.	

LOCATION OF BORING



SITE/LOCATION		CARRINGTON/DARLAND		BORING NO.	
PROJECT NO.		004-88-058		15W-9	
WATER LEVEL ELEVATION		6.4	8.38	SHEET 1	
TIME				OF 2	
DATE		4-25-88	6-7-88	DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		7-30	2-30
DRILLER		MIKE MOORE		DATE	DATE
DRILLING METHOD		HOLLOW STEEL AUGER		3-17-88	3-17-88
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER		ERIC HOLM			
N/S		N 2288.3	E/W	E 2866.1	ELEV. 18.77
BORING DIAMETER:		10 INCHES		WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY:		M.A.M.		DATE: 8-18-88	

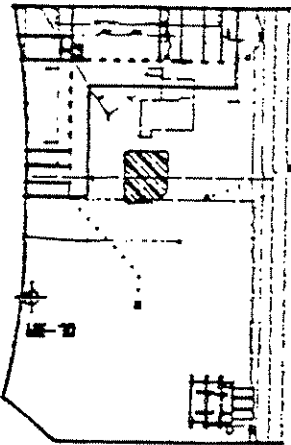
DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOBS PER 6 IN.	UBCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									ASPHALTIC CONCRETE
2								SM	SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH AREAS OF OXIDATION, QUARTZ, MAFICS, NO HYDROCARBON ODOR.
3									
4	BLANK						7		
5							8		
6		3/8" BENTONITE PELL.		0	3401		9		
7									
8							10	SP	
9					3402		11		SAND- RED BROWN, MOIST, MEDIUM GRAINED WITH SOME SILT, AREAS OF OXIDATION, QUARTZ, MAFICS, NO HYDROCARBON ODOR.
10							12		
11							13		
12							14		
13	0.750 INCH SLOT						15		
14							16		NO HYDROCARBON ODOR.
15							17		
16							18		
17							19		
18							20		
19							21		
20							22		NO HYDROCARBON ODOR.



SITE/LOCATION				OAKMATION/OAKLAND		BORING NO.	
PROJECT NO.				004-88-069		MW-9	
WATER LEVEL ELEVATION		8.4	5.28			SHEET 2	
TIME						OF 2	
DATE		4-25-89	8-7-89	7-5-89	7-31-89	DRILLER	
CASING DEPTH						START	FINISH
DRILLING CONTRACTOR				PC EXPLORATION		TIME	TIME
DRILLER				MIKE MOORE		7:30	12:00
DRILLING METHOD				HOLLOW STEEL AUGER		DATE	DATE
SAMPLING METHOD				140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		3-17-89	3-17-89
LOGGER				ERIC HOLM			
N/S		N 2289.9	E/W	E 2956.1	ELEV.	18.77	
BORING DIAMETER:				10 INCHES		WELL CASING DIAMETER: 4 INCHES	
REVIEWED BY:				M.A.M.		DATE: 8-18-89	

DIST. FROM SURF.	WELL CONST.		LEND	TLY READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
21								SP	
22									
23									
24						X	7		
24						X	8		NO HYDROCARBON COOR.
25				0		X	8		
								TD	TEST BORING TERMINATED @ 25' ON 3-17-89
									MATERIALS: 7 BAGS OF #3 SAND
									1 1/2 BAGS OF CEMENT
									1-6 GALLON BUCKET OF BENTONITE

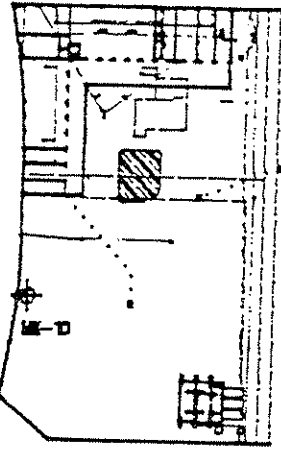
LOCATION OF BORING



SITE/LOCATION		CONVATION/OAKLAND				BORING NO.	
PROJECT NO.		004-08-008				MW-10	
WATER LEVEL ELEVATION		6.41	5.90	5.23	4.08	SHEET 1	
TIME						OF 2	
DATE		4-25-88	6-7-88	7-6-88	7-31-88	DRILLER	
CASING DEPTH						START	FINISH
DRILLING CONTRACTOR		PG EXPLORATION				TIME	TIME
DRILLER		MIKE MOORE				1215	518
DRILLING METHOD		HOLLOW STEM AUGER				DATE	DATE
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER				3-18-88	3-18-88
LOGGER		ERIC HOLM					
N/S		X 2273 J	E/E	E 2833 J	2982.6	ELEV. 18.04	
BORING DIAMETER:		10 INCHES		WELL CASING DIAMETER: 4 INCHES			
REVIEWED BY:		M.A.M.				DATE: 8-17-88	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLADES PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1		44 BENTONITE CEMENT SLURRY						GP	APPLIED CONCRETE
2									GRAVELLY SAND- GRAY BROWN, DRY TO MOIST WITH MAFICS, GRAVEL ANGULAR 1/2" TO 1 1/2" QUARTZ, MEDIUM DENSE, SOME ORGANICS, NO HYDROCARBON ODOR, (FILL)
3									
4	BLANK					X	8		BRICK PIECES
5		3/8" BENT. PELL.		0	3867	X	7	SM	SILTY SAND- LIGHT BROWN, MOIST, MEDIUM DENSE WITH SOME GRAVEL, QUARTZ MAFICS, NO HYDROCARBON ODOR.
6									
7									
8						X	5	SP	
9						X	6		
10				0	3868	X	6		SAND- SOME SILT, BROWN, MOIST, MEDIUM DENSE, WITH TRACE OF QUARTZ MAFICS, LAMINATIONS-HORIZONTAL, NO HYDROCARBON ODOR.
11									
12									
13									
14	0.000 INCH SLOT								
15								SM	SILTY SAND- GRAY AND BROWN, WET, MEDIUM DENSE, AREAS OF COAGULATION QUARTZ, MAFICS, NO HYDROCARBON ODOR.
16						X	8		
17									
18									
19									
20									NO HYDROCARBON ODOR.

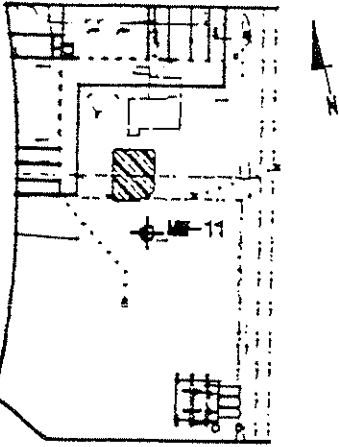
LOCATION OF BORING



SITE/LOCATION		OAKLAND/OAKLAND				BORING NO.	
PROJECT NO.		004-88-058				MW-10	
WATER LEVEL ELEVATION	6.41	5.88	5.25	5.08	SHEET 2		
TIME					OF 2		
DATE	4-28-88	6-7-88	7-6-88	7-31-88	DRILLER		
CASING DEPTH					START	FINISH	
DRILLING CONTRACTOR	PC EXPLORATION				TIME	TIME	
DRILLER	MIKE MOORE				1245	368	
DRILLING METHOD	HOLLOW STEM AUGER				DATE	DATE	
SAMPLING METHOD	140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER				3-16-89	3-16-89	
LOGGER	ERIC HELM						
N/S	N 2573 J		E/W		E 2983 J		
					ELEV. 18.04		
BORING DIAMETER:	10 INCHES			WELL CASING DIAMETER: 4 INCHES			
REVIEWED BY:	M.A.M.				DATE: 8-17-88		

DIST. FROM SURF.	WELL CONST.			LEND	T.V. READING	SAMPLE NO.	RECOVERY	BLOCS PER 6 IN.	UGCS	LOG OF MATERIAL
	CASING	ANNULUS	LEND							
21									SM	
22										
23										
24	0.030 INCH SLUT							7		
25							X	8		
26							X	8		
									TD	NO HYDROCARBON ODOR.
									TD	TEST BORING TERMINATED AT 27'
									TD	MATERIALS: 7 1/2 BAGS OF #3 SAND
									TD	1 1/4 BAGS OF CEMENT
									TD	1-5 GALLON BUCKET OF BENTONITE

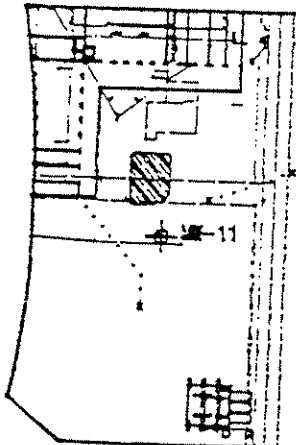
LOCATION OF BORING



SITE/LOCATION				OAKRIDGE/OAKLAND		BORING NO.	
PROJECT NO.				004-88-058		MW-11	
WATER LEVEL ELEVATION		8.48	5.7	3.72	5.07	SHEET 1	
TIME						OF 2	
DATE		4-25-89	6-7-89	7-8-89	7-31-89	DRILLER	
CASING DEPTH						START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION				TIME	TIME
DRILLER		MIKE MOORE				7:15	10:0
DRILLING METHOD		WELDED STEM AUGER				DATE	DATE
SAMPLING METHOD		140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER				3-21-89	3-21-89
LOGGER		ERIC HOLM					
N/S		M 2431.8	E/W	E 3127.8	ELEV.	15.06	
BORING DIAMETER:		10 INCHES		CASING DIAMETER:		4 INCHES	
REVIEWED BY:				M.A.M.		DATE: 8-17-89	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1								GM	ASPHALTIC CONCRETE
2								SM	SILTY GRAVEL - MOIST, MEDIUM DENSE.
3									
4	BLANK						6		
5							7		
6							7		SILTY SAND - RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ, MAFICS, NO HYDROCARBON ODOR.
7							8		
8							8		
9							8		
10							8		
11							8		
12							8		
13							8		
14							8		
15							8		
16							8		
17							8		
18							8		
19							8		
20							8		
21							8		
22							8		
23							8		
24							8		
25							8		
26							8		
27							8		
28							8		
29							8		
30							8		
31							8		
32							8		
33							8		
34							8		
35							8		
36							8		
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40							8		
41							8		
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50							8		

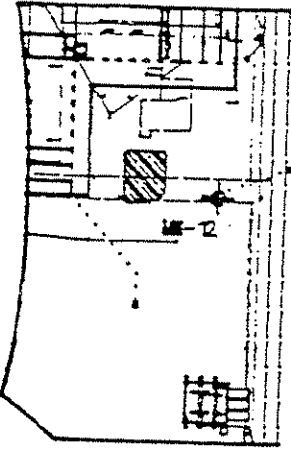
LOCATION OF BORING



SITE/LOCATION				CANNATION/DAKLAND				BORING NO.		
PROJECT NO.				004-88-008				MW-11		
WATER LEVEL ELEVATION		8.45	8.7	3.72	8.07	SHEET 2		OF 2		
TIME						DRILLER				
DATE		4-25-88	6-7-88	7-5-88	7-31-88	START	FINISH			
CASING DEPTH						TIME	TIME			
DRILLING CONTRACTOR		PC EXPLORATION						7:15	10:10	
DRILLER		MIKE MOORE						DATE	DATE	
DRILLING METHOD		HOLLOW STEM AUGER						3-21-88	3-21-88	
SAMPLING METHOD		"MOY" HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER								
LOGGER		ERIC HOLM								
N/S		K 2431.8		E/W		E 3227.8		ELEV.	15.08	
BORING DIAMETER:				10 INCHES		WELL CASING DIAMETER:				4 INCHES
REVIEWED BY:				M.A.M.		DATE:				8-17-88

DIST. FROM SURF.	WELL CONST.		LEND	TLY HEAD ING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL		
	CASING	ANNULUS									
21	0.030 INCH SLOT	#3 SAND	[Pattern]					SM			
22											
23											
24											
25				0			7	TD	NO HYDROCARBON COOR.		
26							7		TEST BORING TERMINATED @ 25'		
27							7		MATERIALS: 7 BAGS OF #3 SAND		
									1 1/2 BAGS OF CEMENT		
									1-5 GALLON BUCKET OF BENTONITE		

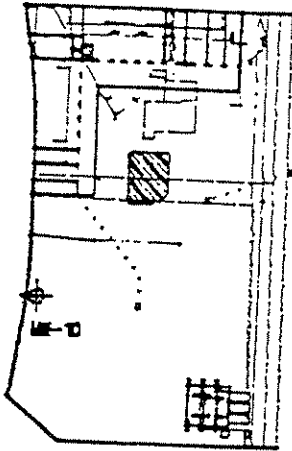
LOCATION OF BORING



SITE/LOCATION				CORINTH/DARLAND				BORING NO.	
PROJECT NO.				004-85-008				MW-12	
WATER LEVEL ELEVATION		6.46	6.26	5.28	5.14	SHEET 1			
TIME						OF 2			
DATE		4-25-88	6-7-88	7-6-88	7-31-88	DRILLER			
CASTING DEPTH						START	FINISH		
DRILLING CONTRACTOR		PC EXPLORATION				TIME	1:00		
DRILLER		MCKE MOORE				TO:TO			
DRILLING METHOD		HOLLOW STEM AUGER				DATE	DATE		
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER				3-21-88	3-21-88		
LOGGER		ERIC HOLM							
N/S		N 3480 J		E/W		E 3220 J		ELEV. 75.70	
BORING DIAMETER: 10 INCHES				WELL CASING DIAMETER: 4 INCHES					
REVIEWED BY: M.J.M.				DATE: 8-17-88					

DIST. FROM SURF.	WELL CONST.			TLY READING	SAMPLE NO.	RECOVERY	BLDG PER 6 IN.	UNCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									ASPHALTIC CONCRETE
2								GM	SILTY GRAVEL- MOIST MEDIUM DENSE.
3									
4	BLANK					X	5		
5		3/8" BENTONITE CEMENT SLURRY				X	5		
6		3/8" BENTONITE CEMENT PELLS		71	3679	X	5		SILTY SAND- RED BROWN, MOIST, LOOSE WITH AREAS OF OXIDATION. QUARTZ, MAFICS, NO HYDROCARBON ODOOR.
7						X	6		
8						X	7		
9						X	8		NO HYDROCARBON ODOOR.
10						X	8		
11						X	8	SM	NO HYDROCARBON ODOOR.
12						X	8		
13						X	8		
14						X	7		
15						X	8		GRADES, NET, NO HYDROCARBON ODOOR.
16						X	8		
17						X	8		
18						X	8		
19						X	8		NO SAMPLE RECOVERED.
20						X	8		
21						X	8		
22						X	8		
23						X	8		
24						X	8		
25						X	8		
26						X	8		
27						X	8		
28						X	8		
29						X	8		
30						X	8		
31						X	8		
32						X	8		
33						X	8		
34						X	8		
35						X	8		
36						X	8		
37						X	8		
38						X	8		
39						X	8		
40						X	8		
41						X	8		
42						X	8		
43						X	8		
44						X	8		
45						X	8		
46						X	8		
47						X	8		
48						X	8		
49						X	8		
50						X	8		

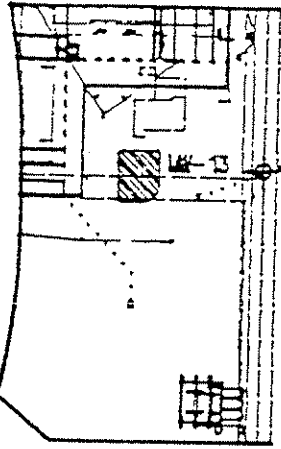
LOCATION OF BORING



SITE/LOCATION		CONVINTION/DANLAND				BORING NO.	
PROJECT NO.		604-88-066				MW-12	
WATER LEVEL ELEVATION		6.45	6.7	3.72	6.27		
TIME					SHEET 2 OF 2		
DATE		4-25-88	6-7-88	7-5-88	7-31-88		
CASTING DEPTH					DRILLER		
DRILLING CONTRACTOR		PC EXPLORATION				START	FINISH
DRILLER		MIKE MOORE				TIME	TIME
DRILLING METHOD		HOLLOW STEM AUGER				1988	1988
SAMPLING METHOD		140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER				DATE	DATE
LOGGER		ERIC HELM				3-21-89	3-21-89
N/S		N 2480 J	E/W		E 3220 J	ELEV. 15.70	
BORING DIAMETER:		10 INCHES		WELL CASTING DIAMETER:		4 INCHES	
REVIEWED BY:		M.A.M.				DATE: 6-17-88	

DIST. FROM SURF.	WELL CONST.		LEND	TLY. READING	SAMPLE NO.	RECOVERY	BLUES PER 6 IN.	UNCS	LOG OF MATERIAL		
	CASTING	ANNULUS									
21	0.030 INCH SLOT	#3 SAND	[Pattern]					SM			
22											
23											
24								X	8	SP	SANDY- GRAY BROWN, VET. MEDIUM DENSE, QUARTZ, NO HYDROCARBON ODOR.
25					X	9					
26				7		X	9				
								TD	TEST BORING TERMINATED AT 25'		
									MATERIALS: 7 1/2 BAGS OF #3 SAND		
									1 1/2 BAGS OF CEMENT		
									1-5 GALLON BUCKET OF BENTONITE		

LOCATION OF BORING



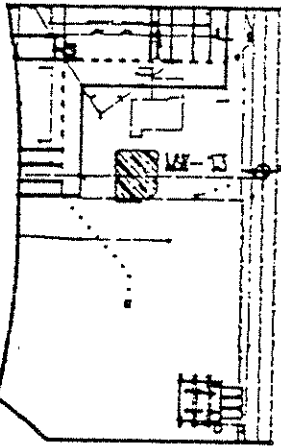
SITE/LOCATION				CANNATION/DAYLAND		BORING NO.	
PROJECT NO.				004-86-008		MW-13	
WATER LEVEL ELEVATION		8.38	8.11	8.3	8.02	SHEET 1	
TIME						OF 2	
DATE		4-25-88	6-7-88	7-6-88	7-31-88	DRILLER	
CASING DEPTH						START	FINISH
DRILLING CONTRACTOR		ENSCO SERVICES				TIME	TIME
DRILLER		FRANK BARTOLYICH				11:45	15:50
DRILLING METHOD		HOLLOW STEM AUGER				DATE	DATE
SAMPLING METHOD		140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER				3-21-88	3-21-88
LOGGER: KARL ANANIA							
N/S		M 2488.7		E/W		E 3290.0	
BORING DIAMETER:		10 INCHES		WELL CASING DIAMETER:		4 INCHES	
ELEV.		16.48		REVIEWED BY: N.A.M.			
				DATE: 8-17-88			

DIST. FROM SURF.	WELL CONST.		LEND	T.V. READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	WALLS							
1									ASPHALTIC CONCRETE
2									AGGREGATE BASEROCK
3									ASPHALTIC CONCRETE
4									AGGREGATE BASEROCK
5									ASPHALTIC CONCRETE
6								GM	SILTY GRAVEL- GRAY, MOIST, MEDIUM DENSE.
7									
8								SC	SILTY SAND- MOTTLED YELLOW BROWN TO DARK BROWN, MOIST TO WET, MEDIUM DENSE, FINE GRAINED WITH TRACE OF CLAY.
9				0	3668		6		
10							7		
11							8		
12									
13							24		
14				0	3670		28		GRADES DENSE
15							40		
16									
17							6		
18							7		
19							11		
20									
21									
22									
23									
24									
25									
26									
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93									
94									
95									
96									
97									
98									
99									
100									

SANDY SILT- BROWN TO LIGHT BROWN, WET, STIFF, FINE GRAINED.

ML

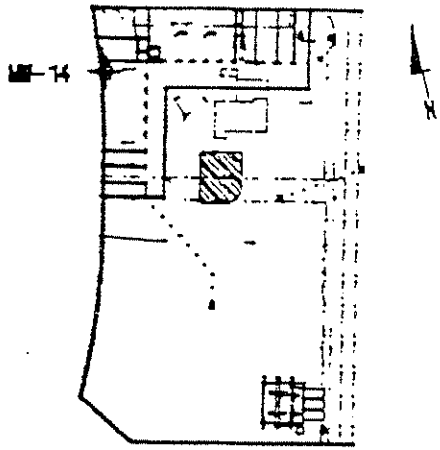
LOCATION OF BORING



SITE/LOCATION				CANNATION/OAKLAND				BORING NO.	
PROJECT NO.				004-88-088				LAW-13	
WATER LEVEL ELEVATION		6.28	6.27	6.3	6.22	SHEET 2			
TIME						OF 2			
DATE		4-25-88	6-7-88	7-5-88	7-31-88	DRILLER			
CASING DEPTH						START	FINISH		
DRILLING CONTRACTOR		ENESCO SERVICES				TIME	TIME		
DRILLER		FRANK BARTOLICHI				11:45	12:50		
DRILLING METHOD		HOLLOW STEM AUGER				DATE	DATE		
SAMPLING METHOD		MOF HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER				3-21-88	3-21-88		
LOGGER		KARL ANANIA							
N/S		N 2489.7		E/W		E 0090.0		ELEV. 15.48	
BORING DIAMETER: 30 INCHES				WELL CASING DIAMETER: 4 INCHES					
REVIEWED BY: M.A.M.				DATE: 6-17-88					

DIST. FROM SURF.	WELL CONST.		LEND	T.V. READING	SAMPLE NO.	RECOVERY	BLDG. PER. # IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
21		#3 SAND	[Pattern]				32	ML	
22							50		
23									
24									
25									
								TD	TEST BORING TERMINATED @ 25'
									MATERIALS: 4 BAGS OF #3 SAND
									1 BAG OF CEMENT
									2/3-3 GALLON BUCKET OF BENTONITE

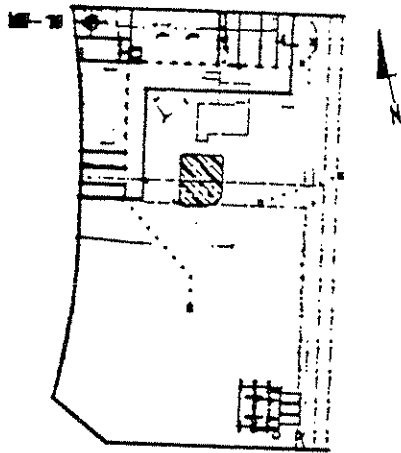
LOCATION OF BORING



SITE/LOCATION		CARNATION/OAKLAND			BORING NO.	
PROJECT NO.		004-88-058			MW-14	
WATER LEVEL ELEVATION		5.34	4.82	4.88	SHEET 1	
TIME					OF 2	
DATE		4-25-89	6-7-89	7-6-89	DRILLER	
CASING DEPTH					START	FINISH
DRILLING CONTRACTOR		ENSCO SERVICES			TIME	TIME
DRILLER		J. R.			07:30	08:30
DRILLING METHOD		HOLLOW STEM AUGER			DATE	DATE
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			3-17-89	3-17-89
LOGGER		NICK COFFEY				
N/S	N 28° 19' .1	E/W	E 3085.0	ELEV. 14.80		
BORING DIAMETER:		8 INCHES		WELL CASING DIAMETER: 2 INCHES		
REVIEWED BY: M.A.M.				DATE: 8-18-89		

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOBS PER 6 DR.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEAKAGE						
1								SC	PORTLAND CEMENT CONCRETE
2		4" BENTONITE CEMENT SLURRY						SC	CLAYEY SAND- GRAY, MOIST, LOOSE, FINE TO MEDIUM GRAINED.
3								SC	
4	BLANK							SC	
5		3/8" BENTONITE PELLETS			3149	0	4	SC	COLOR CHANGE TO YELLOW BROWN WITH INCREASING CLAY CONTENT.
6								SC	
7								SC	
8								SC	
9								SC	
10					3150	4	18	SP	SAND- MOTTLED RED BROWN TO GRAY, MOTTLING IN 1/4"-1/2" OVALS.
11								SP	MOIST, DENSE, FINE TO MEDIUM SAND WITH TRACE CLAY.
12								SP	
13								SP	
14	0.030 INCH SLOTT				3181	0	18	SM	SILTY SAND- MOTTLED RED BROWN, WET MEDIUM DENSE, FINE TO
15								ML	COARSE GRAINED WITH TRACE CLAY.
16								ML	
17								ML	
18								ML	
19								ML	
20								ML	
21								ML	
22								ML	
23								ML	
24								ML	
25								ML	
26								ML	
27								ML	
28								ML	
								SP	SAND- RED BROWN WITH GRAY INCLUSIONS (OVAL UP TO 2" IN DIAMETER)
								SP	WET, VERY DENSE WITH TRACE SILT AND CLAY.

LOCATION OF BORING



SITE/LOCATION				CANNATION/OAKLAND		BORING NO.	
PROJECT NO.				004-88-058		LAW-16	
WATER LEVEL ELEVATION		5.88	5.21	4.83	4.58	SHEET 2	
TIME						OF 2	
DATE		4-25-89	6-7-89	7-5-89	7-31-89	DRILLER	
CASING DEPTH						START	FINISH
DRILLING CONTRACTOR		ENSCO SERVICES				11:20	11:20
DRILLER		FRANK BARTOLYICH				DATE	DATE
DRILLING METHOD		HOLLOW STEW AUGER				3-22-89	3-22-89
SAMPLING METHOD		140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER		KARL ANANIA					
N/S		N 2869 J		E/W		E 3047 J	
BORING DIAMETER:		6 INCHES		WELL CASING DIAMETER:		2 INCHES	
REVISED BY:		M.J.M.		ELEV.		14.78	
				DATE:		6-18-89	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLY READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	BITUMEN							
21			[Pattern for #3 SAND]						GRADES WITH CLAY, SOFT.
22									
23									
24									
25									
								TD	
									TEST BORING TERMINATED @ 25' ON 3-22-89
									MATERIALS: 4 BAGS OF #3 SAND
									1 BAG OF CEMENT
									2/3-5 GALLON BUCKET OF BENTONITE

DATE STARTED: 8/23/89

DATE COMPLETED: 8/23/89

TIME STARTED: 10:25

TIME COMPLETED:

DRILLING EQUIPMENT: Hollow Stem Auger

SURFACE CONDITIONS: Asphaltic Concrete

SURFACE ELEVATION: 13.25

COORDINATES: N 2,694.8 E 3,150.6

GROUNDWATER CONDITIONS: Free Groundwater Encountered at 14 feet during drilling

DRILLING CONTRACTOR: Accubore

SLOT SIZE: 0.020 inch

BORING DIAMETER: 10 inches

BORING DEPTH: 22.5 feet

CASING DIAMETER: 4 inches

CASING DEPTH: 22.5 feet

LOGGED BY: Jim Wallace

FILTER PACK: #2/16 sand

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	WELL CONST (FT.)	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
		400					Asphaltic Concrete
							Portland Cement Concrete
	2089	750			2		Aggregate Baserock
		80				SM	
Hydrocarbon Odor	2090	220			4		SILTY SAND(SM) Dark Gray, dry to moist, medium dense,
		240					
		100				SC	
	2091	45			6		CLAYEY SAND(SC) Dark Gray to Black, (diesel staining), wet, medium dense
		95				SM	
No Hydrocarbon Odor	2092	95	4		8		SILTY SAND(SM) Dark Gray, dry to moist, medium dense
	2093		5				color change to Light Gray
			7				
			5				
			7				color change to Mottled Red Brown
	2094	180	13		10		
			5				
No Hydrocarbon Odor	2095	160	5		12		grades moist, with trace clay
			5				
	2096	48	5		14		Free Groundwater Encountered at 14 feet during drilling
			9		16		

AGE


ANANIA GEOLOGIC ENGINEERING

PROJECT NO. 004-88-059

Carnation Dairy Facility
1310 14th St., Oakland, Ca.

LOG OF MW-OS25

Sheet 1 of 2

REMARKS	SAMP. NO.	TLU READ	BLDS / 6"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
						30 22		
						24 26 28 30 32 34 36 38 40 42		Boring Terminated at 22.5 feet on 8-23-89

AGE
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

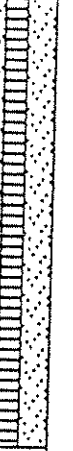
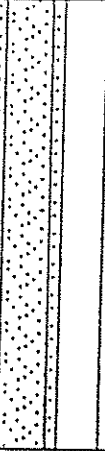
Carnation Dairy Facility
 1310 14th St., Oakland, Ca.
 LOG OF MW-OS25

Sheet 2 of 2

DATE STARTED: 8/24/89
 DATE COMPLETED: 8/24/89
 TIME STARTED:
 TIME COMPLETED:
 DRILLING EQUIPMENT: Hollow Stem Auger
 DRILLING CONTRACTOR: Accubore
 BORING DIAMETER: 10 inches
 CASING DIAMETER: 4 inches
 LOGGED BY: Robyn McKinney

SURFACE CONDITIONS: Asphaltic Concrete
 SURFACE ELEVATION: 13.55
 COORDINATES: N 2,676.8 E 3,206.4
 GROUNDWATER CONDITIONS: Free
 Groundwater Encountered at 17 feet during drilling
 SLOT SIZE: 0.02 inch
 BORING DEPTH: 25.0 feet
 CASING DEPTH: 25 feet
 FILTER PACK: #2/16 sand

REMARKS	SAMP. NO.	TLV READ	BLOWS / 6"	WELL CONST (FT.)	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
		75					Asphaltic Concrete
	2097	100			2	SM	Portland Cement Concrete
	2098	110					Aggregate Baserock, does not appear to be stained
	2099	130			4		Silty SAND(SM) Dark Gray to Black, dry to moist, medium dense, color change to Black color change to Light Gray grades moist color change to Green Gray, grades with some clay color change to Green Gray, slightly moist
Hydrocarbon Odor	2100	150					
Slight Hydrocarbon Odor	2101	180			6		
Hydrocarbon Odor	2103	5500	8		8		
Hydrocarbon Odor	2109		3				color change to Red, grades moist
Hydrocarbon Odor	2104	500	12		10		
Pulled auger to ream with plug			10		12		grades with increasing clay content
		600			14		
		600			16		
					17		Free Water Encountered at 17 feet during drilling

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
						20 22 24		
						26 28 30 32 34 36 38 40 42		Boring Terminated at 25 feet on 8-24-89

AGE _____
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation Dairy Facility
 1310 14th St., Oakland, Ca.
 LOG OF MW-OS26

Sheet 2 of 2

DATE STARTED: 8/28/89

DATE COMPLETED: 8/28/89

TIME STARTED:

TIME COMPLETED:

DRILLING EQUIPMENT: Hollow Stem Auger

DRILLING CONTRACTOR: Accubore

BORING DIAMETER: 10 inches

CASING DIAMETER: 4 inch

LOGGED BY: Robyn McKinney

SURFACE CONDITIONS: Asphaltic Concrete

SURFACE ELEVATION: 14.33

COORDINATES: N 2,666.4 E 3,271.2

GROUNDWATER CONDITIONS: Free
Groundwater Encountered at 14 feet during drilling

SLOT SIZE: .020 inch



BORING DEPTH: 24.5 feet

CASING DEPTH: 24 feet

FILTER PACK: #2/16 sand

REMARKS	SAMP. NO.	TLV READ	BLOWS / 6"	SAMP. TYPE	WELL CONST.	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
						0		Asphaltic Concrete
						2	SM	SILTY SAND(SM) Gray, dry-to-moist, medium dense with some clay
						4		
						6		
	1172	400	7 10 15			8		
						10		grades with increasing sand, color change to Gray-Brown
	1173	300	7 9 20			12		
						14		color change to Red-Brown, grades wet, grades with increasing clay content
						16		

TLV reading 70ppm at well head

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP. TYPE	WELL CONST.	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
No Hydrocarbon Odor						20 22 24		color change to brown
						26 28 30 32 34 36 38 40 42		Boring Terminated at 24 1/2 feet on 8-28-89

DATE STARTED: 8/29/89

DATE COMPLETED: 8/29/89

TIME STARTED:

TIME COMPLETED:

DRILLING EQUIPMENT: Hollow Stem Auger

DRILLING CONTRACTOR: Accubore

BORING DIAMETER: 10 inches

CASING DIAMETER: 4 inch

LOGGED BY: Robyn McKinney

SURFACE CONDITIONS: Asphaltic Concrete

SURFACE ELEVATION: 13.90

COORDINATES: N 2,704.7 E 3,220.1

GROUNDWATER CONDITIONS: Free Groundwater Encountered at 14 feet during drilling

SLOT SIZE: 0.02 inch

BORING DEPTH: 27.0 feet

CASING DEPTH: 27 feet

FILTER PACK: #2/16 Sand

REMARKS	SAMP. NO.	TLV READ	BLOWS / 8"	SOIL TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
						0	SM	Asphaltic Concrete
						1		Aggregate Baserock
Hydrocarbon Odor	1176					2		SILTY SAND(SM) Dark Gray to Black, dry-to-moist, medium dense
	1177					4		grades moist
	1178					6	SC	CLAYEY SAND(SC) Blue Gray, moist-to-wet, medium dense
			7			7	SM	
Hydrocarbon Odor	1179	100	8			8		SILTY SAND(SM) Brown, dry-to-moist, medium dense
			12			8		color change to Mottled Gray Brown
Hydrocarbon Odor	1180		5			10		
		70	5			10		
			9			10		
No Hydrocarbon Odor		70				12		grades moist to wet
						14		Free Groundwater Encountered at 14 feet during drilling
No Hydrocarbon Odor		80				16		

AGE _____

ANANIA GEOLOGIC ENGINEERING

PROJECT NO. 004-88-059

Carnation Dairy Facility
1310 14th St., Oakland, Ca.

LOG OF MW-OS28

Sheet 1 of 2

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
No Hydrocarbon Odor						20		
						22		
						24		
						26		
						28		Boring Terminated at 27 feet on 8-29-89
						30		
						32		
						34		
						36		
						38		
						40		
						42		

DATE STARTED: 8/29/89
 DATE COMPLETED: 8/30/89

TIME STARTED:
 TIME COMPLETED:

DRILLING EQUIPMENT: Hollow Stem Auger

SURFACE CONDITIONS: Asphaltic
 Concrete

SURFACE ELEVATION: 13.38
 COORDINATES: N 2,729.2 E 3,146.2

GROUNDWATER CONDITIONS: Free
 Groundwater Encountered at 12 feet during
 drilling

DRILLING CONTRACTOR: Accubore

SLOT SIZE: 0.02 inch

BORING DIAMETER: 10 inches

BORING DEPTH: 25.0 feet

CASING DIAMETER: 4 inches

CASING DEPTH: 25 feet

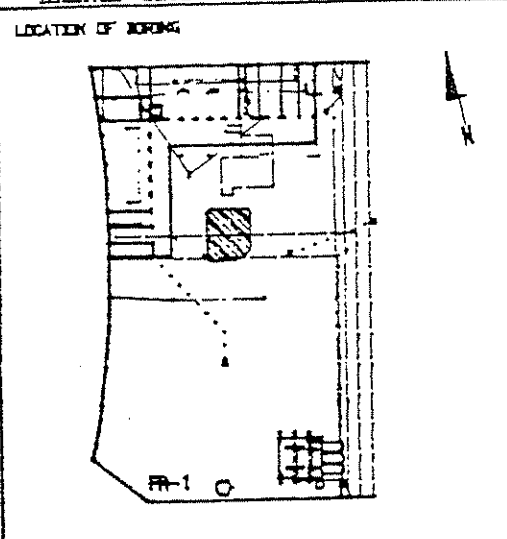
LOGGED BY: J R and R Mc

FILTER PACK: #2/16 Sand

REMARKS	SAMP. NO.	TLU READ	BLOWE / 8"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION						
Abandoned 4" clay pipe	1277	60	7 7 12	[Diagram of well casing and logs]	[Diagram of well casing and logs]	0	SM	Asphaltic Concrete						
						1	SM	Aggregate Baserock						
						2	SM	SILTY SAND (SM) Dark Brown, dry-to-moist, medium dense						
						4								
						6								
						6 1/2	SC	clayey SAND (SM) lense between 6 1/2 and 7 feet						
						7	SM							
						12		Free Groundwater Encountered at 12 feet during drilling						
						No Hydrocarbon Odor	1277	60	7 7 12	[Diagram of well casing and logs]	[Diagram of well casing and logs]	12		grades moist, medium dense with trace clay
												14		grades wet
16														

REMARKS	SAMP. NO.	TLU READ	BLOWS / 8"	SAMP. TYPE	WELL CONST.	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
						20		
						22		
						24		
		90						
						26		Boring Terminated at 25 feet on 8-30-89
						28		
						30		
						32		
						34		
						36		
						38		
						40		
						42		

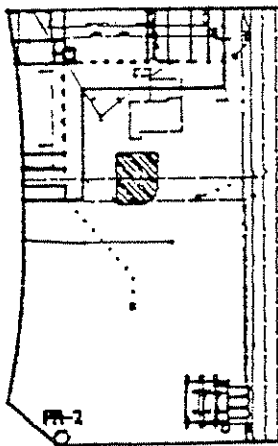
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<p align="center">ANANIA GEOLOGIC ENGINEERING</p>	<p align="center">LOG OF MW-OS29</p>	
<p>PROJECT NO. 004-88-059</p>		



SITE/LOCATION		CARNATION/DARLAND		BORING NO.	
PROJECT NO.		804-08-039		PR-1	
WATER LEVEL ELEVATION		5.86		SHEET 1	
TIME		12:08		OF 1	
DATE		2/28/89		DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER				0:44	1:40
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		MPS		2/28/89	2/28/89
LOGGER		ERIC HOLK			
N/S 2216.9	2216.9	E/V 3654.1	3656.0	ELEV. 16.73	16.73
BORING DIAMETER		6 INCHES		CASING DIAMETER	
				2 INCHES	
REVIEWED BY: MAH				DATE: 8-16-89	

FEET DEPTH	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLDYS PER 6 IN.	USES	LOG OF MATERIAL
	CASING	ANNULUS							
1		7% BENTONITE CEMENT SLURRY						SM	SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH AREAS OF OXIDATION
2									NO HYDROCARBON ODOR.
3									
4	BLANK						7		
5		3" OF BENT. PELLETS		11		X	7		
6						X	9		
7									
8									
9							9		
10						X	12		
11				12		X	12		COLOR CHANGE TO GRAY BROWN, NO HYDROCARBON ODOR.
12									
13	JOY SLIT								
14							3		
15						X	3		
16				16		X	7		GRADES WET WITH QUARTZ PARTICLES, NO HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 17 ON 2-28-89
									MATERIALS: 1 1/2 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



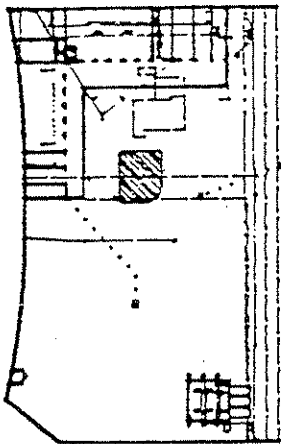
SITE/LOCATION		DARNATION/DAKLAW		BORING NO.		PR-2	
PROJECT NO.		804-88-039		SHEET 1		OF 1	
WATER LEVEL ELEVATION		211		BOLLER			
TIME		9:11		START		FINISH	
DATE		2/22/89		TIME		TIME	
CASING DEPTH				8:28		1:00	
BOLLER CONTRACTOR		PC EXPLORATION		DATE		DATE	
BOLLER				2/22/89		2/22/89	
BOLLING METHOD		HOLLOW STEEL AUGER		DATE		DATE	
SAMPLING METHOD		NPS		DATE		DATE	
LOGGER		ERIC HELM		DATE		DATE	
N/S 28342		2234.2		E/V 29774		2977.6	
ELEV.		25.88		DATE		DATE	
BORING DIAMETER		6 INCHES		CASING DIAMETER		2 INCHES	
REVIEWED BY		MAK		DATE		8-17-89	

TEST DEPTH FEET	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USES	LOG OF MATERIAL
	CASING	MANIFOLD	LENDER						
1								SM	SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ AND KAOLIN, NO HYDROCARBON ODOR.
2									
3									
4	BLANK	4% BENTONITE CEMENT SLURRY				X	8		
5		3 1/2" BENT. PELLETS				X	14		NO HYDROCARBON ODOR.
6									
7									
8									
9						X	14		
10						X	14		
11						X	14		MEDIUM SAND- GRADES WITH DECREASING SILT CONTENT, RED BROWN, VET, MEDIUM DENSE WITH QUARTZ, KAOLIN, NO HYDROCARBON ODOR.
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TEST BORING TERMINATED @ 17' ON 2-22-89

MATERIALS: 1 1/2 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

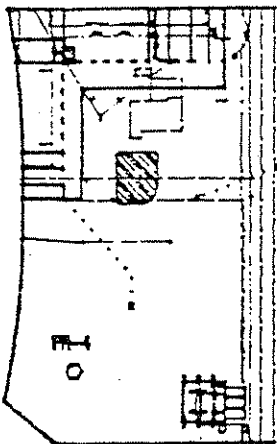
LOCATION OF BORING



SITE/LOCATION		CARNATION/DARLAKS		ALPHANUM. NO.		PR-3	
PROJECT NO.		04-02-03		SHEET 1		OF 1	
WATER LEVEL ELEVATION		3.23		DROLLER			
TIME		7:55		START TIME		FINISH TIME	
DATE		2/22/89		6:00		0:20	
CASSING DEPTH				DATE		DATE	
BORING CONTRACTOR		PC EXPLORATION		2/22/89		2/22/89	
DRILLER							
BORING METHOD		HOLLOW STEEL AUGER					
SAMPLING METHOD		MPS					
LOGGER		ERIC HOLM					
N/S BZLLA		2310.4		E/V BZLLA		20160.1	
				ELEV. BZLLA		15.90	
BORING DIAMETER		6 INCHES		CASSING DIAMETER		2 INCHES	
REVIEWED BY		NAAK		DATE		8-17-89	

DIST. FROM SURF.	WELL CONST.		LEGEND	T.V. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	TEST	LOG OF MATERIAL
	CASSING	ANNULUS							
1								SM	SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE, QUARTZ WITH MACLES, NO HYDROCARBON ODOR.
2		4% BENTONITE CEMENT SLURRY							
3									
4	BLANK					X	7		
5		3/8" BENT. PELLETS		4		X	9		
6									
7									
8									
9						X	11		
10				4		X	14		NO HYDROCARBON ODOR.
11									
12									
13									
14						X	5		
15						X	5		
16				1		X	6		COLOR CHANGE TO DREX BROWN, YET, NO HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 13 1/2' ON 2-22-89
									MATERIALS: 1 1/2 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE

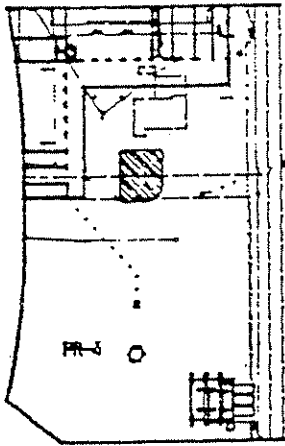
LOCATION OF BORING



SITE/LOCATION		DARNATION/DARLAND		BORING NO.	PR-4
PROJECT NO.		804-88-079		SHEET 1	
WATER LEVEL ELEVATION		3.75		OF 1	
TIME		12:05		DRILLER	
DATE		2/22/89		START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR		PC EXPLORATION		DATE	DATE
DRILLER				2/22/89	2/22/89
DRILLING METHOD		HOLLOW STEM AUGER			
SAMPLING METHOD		MPS			
LOGGER		ERIC HOLM			
N/S 2897.4		E/W 3827.7		ELEV. 16.24	
BORING DIAMETER		6 INCHES		CASING DIAMETER	
				2 INCHES	
REVIEWED BY: KAX				DATE: 8-16-89	

DIST. FROM SURF.	VELL. CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLDGS PER 6 IN.	USES	LOG OF MATERIAL	
	CASING	ANNULUS								
1			[Dotted pattern]					SP	SAND- BROWN, MDSST, MEDIUM DENSE WITH QUARTZ CLASTS, MEDIUM GRAINED.	
2										
3										
4	BLANK					X	6			
5			[Diagonal hatching]					SM	NO HYDROCARBON ODOUR.	
6						X	7			
7			[Cross-hatching]					SM	NO HYDROCARBON ODOUR.	
8										
9						X	12			
10						X	15			
11			[Cross-hatching]					SM	SILTY SAND- BROWN, WET, MEDIUM DENSE WITH CLASTS OF QUARTZ, MATICS, WET, NO HYDROCARBON ODOUR.	
12										
13										
14						X	5			
15			[Cross-hatching]					SM	TEST BORING TERMINATED @ 15 1/2' ON 2-22-89	
16						X	6			
17									MATERIALS: 1 2/3 BAGS OF SAND	
18									2/3 5 GALLON BUCKET OF MONTICITE	

LOCATION OF BORING



SITE/LOCATION: CARRATION/DARLAWG		PR-5	
PROJECT NO: 04-06-09	WATER LEVEL ELEVATION: 4.66		SHEET 1 OF 1
TIME: 044	DATE: 2/22/09		DROLLER
CASING DEPTH	DROLLING CONTRACTOR: PC EXPLORATION		START TIME: 0800
DROLLER	DROLLING METHOD: HOLLOW STEM AUGER		FINISH TIME: 2415
SAMPLING METHOD: MPS	LOGGER: ERIC HOLK		DATE: 2/22/09
N/S: 22944	E/V: 20944	ELEV: 16.64	
BORING DIAMETER: 6 INCHES	CASING DIAMETER: 2 INCHES		DATE: 2/22/09
REVIEWED BY: MAK		DATE: 0-16-09	

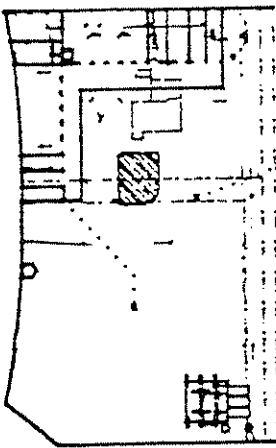
FEET, METERS	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	LOGS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1		4X BENTONITE CEMENT SLURRY	[Pattern]					SM	SILTY SAND- RED BROWN, DRY TO MOIST, LOOSE TO MEDIUM DENSE, FINE TO MEDIUM GRAINED WITH AREAS OF OXIDATION, NO HYDROCARBON.
2									
3									
4	BLANK					X	4		
5		3/8" BENT. PELLETS	[Pattern]	8	2033	X	5		
6									
7									
8									
9						X	7		
10						X	8		
11						X	10		
12									
13									
14									
15									
16									NO HYDROCARBON OBL.
17									
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COLOR CHANGE TO LIGHT BROWN, GRADES LOOSE WITH INCREASING SILT CONTENT, NO HYDROCARBON OBL.

TEST BORING TERMINATED @ 15 1/2' ON 2-22-09

MATERIALS: 1 1/2 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



SITE/LOCATION CARMATION/OAKLAND

BORING NO.

PR-6

PROJECT NO.	824-08-059	SHEET 1	
WATER LEVEL ELEVATION	1.80	OF 1	
TIME	4:40	DRILLER	
DATE	2/22/89	START	FINISH
CASING DEPTH		TIME	TIME
DRILLING CONTRACTOR	PC EXPLORATION	3:40	5:15
DRILLER		DATE	DATE
DRILLING METHOD	HOLLOW STEM AUGER	2/22/89	2/22/89
SAMPLING METHOD	MPS		
LOGGER	ERIC HOLM		
N/S 24245	E/V 2002.0	ELEV. 15.33	
BORING DIAMETER	6 INCHES	CASING DIAMETER 2 INCHES	
REVIEWED BY: MAJ		DATE 8-17-89	

DEPTH FEET	VEIL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BULBS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1			[Dotted pattern]					SM	SILTY SAND- RED BROWN, MOIST, ORGANICS, AREAS OF OXIDATION, NAPCS. NO HYDROCARBON ODOR.
2									
3			[Diagonal hatching]					SM	NO HYDROCARBON ODOR.
4									
5			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
6									
7			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
8									
9			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
10									
11			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
12									
13			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
14									
15			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
16									
17			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
18									
19			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
20									
21			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
22									
23			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
24									
25			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
26									
27			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
28									
29			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
30									
31			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
32									
33			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
34									
35			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
36									
37			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
38									
39			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
40									
41			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
42									
43			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
44									
45			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
46									
47			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
48									
49			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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51			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
52									
53			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
54									
55			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
56									
57			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
58									
59			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
60									
61			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
62									
63			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
64									
65			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
66									
67			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
68									
69			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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71			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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73			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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75			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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77			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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79			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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81			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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83			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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85			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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87			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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89			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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91			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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93			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
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95			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
96									
97			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
98									
99			[Cross-hatching]					SM	NO HYDROCARBON ODOR.
100									

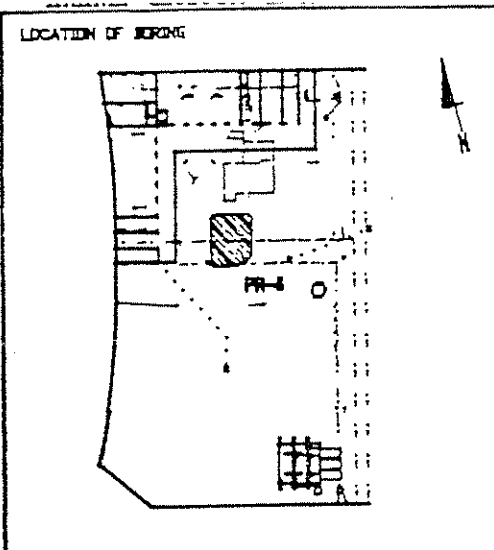
TEST BORING TERMINATED @ 15 1/2' ON 2-22-89

MATERIALS: 1 1/2 BAGS OF SAND

2/3 5 GALLON BUCKET OF BENTONITE

PR-7

NOT DRILLED



SITE/LOCATION		CARRINGTON/DARLAND		BORING NO.	
PROJECT NO.		004-08-039		PR-8	
WATER LEVEL ELEVATION	2.5	APPROX		SHEET 1	
TIME	10:50			OF 1	
DATE	2/23/89			DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR	PC EXPLORATION			TIME	TIME
DRILLER				2:40	5:45
DRILLING METHOD	HOLLOW STEM AUGER			DATE	DATE
SAMPLING METHOD	MPS			2/23/89	2/23/89
LOGGER	ERIC HELM				
N/S	2893.5	E/V	3222.0	ELEV. = 15.92	
BORING DIAMETER	6 INCHES	CASING DIAMETER	2 INCHES		
REVIEWED BY:	MAM			DATE 8-17-89	

X, Y FROM MAP

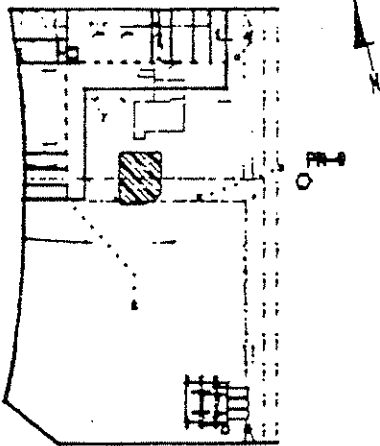
DIST. FROM SURF.	VELL CONST.		LEGEND	TVL READING	SAMPLE NO.	RECOVERY	M/LT'S PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1			4% BENTONITE CEMENT SLURRY					SM	SILTY SAND- RED BROWN, LOOSE TO MEDIUM DENSE, DRY TO MOIST WITH AREAS OF COAGULATION, QUARTZ, NO HYDROCARBON ODOR.
2									
3									
4	BLANK		3/8" BENT. PELLETS				6		
5				12	X	X	7		NO HYDROCARBON ODOR.
6			COURSE AQUICLUD SAND						
7									
8									
9								9	
10						X	X	18	
11					27	X	X	12	GRADES WITH AND SOME PIECES OF 1/4" ANGULAR GRAVEL, NO HYDROCARBON ODOR.
12	NEW SLOT								
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TEST BORING TERMINATED @ 15 1/2' ON 2-23-89

MATERIALS: 1 2/3 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

■ AREA COVERED BY SOIL PILE, COULD NOT BE SURVEYED.

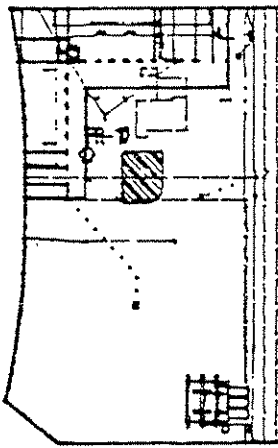
LOCATION OF BORING



SITE/LOCATION		CARNATION/DARLAND		BORING NO.	
PROJECT NO.		804-88-059		PR-9	
WATER LEVEL ELEVATION		2.26		SHEET 1	
TIME		100		OF 1	
DATE		2/21/89		DRILLER	
CASSING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER				1405	1550
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		MPS		2/21/89	2/21/89
LOGGER		ERIC HOLM			
N/S 24248	E/W 23254	ELEV. 15.99			
BORING DIAMETER		4 INCHES		CASING DIAMETER	
				2 INCHES	
REVIEWED BY: MAK				DATE: 8-16-89	

DEPTH FEET	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									ASPHALTIC CONCRETE
2								SM	SILTY SAND- GRAY BROWN DRY TO MOIST, MEDIUM DENSE WITH AREAS OF OXIDATION, QUARTZ, MAFICS, NO HYDROCARBON ODOR.
3									
4	BLANK						18		
4.5		3/8" BENTONITE PELL.		42		X	18		
5						X	18		
6									
7									
8									
9						X	18		
10						X	12		
11				60	2138	X	14		NO HYDROCARBON ODOR.
12									
13									
14							7		
15						X	7		
16				62		X	7		NO HYDROCARBON ODOR.
17									TEST BORING TERMINATED @ 17' ON 2-21-89
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MATERIALS: 1 2/3 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

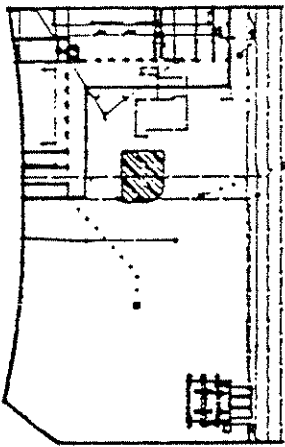


SITE/LOCATION		CARBATION/DARLAND		PR-10	
PROJECT NO.		04-00-03		SHEET 1	
WATER LEVEL ELEVATION		175		OF 1	
TIME		1200		DRILLER	
DATE		2/25/09		START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR		PC EXPLORATION		LOGS	ELON
DRILLER				DATE	DATE
DRILLING METHOD		HOLLOW STEM AUGER		2/25/09	2/25/09
SAMPLING METHOD		MPS			
LOGGER		ERIC HOLM			
N/G 24928		E/V 00847		ELEV. 1457	
BORING DIAMETER		6 INCHES		CASING DIAMETER	
				2 INCHES	
REVIEWED BY		NAK		DATE 2-18-09	

FEET FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDG'S PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LENDG						
1		42 BENTONITE CEMENT SLURRY						SP	SAND- RED BROWN, MEDIUM TO COARSE GRAINED WITH AREAS OF COBBLATION, TRACES OF MAFICS, QUARTZ, SLIGHT HYDROCARBON ODOR.
2									
3									
4	BLANK				X	9			
5		2 1/2" BENT. PELLETS		14	X	12			
6									
7									
8									
9					X	10			
10					X	11			
11		COARSE AGGREGATE SAND		12	X	14			GRADES, VET, NO HYDROCARBON ODOR.
12									
13									
14									
15									
16					X	5			
17					X	5			
18					X	5			GRADES, LOOSE, NO HYDROCARBON ODOR.
19									
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TEST BORING TERMINATES @ 15 1/2' ON 2-25-09

MATERIALS: 2 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE



PR-11

PROJECT NO. 004-00-079

WATER LEVEL ELEVATION

12.67

W BENEATH SURFACE

SHEET 1

OF 1

BORER

TIME

12:44

DATE

2/21/89

START

FINISH

CASING DEPTH

TIME

TIME

1:00

1:05

BORING CONTRACTOR

PC EXPLORATION

DATE

DATE

BORER

BORING METHOD

HOLLOW STEM AUGER

2/21/89

2/21/89

SAMPLING METHOD

MPS

LOGGER

ERIC HOLM

N/S

E/V

ELEV.

BORING DIAMETER

6 INCHES

CASING DIAMETER

2 INCHES

REVIEWED BY: MAK

DATE: 8-18-89

DEPTH (FEET)	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOVS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LENDING						
1								SP	SAND- RED BROWN MIST, MEDIUM DENSE, MEDIUM TO COARSE GRAINED WITH NAFTICS, QUARTZ, SLIGHT HYDROCARBON ODOUR.
2		4% BENTONITE CEMENT SLURRY							
3									
4	BLANK					X	8		
5		2 1/2" BENT. PELLETS		28		X	12		
6						X	14		
7									
8								SM	SILTY SAND- RED BROWN MIST TO VEL, MEDIUM DENSE WITH AREAS OF OXIDATION, NAFTICS, QUARTZ, SLIGHT HYDROCARBON ODOUR.
9							7		
10				24			7		
11		COARSE AGGREGATE SAND					8		
12									
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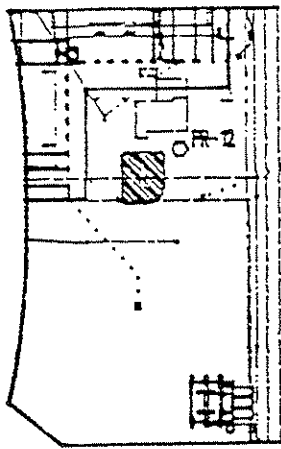
TEST BORING TERMINATED @ 15 1/2' ON 2-21-89

MATERIALS: 1 1/2 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

== AREAS COVERED BY SOIL STOCKPILE

NO PRODUCT OR BUBBLES, SOAPY TYPE BUBBLES NOTED.

LOCATION OF BORING



SITE/LOCATION		CARNATION/DARLAKO		PR-12	
PROJECT NO.		04-08-059		SHEET 1	
WATER LEVEL ELEVATION		214		OF 1	
TIME		9:58		DRILLER	
DATE		2/21/89		START	FINISH
CASING DEPTH ESTIMATED				TIME	TIME
				2:15	3:58
DRILLING CONTRACTOR		PC EXPLORATION		DATE	DATE
DRILLER				2/21/89	2/21/89
DRILLING METHOD		HOLLOW STEEL AUGER			
SAMPLING METHOD		MPS			
LOGGER		ERIC HOLM			
N/S	E1964	E/V	3193	ELEV. 1524	
BORING DIAMETER		6 INCHES		CASING DIAMETER 2 INCHES	
REVIEWED BY		NAK		DATE 6-16-89	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1		42 BENTONITE CEMENT SLURRY							SILTY SAND- GREEN GRAY, MOIST, MEDIUM DENSE, FINE TO MEDIUM GRAINED WITH SOME ORGANICS. STRONG HYDROCARBON ODOOR.
2									
3									
4	BLANK					X	9		
5		3/8" BENT. PELLETS		118		X	11		STRONG HYDROCARBON ODOOR.
6									
7									
8									
9						X	12		
10						X	12		
11		COARSE AQUARIUM SAND		1080		X	13		STRONG HYDROCARBON ODOOR.
12									
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SM

SILTY SAND- GREEN GRAY, MOIST, MEDIUM DENSE, FINE TO MEDIUM GRAINED WITH SOME ORGANICS. STRONG HYDROCARBON ODOOR.

STRONG HYDROCARBON ODOOR.

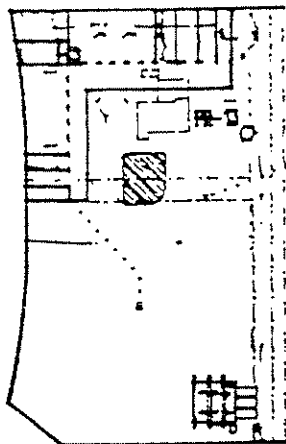
STRONG HYDROCARBON ODOOR.

GRADES, VET, LOOSE TO MEDIUM DENSE, STRONG HYDROCARBON ODOOR.

TEST BORING TERMINATED @ 13 1/2' ON 2-21-89

MATERIALS: 1 3/4 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

PRODUCT ON BOTTOM OF THE AUGER WHEN PULLED OUT 1080 ON 2-21-89.



PROJECT NO. 04-88-039

WATER LEVEL ELEVATION

1.96

SHEET 1

OF 1

TIME

145

DRELLER

DATE

2/28/89

START

FINISH

CASING DEPTH

TIME

TIME

1300

1140

DRELLING CONTRACTOR

PC EXPLORATION

DATE

DATE

DRELLER

DRELLING METHOD

HOLLOW STEEL AUGER

3/28/89

3/28/89

SAMPLING METHOD 140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER

LOGGER ERIC HOLM

N/S 24865

E/V 32637

ELEV. 15.85

BORING DIAMETER

6 INCHES

CASING DIAMETER

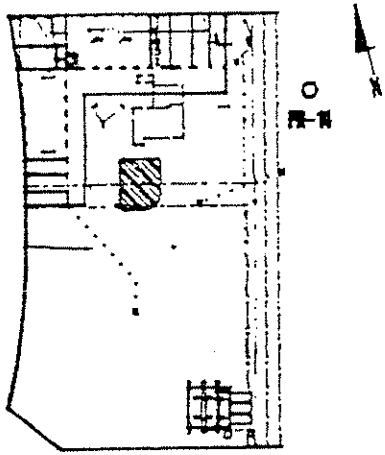
2 INCHES

REVIEWED BY: MAH

DATE 8-18-89

DIST. FROM SURF.	WELL CONST.		LEND	TLV READING	SAMPLE NO.	RECOVERY	GALVS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1								SM	SILTY SAND- RED BROWN DRY TO MOIST, MEDIUM DENSE WITH AREAS OF OXIDATION, QUARTZ, HAFTCS, NO HYDROCARBON ODDR.
2		42 BENTONITE CEMENT SLURRY							
3									
4	BLANK					X	8		
5		3/8" BENT. PELLETS		29		X	18		
6									
7									
8									
9							7		
10							8		
11									NO HYDROCARBON ODDR.
12									
13									
14							6		
15									
16						X	8		GRADES WITH DECREASING SILT CONTENT, VET, NO HYDROCARBON ODDR.
									TEST BORING TERMINATED @ 15 1/2' ON 2-28-89
									MATERIALS: 1 1/2 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE

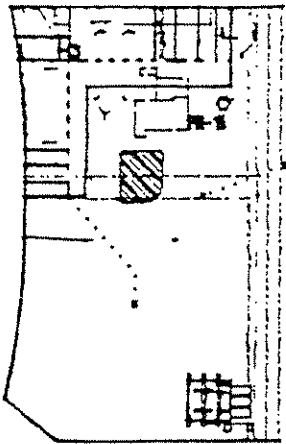
LOCATION OF BORING



SITE/LOCATION		DARNATION/DARLANS		BORING NO.	
PROJECT NO.		004-00-079		PR-14	
WATER LEVEL ELEVATION		2.65		SHEET 1	
TIME		1:41		OF 1	
DATE		2/28/89		DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER				1:28	2:44
DRILLING METHOD		HOLLOW STEEL AUGER		DATE	DATE
SAMPLING METHOD		160# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		2/28/89	2/28/89
LOGGER		ERIC HOLM			
N/S 25862	E/V 13544	ELEV. 15.55			
BORING DIAMETER		6 INCHES		CASING DIAMETER	
				2 INCHES	
REVISED BY: M.A.M.				DATE: 8-18-88	

DEPTH FEET	WELL CONST.			T.V. READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1			4% BENTONITE CEMENT SLURRY					SM	SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE, MEDIUM GRAINED WITH QUARTZ, KAOLIN.
2									
3									
4	BLANK					X	7		
5		3/8" BENT. PELLETS	3/8" BENT. PELLETS	8	X	8		NO HYDROCARBON ODOR.	
6									
7			COARSE ANGLONUM SAND					NO HYDROCARBON ODOR.	
8							8		
9							9		
10					7	X	12		
11									
12	3/8" SLIT								
13									
14							5		
15					X	6			
16				18	X	7		GRADES, VET, AREAS OF OXIDATION, NO HYDROCARBON ODOR.	
								TEST BORING TERMINATED @ 15 1/2' ON 2-28-89	
								MATERIALS 1 1/2 BAGS OF SAND 2/3 5 GALLON BUCKET OF BENTONITE	

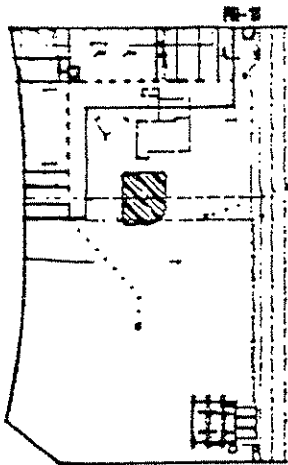
LOCATION OF BORING



SITE/LOCATION		CARNATION/DAKLANS		BORING NO.		PR-15	
PROJECT NO.		84-86-039		SHEET 1		OF 1	
WATER LEVEL ELEVATION		2.21		BROLLER			
TIME		643		START		FINISH	
DATE		3/28/89		TIME		TIME	
CASING DEPTH				3:08		5:48	
DRILLING CONTRACTOR		PC EXPLORATION		DATE		DATE	
DRILLER				3/28/89		3/28/89	
DRILLING METHOD		HOLLOW STEM AUGER					
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER		ERIC HOLM					
N/S 25361		E/V 32525		ELEV. 15.06			
BORING DIAMETER		6 INCHES		CASING DIAMETER		2 INCHES	
REVIEWED BY: M.A.M.				DATE: 6-18-89			

DIST. FROM SURF.	WELL CONST.			TLY READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1								SM	SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH AREAS OF COAGULATION. QUARTZ, MAFICS, NO HYDROCARBON ODOR.
2									
3									
4	BLANK	4% BENTONITE CEMENT SLURRY				X	7		
5		3/8" BENT. PELLETS		38		X	7		
6									
7									
8									
9							9		
10						X	12	SP	SAND- RED BROWN, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, NO HYDROCARBON ODOR.
11				39		X	12		
12									
13									
14							5		
15							6		
16				21		X	9		GRADES, WET, FINE TO MEDIUM GRAINED, NO HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 15 1/2' ON 2-28-89
									MATERIALS: 1 2/4 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE

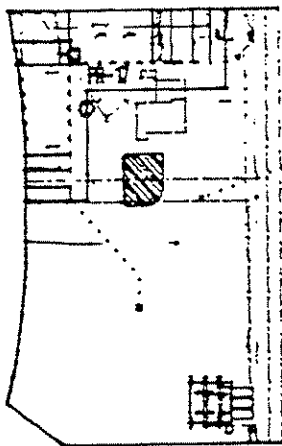
LOCATION OF BORING



SITE/LOCATION		CARNATION/DAGLAVI		BORING NO.	
PROJECT NO.		884-00-059		PR-16	
WATER LEVEL ELEVATION		.99		SHEET 1	
TIME		1:56		OF 1	
DATE		2/28/89		ROLLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER				7:00	8:04
DRILLING METHOD		HOLLOW STEEL AUGER		DATE	DATE
SAMPLING METHOD		140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER		2/28/89	2/28/89
LOGGER		ERIC HOLM			
N/S 2619.4	E/V 2365.0	ELEV. 14.87			
BORING DIAMETER		6 INCHES		CASING DIAMETER	
				2 INCHES	
REVIEWED BY: W.A.M.				DATE: 8-18-89	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1								SM	SILTY SAND- RED BROWN, DRY TO MOIST, MEDIUM DENSE, MEDIUM GRAINED WITH QUARTZ WAFLES, SLIGHT HYDROCARBON ODOR.
2									
3									
4	BLANK					X	11		
5				280		X	12		
6									
7									
8									
9									
10						X	8		COLOR CHANGE TO GREEN GRAY AND AREAS OF BROWN, NO HYDROCARBON ODOR.
11									
12									
13									
14						X	3		
15				5		X	6		GRADES, VET, NO HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 15 1/2' ON 2-28-89.
									MATERIALS: 1 2/3 BAGS OF SAND 2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



SITE/LOCATION		CARRINGTON/DAKLAND		BORING NO.		PR-17	
PROJECT NO.		84-08-09		SHEET 1		OF 1	
WATER LEVEL ELEVATION		47		DRILLER			
TIME		2:05		START			
DATE		2/23/89		TIME		FINISH	
CASING DEPTH				1:30		3:00	
DRILLING CONTRACTOR		PC EXPLORATION		DATE		DATE	
DRILLER				2/23/89		2/23/89	
DRILLING METHOD		HOLLOW STEEL AUGER		SAMPLING METHOD (40# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER)			
LOGGER		ERIC HOLM					
N/S 2575.0		E/W 288.7		ELEV. 1462			
BORING DIAMETER		6 INCHES		CASING DIAMETER		2 INCHES	
REVIEWED BY: KAK				DATE: 8-18-89			

DIST. FROM SURF.	WELL CONST.		LEGEND	T.V. READING	SAMPLE NO.	RECOVERY	BLVS PER 6 IN.	SPEC	LOG OF MATERIAL
	CASING	ANNULAR							
1								SM	SILTY SAND- RED BROWN, DRY TO MOIST, MEDIUM DENSE, COLOR CHANGE WITH AREAS OF COAGULATION, QUARTZ, MAFIC CLASTS, SLIGHT HYDROCARBON ODOR.
2									
3									
4	BLANK					X	13		
5		4% BENTONITE CEMENT SLURRY		23		X	14		
6		3/4" BENT. PELLETS							
7									COLOR CHANGE TO GRAY BLACK, STRONG HYDROCARBON ODOR.
8									
9						X	18		
10						X	18		
11				23		X	13		COLOR CHANGE TO RED BROWN, NO HYDROCARBON ODOR.
12									
13							5		
14							6		
15				23	215	X	7		COLOR CHANGE TO GREEN GRAY, GRADES VET, LOOSE, NO HYDROCARBON ODOR.
16									
17									
18									COLOR CHANGE TO RED BROWN.
19									TEST BORING TERMINATED @ 20' ON 2-23-89
20									MATERIALS: 1 3/4 BAGS OF SAND
21						X	8		2/3 5 GALLON BUCKET OF BENTONITE
22						X	11		

PR-18

NOT DRILLED

AGE

11330 SUNRISE PARK DR., SUITE C • RANCHO CORDOVA, CA 95742
P.O. BOX 161148 • SACRAMENTO, CA 95816 • PHONE (916) 631-0154 FAX (916) 631-0528

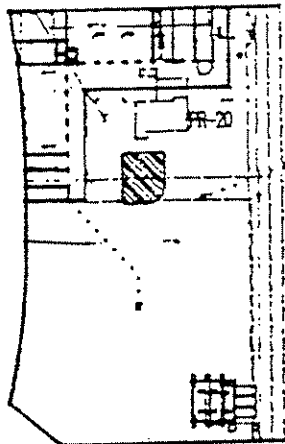
PR-19

NOT DRILLED

AGE

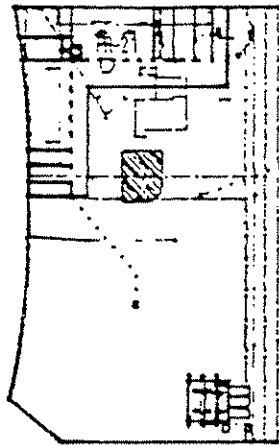
11330 SUNRISE PARK DR., SUITE C • RANCHO CORDOVA, CA 95742
P.O. BOX 161148 • SACRAMENTO, CA 95816 • PHONE (916) 631-0154 FAX (916) 631-0528

LOCATION OF BORING



SITE/LOCATION		CARBATION/DAYLAND		BORING NO.	
PROJECT NO.		004-00-009		PR-20	
PRODUCT LEVEL ELEVATION	26			SHEET 1 OF 1	
TIME	1500			DRILLER	
DATE	2/23/09			START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				PC EXPLORATION	
DRILLER					
DRILLING METHOD				HOLLOW STEM AUGER	
SAMPLING METHOD				160# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER	
LOGGER				ERIC HOLM	
N/S 25743		E/Y 22434		ELEV. 1464	
BORING DIAMETER		6 INCHES		CASING DIAMETER	
				2 INCHES	
REVIEWED BY:				M.A.M.	
				DATE: 0-24-08	

DEPTH FEET INCHES	WELL CONST.		LEND	T.V. READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1								SM	SILTY SAND- RED MOTTLED, RED TO BROWN MOIST, QUARTZ WITH
2									MAFIC, MEDIUM DENSE, HYDROCARBON ODOR.
3									
4							15		
5	BLANK					X	11		
6		3/4" BENT. PELLETS		1800		X	13		SLIGHT HYDROCARBON ODOR.
7									
8							15		
9						X	11		
10				3400		X	12		SLIGHT HYDROCARBON ODOR.
11									
12									
13							7		
14						X	7		
15				10,000		X	9		GRADES WITH INCREASING SAND/CLAY/SLT GRAINED, STRONG HYDROCARBON ODOR.
16									TEST BORING TERMINATED @ 15 1/2' ON 2-23-09
17									PRODUCT ENCOUNTERED
18									MATERIALS 1 3/4 BAGS OF SAND
19									2/3 5 GALLON BUCKET OF BENTONITE



DATE/ELEVATION: CARROLL/DARLAW

PROJECT NO: 04-08-09 PR-21

PROJECT LEVEL ELEVATION: .97 SHEET 1 OF 1

TIME: 8:55 DRILLER

DATE: 2/28/09 START TIME: 1:20 FINISH TIME: 3:15

CASING DEPTH: DRILLING CONTRACTOR: PC EXPLORATION DATE: 2/28/09

DRILLER: DRILLING METHOD: HOLLOW STEEL AUGER DATE: 2/28/09

LOGGER: ERIC HELM

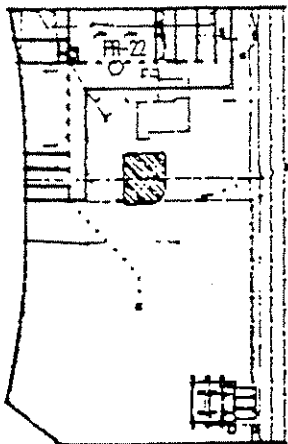
N/S: 26084 E/V: 21421 ELEV: 1443

BORING DIAMETER: 6 INCHES CASING DIAMETER: 2 INCHES

REVIEWED BY: NAAJ DATE: 2-24-09

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOYS PER 6 IN.	USES	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1								SM	SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH MAFICS, QUARTZ, STRONG HYDROCARBON ODOR.
2		47 BENTONITE CEMENT SLURRY							
3									
4	BLANK					X	8		
5		3/4" BENT. PELLETS		6500	3136	X	9		STRONG HYDROCARBON ODOR.
6									
7									
8									
9						X	8		
10				6000		X	9		STRONG HYDROCARBON ODOR.
11		COARSE AGGREGATE SAND							
12	BUCKET SLIT								
13									
14							9		
15				6500		X	12		STRONG HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 15 1/2' ON 2-22-09
									MATERIALS: 2 BAGS OF SAND 2/3 5 GALLON BUCKET OF BENTONITE

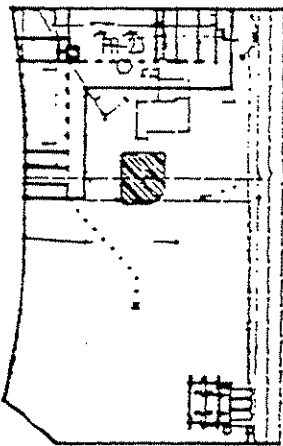
LOCATION OF BORING



SITE/LOCATION		CARBATION/DARLAND		BORING NO.	
PROJECT NO.		04-08-059		PR-22	
PRODUCT LEVEL ELEVATION	LOG			SHEET 1	
TIME	2:10			OF 1	
DATE	3/28/09			DRILLER	
CASING DEPTH				START TIME	FINISH TIME
DRILLING CONTRACTOR	PC EXPLORATION			3/28/09	3/28/09
DRILLER	HOLLIV STEW AUGER			DATE	DATE
DRILLING METHOD	HOLLIV STEW AUGER			3/28/09	3/28/09
SAMPLING METHOD 1408 HAMMER OR DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER ERIC HOLM					
N/S 26457	E/V 26457	ELEV. 1461			
BORING DIAMETER 4 INCHES		CASING DIAMETER 2 INCHES			
REVIEWED BY: NAAK				DATE: 8-29-09	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOBS PER 6 IN.	LSCS	LOG OF MATERIAL
	CASING	MANIFOLD	LEGEND						
1									SILTY SAND- RED BROWN, DRY TO MOIST, MEDIUM DENSE, MAFICS, QUARTZ. STRONG HYDROCARBON ODOR.
2									
3									
4	BLANK	42 PORTLAND CEMENT SLURRY				X	18		
5		3/8" BENT. PELLETS		2500		X	11		STRONG HYDROCARBON ODOR.
6									
7									
8									
9						X	7		
10						X	9		
12				10000		X	11		STRONG HYDROCARBON ODOR.
13									
14							7		
15				1500		X	8		GRADES WITH INCREASING SAND CONTENT, STRONG HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 15 1/2' ON 2-28-09
									MATERIALS 1 3/4 BAGS OF SAND
									2/3 5 GALLON BUCKET OF PORTLAND CEMENT

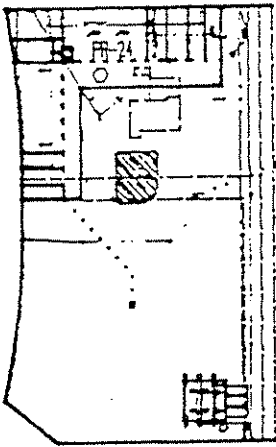
LOCATION OF BORING



SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-04-079		PR-23	
PRODUCT LEVEL ELEVATION	1240'			SHEET 1	
TIME	063			OF 1	
DATE	2/24/89			DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR				PC EXPLORATION	
DRILLER					
DRILLING METHOD				HOLLOW STEEL AUGER	
SAMPLING METHOD				140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER	
LOGGER				ERIC HELM	
N/S 26034	E/V 21593	ELEV. 1441			
BORING DIAMETER		6 INCHES		CASING DIAMETER	
				2 INCHES	
REVIEWED BY: KAM				DATE: 8-28-89	

DIST. FROM SURF, FT.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USGS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									
2									
3									
4	BLANK	42 BENTONITE CEMENT SLURRY				X	6		
5		3/4" BENT. PELLETS		2200		X	8		SILTY SAND- RED BROWN MUDST, MEDIUM DENSE WITH AREAS OF OXIDATION, QUARTZ MAFICS, STRONG HYDROCARBON ODOR.
6									
7									
8									
9						X	9		
10				10,000		X	10		STRONG HYDROCARBON ODOR.
11									
12	BLAST SLIT	COURSE ARGILLUM SAND							
13									
14							6		
15							7		
16				10,000		X	9		GRADES WET, MEDIUM DENSE, STRONG HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 15 1/2' ON 2-24-89
									PRODUCT ENCOUNTERED
									MATERIALS: 1 3/4 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



SITE/LOCATION		CARNATION/DACKLAND		BORING NO.	
PROJECT NO.		004-00-009		PR-24	
PRODUCT LEVEL ELEVATION		0.76		SHEET 1	
TIME		1000		OF 1	
DATE		2/24/89		DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		PC EXPLORATION		TIME	TIME
DRILLER				900	1040
DRILLING METHOD		HOLLOW STEM		DATE	DATE
SAMPLING METHOD		1400 HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER		2/24/89	2/24/89
LOGGER		ERIC HOLM			
N/S 23948	E/V 20374	ELEV. 1457			
SURFACE CONDITIONS		ASPHALT			
REVIEWED BY: MAK				DATE: 6-28-89	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDYS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ FRACTIONS
2									STRONG HYDROCARBON ODOR
3		4% BENTONITE CEMENT SLURRY							
4	BLANK					X	8		
5		3/8" BENT. PELLETS		2000		X	13		STRONG HYDROCARBON ODOR
6									
7									
8							12		
9						X	12		
10		COURSE SAND		1800		X	11		STRONG HYDROCARBON ODOR
11									
12									
13									
14						X	5		
15				15		X	6		GRADES WET, MODERATE HYDROCARBON ODOR
16									
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SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ FRACTIONS
STRONG HYDROCARBON ODOR

STRONG HYDROCARBON ODOR

STRONG HYDROCARBON ODOR

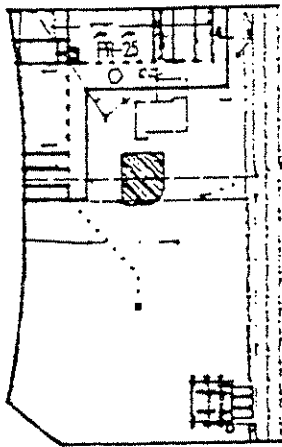
GRADES WET, MODERATE HYDROCARBON ODOR

TEST BORING TERMINATED @ 15' ON 2-24-89

PRODUCT ENCOUNTERED

MATERIALS: 1 3/4 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

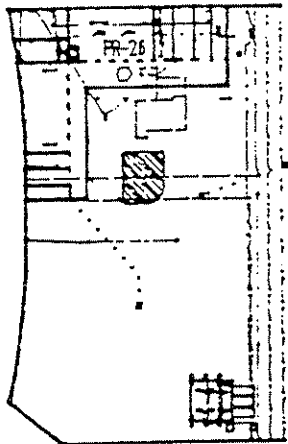
LOCATION OF BORING



SITE/LOCATION		CARNATION/DAKLAND		BORING NO.		PR-25	
PROJECT NO.		004-00-009		SHEET 1		OF 1	
PRODUCT LEVEL ELEVATION		44		DRIER		START	
TIME		11:00		TIME		12:05	
DATE		2/24/09		DATE		2/24/09	
CASING DEPTH				DATE		2/24/09	
DRIER CONTRACTOR		PC EXPLORATION		DATE		2/24/09	
DRIER				DATE		2/24/09	
DRIER METHOD		HOLLEY STEM ALGER		DATE		2/24/09	
SAMPLING METHOD		1454 HAWKER 30" DROP, MODIFIED CALIFORNIA SAMPLER		DATE		2/24/09	
LOGGER		ERIC HOLK		DATE		2/24/09	
N/S 25961		E/V 2471		ELEV. 14.56			
BORING DIAMETER		6 INCHES		CASING DIAMETER		2 INCHES	
REVIEWED BY: MAK				DATE: 0-28-09			

DEPTH FEET SURF.	WELL CONST.		LEGEND	T/V READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USGS	LOG OF MATERIAL
	CASING	ANNULUS							
1		17 BENTONITE CEMENT SLURRY	[Dotted pattern]					SM	SILTY SAND- RED BROWN DRY TO MOIST, MEDIUM DENSE WITH QUARTZ WAXY, STRONG HYDROCARBON ODOR.
2									
3									
4	BLANK					X	11		
5		3/4" BENT. PELLETS	[Diagonal hatching]	5800		X	13		STRONG HYDROCARBON ODOR.
6									
7									
8									
9						X	9		
10						X	9		STRONG HYDROCARBON ODOR.
11									
12									
13	ALUM. SLIT								
14									
15									
16									
17						X	12		GRADED WET, HYDROCARBON ODOR.
18									TEST BORING TERMINATED @ 17' ON 2-24-09
19									PRODUCT ENCOUNTERED
20									
21									MATERIALS 1 3/4 BAGS OF SAND
22									2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



SITE/LOCATION		CARRINGTON/DARLING		BORING NO.		PR-26	
PROJECT NO.		04-08-09		SHEET 1		OF 1	
PRODUCT LEVEL		L63		DRILLER			
TIME		2:00		START		FINISH	
DATE		2/24/09		TIME		DATE	
CASING DEPTH				3:45		2:44	
DRILLING CONTRACTOR		PC EXPLORATION		DATE		DATE	
DRILLER				2/24/09		2/24/09	
DRILLING METHOD		HOLLOW STEEL AUGER					
SAMPLING METHOD		1400 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER		ERIC HOLM					
N/S ZENITH		2593.4		E/V ZENITH		3156.8	
ELEV. 1436		19.56					
BORING DIAMETER		6 INCHES		CASING DIAMETER		2 INCHES	
REVIEWED BY: MARK				DATE: 0-08-09			

FEET DEPTH	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	MATERIAL							
1		47 BENTONITE CEMENT SLURRY	[Dotted Pattern]						SILTY SAND- MOTTLED RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ, MAFICS, STRONG HYDROCARBON ODOR.
2									
3									
4	BLANK					X	7		
5		30% BENT. PELLETS	[Diagonal Lines]	1.000		X	9		STRONG HYDROCARBON ODOR.
6									
7									
8									
9						X	8		
10						X	8		
11				1.000		X	8	SM	STRONG HYDROCARBON ODOR.
12									
13									
14						X	8		
15						X	9		
16				1.1		X	28		COLOR CHANGE TO BROWN, GRAVES VET, SLIGHT HYDROCARBON ODOR.
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SILTY SAND- MOTTLED RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ,
MAFICS, STRONG HYDROCARBON ODOR.

STRONG HYDROCARBON ODOR.

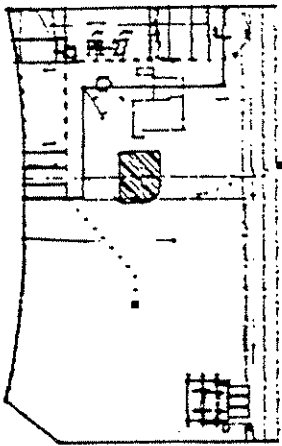
STRONG HYDROCARBON ODOR.

COLOR CHANGE TO BROWN, GRAVES VET, SLIGHT HYDROCARBON ODOR.

TEST BORING TERMINATED @ 17' ON 2-24-09.

PRODUCT ENCOUNTERED

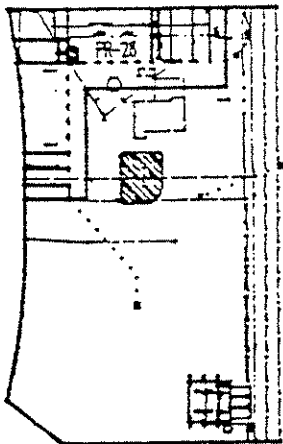
MATERIALS 1 2/4 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE



SITE/LOCATION		CARNATION/DANLOND		BORING NO.		PR-27	
PROJECT NO.		84-88-029		SHEET 1		OF 1	
WATER LEVEL ELEVATION		8.72		DRILLER			
TIME		4:01		START		FINISH	
DATE		2/24/89		TIME		TIME	
CASING DEPTH				M/S		240	
DRILLING CONTRACTOR		PC EXPLORATION		DATE		DATE	
DRILLER				2/24/89		2/24/89	
DRILLING METHOD		HOLLOW STEM AUGER					
SAMPLING METHOD		1400 HAMMER DR. DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER		ERIC HOLM					
N/S 2589.5		E/V 2134.6		ELEV. 14.56			
BORING DIAMETER		6 INCHES		CASING DIAMETER		2 INCHES	
REVIEWED BY: KAK				DATE		8-28-89	

FEET FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USES	LOG OF MATERIAL
	CASING	ANNULUS	LENERG						
1	BLANK	4X BENTONITE CEMENT SLURRY						SM	SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ FRACTION, SLIGHT HYDROCARBON ODOR.
2									
3									
4	BLANK					X	7		
5		3/8" BENT. PELLETS		120		X	8		SLIGHT HYDROCARBON ODOR.
6									
7									
8							10		
9						X	10		
10				120		X	10		SLIGHT HYDROCARBON ODOR.
11									
12									
13									
14							9		
15						X	11		GRADES WITH INCREASING SILT CONTENT, AREAS OF OXIDATION VET, NO HYDROCARBON ODOR.
16				10		X	13		
									TEST BORING TERMINATED @ 15' ON 2-24-89
									MATERIALS 1 3/4 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



SITE/LOCATION		CARNATION/DAKLAND		BORING NO.		PR-28	
PROJECT NO.		04-08-09		SHEET 1		OF 1	
WATER LEVEL ELEVATION		844		DRILLER			
TIME		8:29		START TIME		7:00	
DATE		2/22/89		FINISH TIME		9:00	
CASSING DEPTH				DATE		2/22/89	
DRILLING CONTRACTOR		PC EXPLORATION		DATE		2/22/89	
DRILLER				DATE		2/22/89	
DRILLING METHOD		HOLLOW STEM AUGER					
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER		ERIC HOLM					
N/S 2506.5		2586.5		E/V 2445		ELEV. 14.52	
BORING DIAMETER		6 INCHES		CASSING DIAMETER		2 INCHES	
REVIEWED BY		NAM		DATE		8-28-89	

DEPTH (FEET)	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLUETS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1		4% BENTONITE CEMENT SLURRY	[Pattern]					SM	SILTY SAND- RED BROWN AREAS OF GREEN STAINING DRY TO MOIST, MEDIUM DENSE WITH AREAS OF OXIDATION, QUARTZ MAFICS, STRONG HYDROCARBON ODOR.
2									
3									
4	BLANK						8		
5		3/8" BENT. PELLETS	[Pattern]	2000		X	10		STRONG HYDROCARBON ODOR.
6									
7									
8									
9						X	9		
10						X	10		
11						X	12		STRONG HYDROCARBON ODOR.
12									
13	SLIGHT SLIT								
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MATERIALS: 1 3/4 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

TEST BORING TERMINATED @ 13' ON 2-22-89

GRADED VET, SLIGHT HYDROCARBON ODOR.

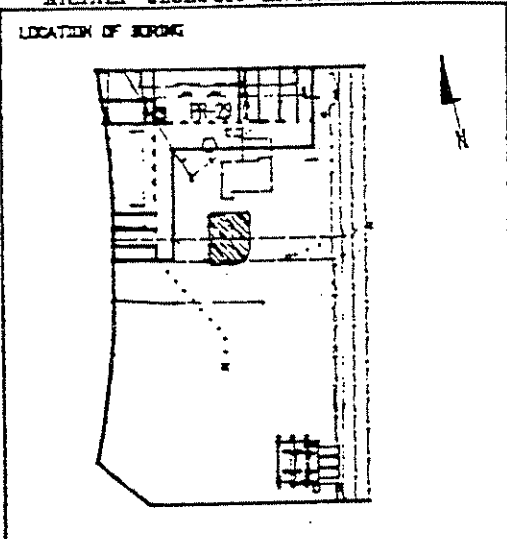
STRONG HYDROCARBON ODOR.

STRONG HYDROCARBON ODOR.

STRONG HYDROCARBON ODOR.

DENSE WITH AREAS OF OXIDATION, QUARTZ MAFICS, STRONG

SILTY SAND- RED BROWN AREAS OF GREEN STAINING DRY TO MOIST, MEDIUM

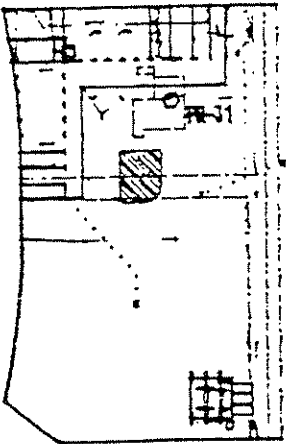


SITE/LOCATION		CARNATION/DANLAND		BORING NO.	
PROJECT NO.		864-88-033		PR-29	
PROJECT LEVEL	ELEVATION	8.83		SHEET 1	
TIME	1200			OF 1	
DATE	2/22/89			DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR	PC EXPLORATION			TIME	TIME
DRILLER				9:40	10:45
DRILLING METHOD	HOLLEY/STEM AUGER			DATE	DATE
SAMPLING METHOD	1408 HAMMER 3/4" DROP, MODIFIED CALIFORNIA SAMPLER			2/22/89	2/22/89
LOGGER	ERIC HELM				
N/S 2580.0	E/V 3150.0	ELEV. 1452			
BORING DIAMETER	6 INCHES	CASING DIAMETER	2 INCHES		
REVIEWED BY	MAX			DATE 8-28-89	

DEPTH FEET	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN	USGS	LOG OF MATERIAL	
	CASING	ANNULUS	LEND							
1		4% BENTONITE CEMENT SLURRY	[Pattern]					SM	SILTY SAND- RED BROWN, MOIST, MEDIUM DENSE WITH AREAS OF MOTTLING QUARTZ GRAIN, STRONG HYDROCARBON ODOR.	
2										
3										
4	BLANK	3/4" BENT. PELLETS	[Pattern]			X	7			
5						58		X	7	STRONG HYDROCARBON ODOR.
6		COARSE ARLANDIN SAND	[Pattern]							
7										
8									9	
9									9	
10						10.800		X	11	FLOATING GAS, STRONG HYDROCARBON ODOR.
11										
12							5			
13										
14						X	6			
15						X	2		GRADES VET, LODGE, PRODUCT VISIBLE, STRONG HYDROCARBON ODOR.	
16									TEST BORING TERMINATED @ 15' ON 2-22-89	
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MATERIALS: 1 1/2 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

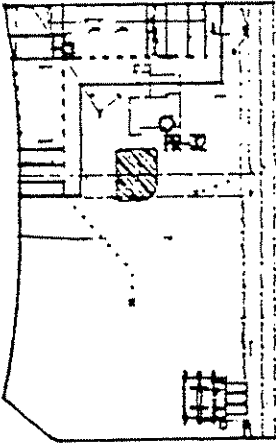
LOCATION OF BORING



SITE/LOCATION		CARNATION/DARLAND		PR-31	
PROJECT NO.		84-00-039		SHEET 1	
PRODUCT LEVEL ELEVATION		600		OF 1	
TIME		845		DRILLER	
DATE		2/23/89		START TIME	
CASING DEPTH				7:00	
DRILLING CONTRACTOR		PC EXPLORATION		FINISH TIME	
DRILLER				9:45	
DRILLING METHOD		HOLLOW STEEL AUGER		DATE	
SAMPLING METHOD		1488 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		2/23/89	
LOGGER		ERIC HELM		DATE	
N/S 2547.4		E/V 3282.5		2/23/89	
BORING DIAMETER		6 INCHES		ELEV. 1474	
CASING DIAMETER		2 INCHES			
REVIEWED BY: MAK				DATE 8-28-89	

DIST. FROM SURF.	WELL CONST.			T.V. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									ASPHALTIC CONCRETE
2								GM	SILTY GRAVEL - GRAY BROWN, MOIST, MEDIUM DENSE, ANGULAR (FILL), HYDROCARBON ODOR.
3									
4	BLANK	1/2 BENTONITE CEMENT SLURRY				X	8		
5		3/8" BENT. PELLETS		90		X	9		HYDROCARBON ODOR.
6									
7									
8							7		
9							9		
10				140		X	10		HYDROCARBON ODOR.
11									
12	DUPE SLIT	COURSE AQUARIUM SAND							
13									
14						X	11	SM	
15				300		X	11		SILTY SAND - RED BROWN, VET, MEDIUM DENSE WITH LARGE OXIDATION DEPOSITS, QUARTZ, MAFICS, MODERATE HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 15' ON 2-23-89
									PRODUCT ENCOUNTERED
									MATERIALS: 1 1/2 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



SITE/LOCATION CARNATION/DAKLAND

BORING NO.

PR-32

PROJECT NO. 024-88-059

PRODUCT LEVEL

L37

SHEET 1

OF 1

TIME

1010

DROLLER

DATE

2/22/89

START

FINISH

CASING DEPTH

TIME

TIME

9:25

10:45

DRILLING CONTRACTOR

PC EXPLORATION

DATE

DATE

DROLLER

2/22/89

2/22/89

DRILLING METHOD

HOLLOW STEM AUGER

SAMPLING METHOD 1400 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER

LOGGER CHRIS HOELSON-CERQUEONE

N/S 2520.9

E/V 3192.8

ELEV. 15.08

BORING DIAMETER

6 INCHES

CASING DIAMETER

2 INCHES

REVIEWED BY: MAM

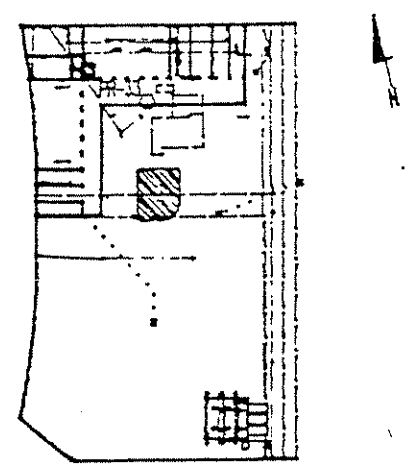
DATE 8-28-89

FEET FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLDYS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1									ASPHALTIC CONCRETE
2								GM	SILTY GRAVEL - GRAY BROVN, MOIST, MEDIUM DENSE, ANGULAR (FILL), HYDROCARBON ODOR.
3		4X MONTMORILLON CEMENT SLURRY							
4	BLANK						7		
5		3/8" BENT. PELLETS		150		X	8		HYDROCARBON ODOR.
6									
7									
8							7		
9							9		
10				300		X	9		HYDROCARBON ODOR.
11									
12									
13									
14							9		
15									
16				800		X	10		GRADES WET, SLIGHT HYDROCARBON ODOR
17									
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TEST BORING TERMINATED @ 15' ON 2-23-89

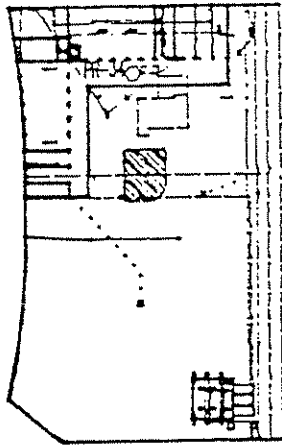
PRODUCT ENCOUNTERED

MATERIALS 1 1/2 BAGS OF SAND
2/3 5 GALLON BUCKET OF MONTMORILLON

LOCATION OF BORING 	SITE/LOCATION CARNATION/DAKLAND			BORING NO. PR-33	
	PROJECT NO. 004-08-079			SHEET 1 OF 1	
	PROJECT LEVEL ELEVATION	1.91		DRILLER	
	TIME	1200		START TIME	1200
	DATE	2/27/09		FINISH TIME	1200
	CASING DEPTH			DATE	2/27/09
	DRILLING CONTRACTOR PC EXPLORATION			DATE	2/27/09
	DRILLER			DATE	2/27/09
	DRILLING METHOD HOLLOW STEM AUGER				
	SAMPLING METHOD 1400 HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER				
LOGGER CHRIS KOELSON-CERQUEIRA					
N/S ESTNS	E/V 21622	ELEV. 1450			
BORING DIAMETER 6 INCHES		CASING DIAMETER 2 INCHES			
REVIEWED BY: MAK			DATE 0-28-09		

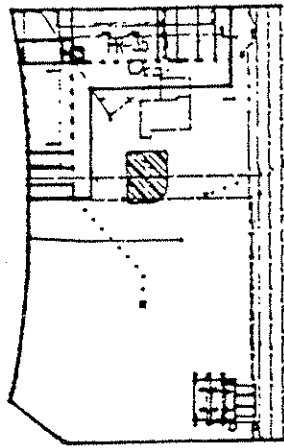
DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERED	BLDS PER 6 IN.	USES	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1		4% BENTONITE CEMENT SLURRY						SM	ELTY SAND- GREEN BROWN, DRY TO MOIST, MEDIUM DENSE WITH QUARTZ PARTICLES
2									STRONG HYDROCARBON ODOR.
3									
4	BLANK						9		
5		5/8" BENT. PELLETS		2800		X	10		STRONG HYDROCARBON ODOR.
6									
7									
8									
9						X	7		
10				2500		X	8		STRONG HYDROCARBON ODOR.
11		COURSE ADLUMIN SAND							
12									
13									
14						X	7		
15				300		X	7		GRADES WITH AREAS OF OXIDATION, VET, STRONG HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 15' ON 2-27-09
									MATERIALS 1 1/2 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



SITE/LOCATION				CARNATION/DANLAND		PR-34	
PROJECT NO.		804-48-039		SHEET 1		OF 1	
PROJECT LEVEL ELEVATION		8.93		DRILLER		START	
TIME		8:45		DATE		2/27/89	
DATE		2/27/89		TIME		TIME	
CASING DEPTH				100		200	
DRILLING CONTRACTOR				PC EXPLORATION			
DRILLER				DATE			
DRILLING METHOD				HOLLOW STEM AUGER			
SAMPLING METHOD				1400 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER				CHRIS WELSON-CORCUONE			
N/S 2590.4		E/W 3164.7		ELEV. 14.68			
BORING DIAMETER		6 INCHES		CASING DIAMETER		2 INCHES	
REVIEWED BY				DATE			
MAN				8-28-89			

DIST. FROM SURF.	WELL CONST.		LEIEND	T.V. READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1		42 BENTONITE CEMENT SLURRY						ML	SANDY SILT- RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ MATRICES.
2									SLIGHT HYDROCARBON ODOR.
3									
4	BLANK					X	7		
5		3/8" BENT. PELLETS		120		X	9		SLIGHT HYDROCARBON ODOR.
6									
7									
8									
9						X	11		
10						X	12		
11				10.990		X	13		COLOR CHANGE TO MOTTLED GREEN GRAY, STRONG HYDROCARBON ODOR.
12									
13	BLIND SLIT	COURSE AQUARIUM SAND							
14							6		
15						X	6		GRADES RED BROWN, VET, STRONG HYDROCARBON ODOR.
				5.400		X	7		
									TEST BORING TERMINATED @ 15' ON 2-27-89
									PRODUCT ENCOUNTERED:
									MATERIALS: 1 2/3 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE



PROJECT NO. 04-02-029		PR-35	
PRODUCT LEVEL ELEVATION	499	SHEET 1 OF 1	
TIME	420	DRILLER	
DATE	2/27/89	START	FINISH
CASTING DEPTH		TIME	TIME
DRILLING CONTRACTOR PC EXPLORATION		300	505
DRILLER		DATE	DATE
DRILLING METHOD HOLLIV STEIN AUGER		2/27/89	2/27/89
SAMPLING METHOD 1400 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER ERIC HOLM			
N/S 26002	E/V 26684	ELEV. 1461	
BORING DIAMETER 6 INCHES		CASTING DIAMETER 2 INCHES	
REVIEWED BY: KAM		DATE 8-28-89	

DEPT. FROM SURF.	WELL CONST.			T.V. READING	SAMPLE NO.	RECOVERY	BLDS PER 6 IN.	USCS	LOG OF MATERIAL
	CASTING	ANNULUS	LEAD						
1		7% BENTONITE CEMENT SLURRY						SM	SILTY SAND- RED BROWN, DRY TO MOIST, MEDIUM DENSE WITH AREAS OF OXIDATION, QUARTZ, NAFTICS, STRONG HYDROCARBON ODOR.
2									
3									
4	BLANK					X	8		
5		2 1/2" BENT. PELLETS		4.000		X	9		STRONG HYDROCARBON ODOR.
6									
7									
8							7		
9						X	8		
10		COURSE AQUICLUD SAND		10.000		X	10		STRONG HYDROCARBON ODOR.
11									
12									
13									
14							6		
15							8		
16				200		X	11		COLOR CHANGE TO GREEN BROWN, GRADES WITH INCREASING SAND VET, STRONG HYDROCARBON ODOR.
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SM

SILTY SAND- RED BROWN, DRY TO MOIST, MEDIUM DENSE WITH AREAS OF OXIDATION, QUARTZ, NAFTICS, STRONG HYDROCARBON ODOR.

STRONG HYDROCARBON ODOR.

STRONG HYDROCARBON ODOR.

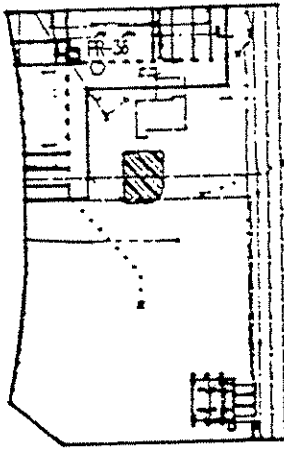
STRONG HYDROCARBON ODOR.

COLOR CHANGE TO GREEN BROWN, GRADES WITH INCREASING SAND VET, STRONG HYDROCARBON ODOR.

TEST BORING TERMINATED @ 15' ON 2-27-89

PRODUCT ENCOUNTERED

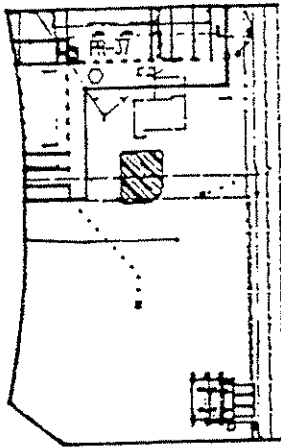
MATERIALS: 1 1/2 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE



PROJECT NO. 84-88-075				PR-36	
PRODUCT LEVEL ELEVATION	0.80			SHEET 1	
TIME	7:45			OF 1	
DATE	2/1/89			DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR PC EXPLORATION				TIME	TIME
DRILLER				7:00	8:05
DRILLING METHOD HOLLOW STEK AUGER				DATE	DATE
SAMPLING METHOD 1448 HAMMER DR DROP, MODIFIED CALIFORNIA SAMPLER				2/1/89	2/1/89
LOGGER ERIC HOLM					
N/S 26115		E/V 20244		ELEV. 1459	
BORING DIAMETER 4 INCHES			CASING DIAMETER 2 INCHES		
REVIEWED BY MAX DATE 8-28-89					

DEPTH FEET	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOYS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	MANIFOLD	LOGEND						
1		17% BENTONITE CEMENT SLURRY						SM	SILTY SAND- RED BROWN DRY TO MOIST, MEDIUM DENSE WITH AREAS OF COAGULATION, QUARTZ, MAFICS, STRONG HYDROCARBON ODOR.
2									
3									
4	BLANK					X	8		
5		9 7/8" BENT. PELLETS		1200		X	9		STRONG HYDROCARBON ODOR.
6									
7									
8							10		
9						X	10		
10				11000		X	10		STRONG HYDROCARBON ODOR.
11									
12									
13									
14						X	8		
15						X	9		GRADES VET WITH INCREASING SAND CONTENT, STRONG HYDROCARBON ODOR.
16				110		X	11		
17									TEST BORING TERMINATED @ 15' ON 2-1-89
18									
19									PRODUCT ENCOUNTERED
20									MATERIALS: 1 1/2 BAGS OF SAND
21									2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



SITE/LOCATION CARNATION/OAKLAND

PROJECT NO.	84-08-059	PR-37	
PROJECT LEVEL ELEVATION	869	SHEET 1	
TIME	0-40	OF 1	
DATE	3/1/89	DRILLER	
CASING DEPTH		START	FINISH
DRILLING CONTRACTOR	PC EXPLORATION	TIME	TIME
DRILLER		065	900
DRILLING METHOD	HOLLOW STEEL AUGER	DATE	DATE
SAMPLING METHOD	1440 HAMMER 34" DROP, MODIFIED CALIFORNIA SAMPLER	3/1/89	3/1/89
LOGGER	ERIC HOLM		
N/S 26021	E/V 20274	ELEV. 1459	
BORING DIAMETER	6 INCHES	CASING DIAMETER 2 INCHES	
REVIEWED BY	MAX	DATE 3-29-89	

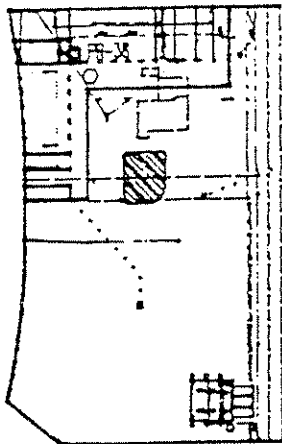
DIST. FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1			[Dotted pattern]					SM	SILTY SAND- RED BROWN, DRY TO MOIST, MEDIUM DENSE WITH QUARTZ PARTICLES. STRONG HYDROCARBON ODOR.
2									
3			[Diagonal hatching]					SM	STRONG HYDROCARBON ODOR.
4	BLANK					X	5		
5		3/4" BENTONITE PELLETS		220		X	7		
6			[Cross-hatching]					SM	COLD CHANGE TO GREEN GRAY, AREAS OF OXIDATION, STRONG HYDROCARBON ODOR.
7									
8			[Cross-hatching]				6	SM	
9							7		
10			[Cross-hatching]	7.800		X	8	SM	
11									
12			[Cross-hatching]					SM	
13									
14			[Cross-hatching]				6	SM	
15						X	8		
16			[Cross-hatching]	220		X	8	SM	STRONG HYDROCARBON ODOR.
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TEST BORING TERMINATED @ 15' ON 3-1-89

PRODUCT ENCOUNTERED

MATERIALS: 1 3/4 BAGS OF SAND
2/3 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING

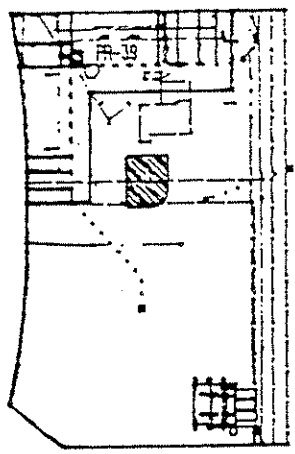


SITE/LOCATION CARMATEM/DARLAND

PROJECT NO. 88-88-059		PR-38	
PROJECT LEVEL ELEVATION	1.05	SHEET 1 OF 1	
TIME	9:00	DRILLER	
DATE	2/1/89	START	FINISH
CASING DEPTH		TIME 9:05	TIME 9:03
DRILLING CONTRACTOR PC EXPLORATION		DATE 2/1/89	DATE 2/1/89
DRILLER			
DRILLING METHOD HELICOY STEEL AUGER			
SAMPLING METHOD 140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER ERIC HOLM			
N/S 2644.9	E/V 301.0	ELEV. 14.57	
BORING DIAMETER 6 INCHES	CASING DIAMETER 2 INCHES		
REVIEWED BY KAK		DATE 8-28-89	

DIST. FROM SURF.	WELL CONST.		LEGEND	TVL READING	SAMPLE NO.	RECOVERY	BLUYS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1		4% PORTLAND CEMENT SLURRY							SM SILTY SAND- MOTTLED RED BROWN AND GREEN STAINED, MOIST, MEDIUM DENSE WITH AREAS OF OXIDATION, QUARTZ, MAFICS, HYDROCARBON ODOR. HYDROCARBON ODOR. HYDROCARBON ODOR. STRONG HYDROCARBON ODOR. TEST BORING TERMINATED @ 15' ON 3-1-89. MATERIALS: 1 1/2 BAGS OF SAND 2/3 5 GALLON BUCKET OF BENTONITE
2									
3									
4	BLANK					X	5		
5		3/4" PORT. PELLETS		170		X	6		
6									
7									
8									
9						X	11		
10				10.000		X	13		
11		COURSE AQUICLUD SAND							
12									
13									
14						X	5		
15				108		X	7		

LOCATION OF BORING

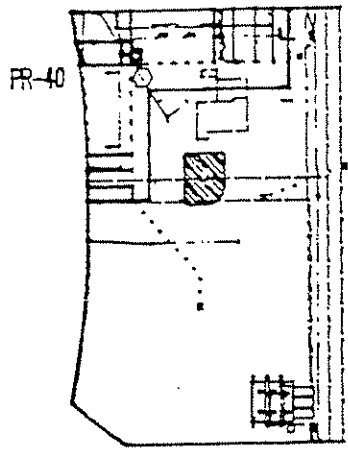


SITE/LOCATION		DARWIN/CARLAND		BORING NO.		PR-39	
PROJECT NO.		824-88-059		SHEET 1		OF 1	
PROJECT LEVEL ELEVATION		0.89		DRILLER			
TIME		1500		START TIME		FINISH TIME	
DATE		2/1/89		1045		1140	
CASING DEPTH				DATE		DATE	
DRILLING CONTRACTOR		PC EXPLORATION		2/1/89		2/1/89	
DRILLER		HOLLIV STEN ALGER					
DRILLING METHOD		HOLLIV STEN ALGER					
SAMPLING METHOD		1408 HAMMER 36" DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER		ERIC HELM					
N/S 26143		E/W 2126.9		ELEV. 1441			
BORING DIAMETER		6 INCHES		CASING DIAMETER		2 INCHES	
REVIEWED BY		MARK		DATE		8-28-89	

DEPTH FEET	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USES	LOG OF MATERIAL
	CASING	ANNULUS							
1		1/2 MONTONITE CEMENT SLURRY	[Dotted pattern]					SM	SILTY SAND - RED BROWN, MOIST, MEDIUM DENSE WITH QUARTZ, MAFICS, AND AREAS OF COALITION.
2									
3									
4	BLANK					X	9		
5		3/8" MONT. PELLETS	[Diagonal lines]	678		X	5		STRONG HYDROCARBON ODOR.
6									
7									
8							7		
9							10		
10		COURSE AQUARIUM SAND	[Cross-hatch pattern]	10.000		X	13		GRADES WITH TRACE GRAVEL, STRONG HYDROCARBON ODOR.
11									
12									
13									
14							8		
15							9		
16				120		X	9		COLOR CHANGES TO GRAY GREEN, HYDROCARBON ODOR.
17									TEST BORING TERMINATED @ 17' ON 3-1-89
18									
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MATERIALS 1 2/3 BAGS OF SAND
2/3 5 GALLON BUCKET OF MONTONITE

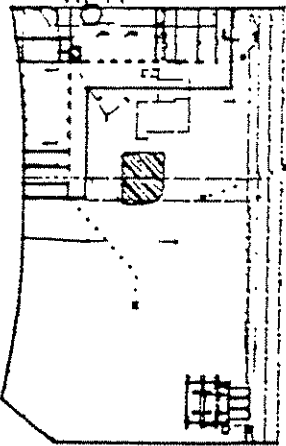
LOCATION OF BORING



SITE/LOCATION		CARNATION/DAKLAND		BORING NO.		PR-40	
PROJECT NO.		004-00-059		SHEET		1	
WATER LEVEL ELEVATION		1.94		OF		1	
TIME		11:50		DRILLER			
DATE		3/1/89		START		FINISH	
CASING DEPTH				TIME		TIME	
DRILLING CONTRACTOR		PC EXPLORATION		DATE		DATE	
DRILLER				3/1/89		3/1/89	
DRILLING METHOD		HOLLOW STEM AUGER					
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER		ERIC HOLM					
N/S 2608.2		E/W 3108.4		ELEV.		1465	
BORING DIAMETER		6 INCHES		CASING DIAMETER		2 INCHES	
REVIEWED BY: MAAM				DATE: 0-20-89			

DIST. FROM SURF.	WELL CONST.			T.V. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1								SM	SILTY SAND- RED BROWN DRY TO MOIST, MEDIUM DENSE WITH AREAS OF OXIDATION, QUARTZ MAFICS, HYDROCARBON ODOR.
2									
3									
4	BLANK	4% BENTONITE GEMENT SLURRY				X	5		
5		3/8" BENT. PELLETS		520		X	5		HYDROCARBON ODOR.
6									
7									
8							10		
9						X	10		
10				100		X	10		HYDROCARBON ODOR.
11									
12	DIRTY SPLIT	COURSE AQUARIUM SAND							
13									
14						X	8		
15				600		X	9		COLOR CHANGE TO GRAY GREEN, GRADES VET, HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 15' ON 3-1-89
									MATERIALS: 1 3/4 BAGS OF SAND
									2/3 5 GALLON BUCKET OF BENTONITE

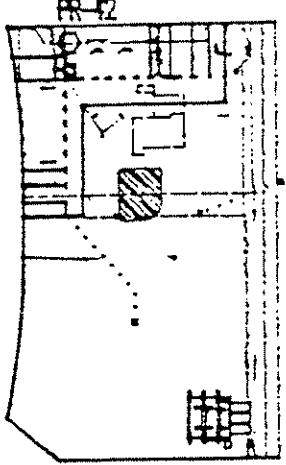
LOCATION OF BORING



SITE/LOCATION		CARPENTON/OAKLAND		BORING NO.	
PROJECT NO.		004-06-056		PR-41	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		MIDKE MOORE		TIME	TIME
DRILLER		MIDKE MOORE		12:00	12:50
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		1464 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		4-26-89	4-26-89
LOGGER		CHRIS NIELSON-DEBOLONE			
N/S	2880.8	2669.9	E/W	3140.0	ELEV. 14.43
BORING DIAMETER:			WELL CASING DIAMETER:		
REVIEWED BY: N.A.M.			DATE 8-29-88		

DIST. FROM SURF.	WELL CONST.			TLV READ (IN)	SAMPLE NO.	RECOVERY	BLDG PER 6 IN.	USGS	LOG OF MATERIAL
	CASING	ANNULUS	LENDG						
1	BLANK	44 BENTONITE CEMENT SLURRY						ML	PORTLAND CEMENT CONCRETE
2									SANDY GRAVEL
3									SANDY SILT- BLACK TO DARK BROWN, MOIST, MEDIUM STIFF WITH TRACE GRAVEL, SEWAGE ODOOR.
4		3/8" BENT. PELL.							
5				3					SILTY SAND- MOTTLED GREEN/GRAY, MOIST, MEDIUM DENSE.
6									
7									
8									GRADES MOIST TO WET.
9									
10	0.000 INCH SLOT								GRADES WET
11									
12									
13									COLOR CHANGE TO YELLOW BROWN.
14									
15				10000					
									TEST BORING TERMINATED @ 15' ON 4-26-89
									MATERIALS: 2 BAGS OF SAND
									1/2 5 GALLON BUCKET OF BENTONITE

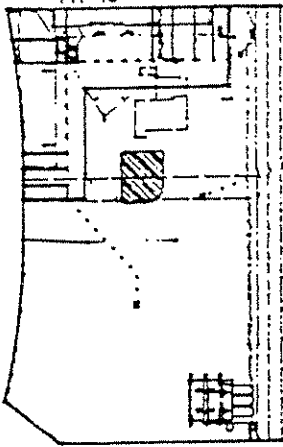
LOCATION OF BORING



SITE/LOCATION		CORNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-068		PR-42	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR				TIME	TIME
DRILLER		MORDE MOORE		13:00	13:45
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		1446 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		4-28-88	4-28-88
LOGGER		CHRIS NIELSON-GENUONE			
N/S	2002.8	2962.6	E/W	3178.3	ELEV.
BORING DIAMETER: 6 INCHES		WELL CASING DIAMETER: 2 INCHES			
REVIEWED BY: M.J.M.				DATE: 8-28-88	

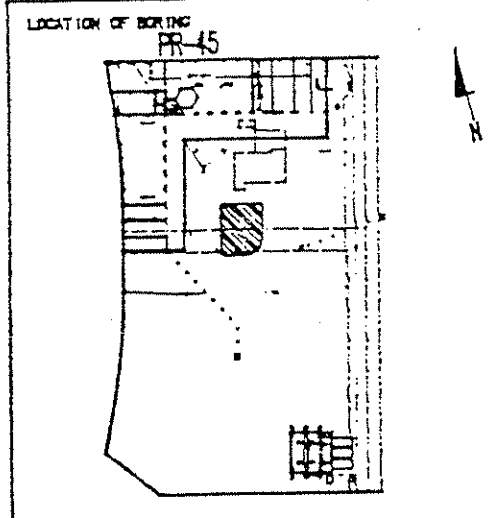
DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1		44 BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					ML	PORTLAND CEMENT CONCRETE
2									SANDY GRAVEL
3	BLANK								SILTY SAND- BLACK TO DARK BROWN, MOIST, MEDIUM STIFF, SEWAGE AND HYDROCARBON ODOR.
4		3/8" BENT. CEMENT FILL	[Diagonal hatched pattern]					SM	SILTY SAND- GRAY TO GREEN BROWN, DRY TO MOIST, MEDIUM DENSE, HYDROCARBON ODOR.
5									
6									
7									
8									GRADES MOIST TO WET
9									GRADES WET
10	0.030 INCH SLOT								
11									
12									
13									COLOR CHANGE TO YELLOW BROWN.
14									
15									TEST BORING TERMINATED @ 15' ON 4-28-88

LOCATION OF BORING
PR-43



SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-66-058		PR-43	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START	FINISH
				TIME	TIME
				14:00	15:30
DRILLING CONTRACTOR				DATE	DATE
DRILLER		MIKE MOORE		4-26-89	4-26-89
DRILLING METHOD		HOLLOW STEM AUGER			
SAMPLING METHOD: 1404 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER.					
LOGGER: CHRIS NIELSON-CERQUEONE					
N/S	2850 J	E/W	3116 J	ELEV.	14.53
BORING DIAMETER: 6 INCHES			WELL CASING DIAMETER: 2 INCHES		
REVIEWED BY: M.A.M.				DATE: 8-29-89	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEND						
1		44 BENTONITE CEMENT SLURRY						OP	PORTLAND CEMENT CONCRETE
2								ML	SANDY GRAVEL
3	BLANK								SANDY SILT- BLACK, MOIST, MEDIUM STIFF, SEWAGE AND HYDROCARBON ODOOR.
4		3/8" BENT. PELL.						SM	SILTY SAND- GREEN/GRAY, MOIST, MEDIUM DENSE, STRONG SEWAGE ODOOR.
5				3					
6									
7									GRADES WET TO MOIST.
8									
9									GRADES WET
10	0.030 INCH SLOT	3/4 SAND		4					
11									
12									
13									COLOR CHANGE TO YELLOW BROWN.
14									
15									TEST BORING TERMINATED @ 15' ON 4-28-89

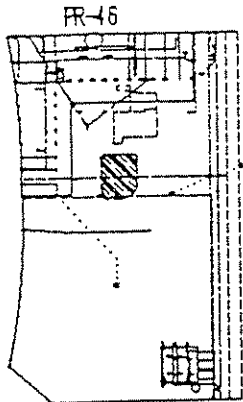


SITE/LOCATION		CARNATION/DAKLAND		BORING NO.	
PROJECT NO.		004-88-068		PR-45	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR				TIME	TIME
DRILLER		WIRE MOORE		DATE	DATE
DRILLING METHOD		HOLLOW STEM ALGER		4-27-89	4-27-89
SAMPLING METHOD: 1436 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER.					
LOGGER: CHRIS NIELSON-CERGLONE					
N/S		E/W		ELEV.	
2853.3		3229.7		14.50	
BORING DIAMETER: 6 INCHES			WELL CASING DIAMETER: 2 INCHES		
REVIEWED BY: M.J.M.				DATE: 8-29-88	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLY. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
0									PORTLAND CEMENT CONCRETE
1		4" BENTONITE CEMENT SLURRY						ML	SANDY SILT- BLACK, DRY TO MOIST, MEDIUM STIFF, SLIGHT HYDROCARBON ODOR.
2	BLANK								
3		3/8" BENT. PELL.						SM	SILTY SAND- GREEN TO GRAY BROWN, DRY TO MOIST, MEDIUM DENSE, HYDROCARBON ODOR.
4									
5				3					
6									
7									
8									
9									
10	0.030 INCH SLOT			3					GRADES MOIST TO WET.
11									
12									
13									COLOR CHANGE TO YELLOW BROWN, GRADES WET.
14									
15				220					
16									TEST BORING TERMINATED @ 15' ON 8-29-88

ANANIA GEOLOGIC ENGINEERING

BORING LOG

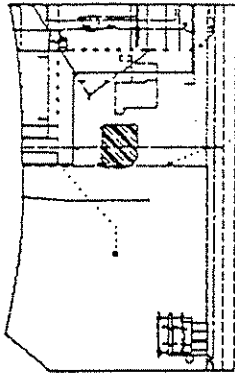


PR-46

SITE/LOCATION		CARNATION/DAYLAND		BORING NO.	
PROJECT NO.		004-88-069		PR-46	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR					
DRILLER MIKE MOORE					
DRILLING METHOD				DATE	DATE
HOLLOW STEW AUGER				4-27-89	4-27-89
SAMPLING METHOD					
140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER					
CHRIS NIELSEN-CERQUEONE					
N/S		E/W		ELEV.	
2563.6		3163.2		14.51	
BORING DIAMETER:				WELL CASING DIAMETER:	
6 INCHES				2 INCHES	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDMS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1	BLANK	4% BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					ML	PORTLAND CEMENT CONCRETE
2									SANDY GRAVEL- GRAY, MOIST, MEDIUM DENSE.
3									SANDY SILT- BLACK, DRY TO MOIST, MEDIUM STIFF, HYDROCARBON ODOR.
4		3/8" BENT. PELL.	[Diagonal hatched pattern]					SM	SILTY SAND- GRAY/GREEN BROWN, DRY TO MOIST, MEDIUM DENSE, STRONG HYDROCARBON ODOR.
5				10					
6									
7									
8									
9									
10	0.000 INCH SLOT			5					
11									
12									
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15									
16									
17									
18									
									TEST BORING TERMINATED @ 15' DN 4-27-89

PR-47



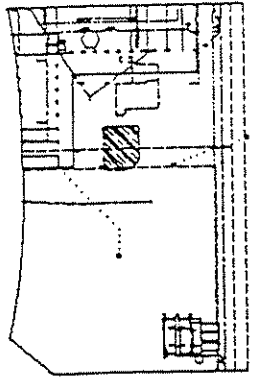
ANANIA GEOLOGIC ENGINEERING

BORING LOG

SITE/LOCATION		CARWATON/OAKLAND		BORING NO.	
PROJECT NO.		004-88-059		PR-47	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				DATE	DATE
DRILLER		MIKE MOORE		4-27-89	4-27-89
DRILLING METHOD		HOLLOW STEM AUGER			
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER		CHRIS NIELSEN-CERULONE			
N/S	2645.4	E/W	3153.8	ELEV. 14.41	
BORING DIAMETER:		6 INCHES		WELL CASING DIAMETER: 2 INCHES	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLY. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1		4" BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					ML	PORTLAND CEMENT CONCRETE
2									SANDY GRAVEL - GRAY, MOIST, MEDIUM DENSE
3	BLANK								SANDY SILT - BLACK, DRY TO MOIST, MEDIUM STIFF.
4		3/8" BENT. PELL.	[Diagonal lines pattern]						
5									SILTY SAND - GRAY BROWN, MOIST, MEDIUM DENSE, STRONG HYDROCARBON ODOOR.
6									HIT CONCRETE OBSTRUCTION, VERY STRONG SEWAGE ODOOR PRESENT.
7								SM	
8									HIT OBSTRUCTION.
9									CONTINUED DRILLING WITH NO CUTTINGS COMING TO SURFACE. WHEN AUGER WAS PULLED OUT THERE WAS A STRONG LEACHATE ODOOR.
10	0.030 INCH SLOT								
11		3/4 SAND	[Dotted pattern]						
12									
13									
14									
15									TEST BORING TERMINATED @ 15' ON 4-27-89

PR-48



ANANIA GEOLOGIC ENGINEERING

BORING LOG

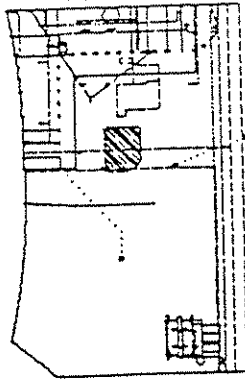
SITE/LOCATION		CARNATION/DAYLAND		BORING NO.	
PROJECT NO.		004-88-059		PR-48	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START FINISH	
CASING DEPTH				TIME TIME	
DRILLING CONTRACTOR				12:00 12:45	
DRILLER		MIKE MOORE		DATE DATE	
DRILLING METHOD		HOLLOW STEM AUGER		4-27-89 4-27-89	
SAMPLING METHOD		140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER.			
LOGGER		CHRIS NIELSON-CERQUONE			
N/S		2827.1		E/W	
				3148.9	
				ELEV. 14.57	
BORING DIAMETER:		6 INCHES		WELL CASING DIAMETER:	
				2 INCHES	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1	BLANK	4% BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					OP ML	PORTLAND CEMENT CONCRETE
2									SANDY GRAVEL - MOIST, MEDIUM DENSE
3									SANDY SILT - BLACK, DRY, SOFT, SLIGHT HYDROCARBON ODOR.
4		3/8" BENT. PELL.	[Diagonal hatched pattern]						SILTY SAND - GRAY/GREEN BROWN, MOIST, MEDIUM DENSE, MODERATE HYDROCARBON ODOR.
5									
6									
7								SM	COLOR CHANGE TO BROWN AND MOTTLED GREEN GRAY.
8									
9									
10	0.000 INCH SLOT	3/4 SAND	[Dotted pattern]						COLOR CHANGE TO BROWN, GRADES WET, STRONG HYDROCARBON ODOR.
11									
12									
13									
14									
15									TEST BORING TERMINATED • 15' ON 4-27-89

PR-49

ANANIA GEOLOGIC ENGINEERING

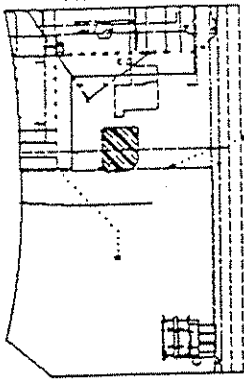
DATE: 8-24-89



SITE/LOCATION		DURNAY DR/DAKLAND		BORING NO.	
PROJECT NO.		004-88-059		PR-49	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				13:30	14:20
DRILLER		MIKE MOORE		DATE	DATE
DRILLING METHOD		HOLLOW STEM AUGER		4-27-89	4-27-89
SAMPLING METHOD		1/4" HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER		CHRIS NIELSEN-CERQUONE			
N/S	2652.3	E/W	3179.1	ELEV. 14.50	
BORING DIAMETER:			6 INCHES		WELL CASING DIAMETER: 2 INCHES

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL DATE: 8-24-89
	CASING	ANNULUS	LEGEND						
1		4% BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					ML	PORTLAND CEMENT CONCRETE
2	BLANK								SANDY GRAVEL- MOIST, MEDIUM DENSE.
3		3/8" BENT. PELL.	[Diagonal lines pattern]						SANDY SILT- BLACK, DRY, MEDIUM STIFF, HYDROCARBON ODR.
4								SM	SILTY SAND- MOTTLED BROWN AND GRAY GREEN, MOIST MEDIUM DENSE.
5									
6									
7									
8									
9									
10	0.000 INCH SLUR								COLOR CHANGE TO YELLOW BROWN, GRADES WET.
11									
12									
13									
14									
15									
16									TEST BORING TERMINATED • 15' ON 4-27-89

PR-50



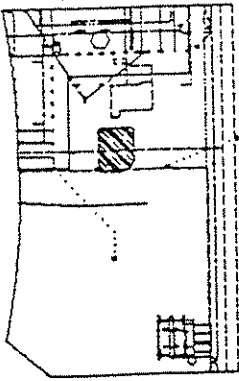
ANANIA GEOLOGIC ENGINEERING

DURING LOG

SITE/LOCATION		CARNATION/DAYLAND		BORING NO.	
PROJECT NO.		00-88-059		PR-50	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				1/2:30	
DRILLER		MIKE MOORE		DATE	DATE
DRILLING METHOD		HOLLOW STEM AUGER		4-27-89	4-27-89
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER		CHRIS HIELSON-CERQUEONE			
N/S	2635.6	E/W	3173.2	ELEV. 14.37	
BORING DIAMETER:			6 INCHES		WELL CASING DIAMETER:
					2 INCHES

DIST. FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS								
1	BLANK	4# BENTONITE CEMENT SLURRY						ML	PORTLAND CEMENT CONCRETE	
2									SANDY GRAVEL - MOIST, MEDIUM DENSE	
3									SANDY SILT - BLACK, DRY, MEDIUM STIFF.	
4	0.030 INCH SLOT	3/8" BEAT. PELL.						SM	SILTY SAND - MOTTLED GRAY GREEN AND BROWN, MOIST, MEDIUM DENSE, STRONG SEWAGE AND HYDROCARBON ODDOR.	
5										
6										
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14										
15										
16									TEST BORING TERMINATED @ 15' ON 4-27-89	

PR-51



ANANIA GEOLOGIC ENGINEERING

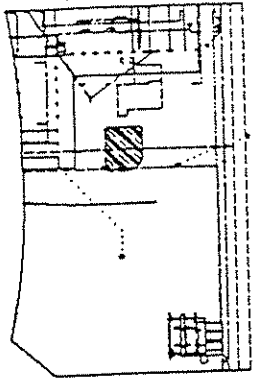
DATE LOG

SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-059		PR-51	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				10:15	
DRILLER		MIKE MOORE		DATE	DATE
DRILLING METHOD		HOLLOW STEM AUGER		4-28-89	4-28-89
SAMPLING METHOD		1/4" HOLLOW 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER		CHRIS NIELSON-CERQUONE			
N/S	2621.8	E/W	3168.4	ELEV. 14.58	
BORING DIAMETER:			6 INCHES		WELL CASING DIAMETER:
			2 INCHES		

DIST. FROM SURF.	WELL CONST.		LEGEND	TLY. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1			[Cross-hatched pattern]					ML	PORTLAND CEMENT CONCRETE
2		4" BENTONITE CEMENT SLURRY							SANDY GRAVEL - MOIST, MEDIUM DENSE.
3	BLANK								SANDY SILT - DARK BROWN TO BLACK, MOIST, MEDIUM STIFF, SEWAGE DOOR (FILL).
4			[Diagonal hatched pattern]					SM	ENCOUNTERING (RED BRICK).
5		3/8" BENT. PELL.							SILTY SAND - GRAY/GREEN BROWN, MOIST, MEDIUM DENSE.
6			[Dotted pattern]						
7									COLOR CHANGE TO BROWN, GRADES VERY MOIST TO WET.
8									
9									
10	0.030 INCH SLOT								
11									
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TEST BORING TERMINATED @ 75' ON 4-28-89

PR-52



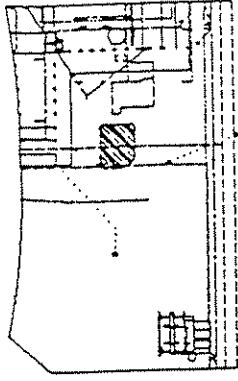
ANANIA GEOLOGIC ENGINEERING

DURING LOG

SITE/LOCATION		CARNATION/DAYLAND		BORING NO.	
PROJECT NO.		004-85-059		PR-52	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				15:30	
DRILLER		MIKE MOORE		DATE	DATE
DRILLING METHOD		HOLLOW STEM AUGER		4-27-89	4-27-89
SAMPLING METHOD		"W" HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER		CHRIS NIELSEN-CERQUONE			
N/S	2521.5	E/W	3168.2	ELEV. 14.56	
BORING DIAMETER:			6 INCHES		WELL CASING DIAMETER: 2 INCHES

DIST. FROM SURF.	WELL CONST.		LEGEND	TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1	BLANK	1% BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					ML	PORTLAND CEMENT CONCRETE
2									SANDY GRAVEL - GRAY, MOIST, MEDIUM DENSE
3									SANDY SILT - BLACK, DRY, MEDIUM STIFF.
4		3/8" BENT. PELL	[Diagonal lines pattern]						SILTY SAND - GRAY/GREEN BROWN, DRY TO MOIST, MEDIUM DENSE.
5									
6									
7								SM	GRADES MOIST TO WET.
8									
9									
10	0.030 INCH SLOT								
11									
12									
13									
14									
15									TEST BORING TERMINATED @ 15' ON 4-27-89

PR-53

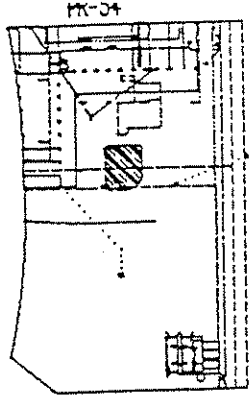


ANANIA GEOLOGIC ENGINEERING

DATING LOG

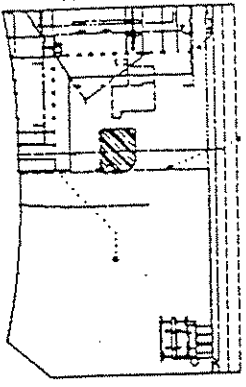
SITE/LOCATION		CARNATION/GARLAND		BORING NO.	
PROJECT NO.		004-88-059		PR-53	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				10:00	
DRILLER		MIKE MOORE		DATE	DATE
DRILLING METHOD		HOLLOW STEM AUGER		4-28-89	4-28-89
SAMPLING METHOD		140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER		CHRIS WIELSON-CERQUE			
N/S	257.2	E/W	3187.9	ELEV.	14.43
BORING DIAMETER:			6 INCHES		WELL CASING DIAMETER:
					2 INCHES

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1		4% BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					GP	PORTLAND CEMENT CONCRETE
2		4% BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					SM	SANDY GRAVEL - MOIST, MEDIUM DENSE
3	BLANK	4% BENTONITE CEMENT SLURRY	[Cross-hatched pattern]						SILTY SAND - DARK BROWN TO BLACK, MOIST, MEDIUM DENSE, FINE GRAINED, SEWAGE ODOR.
4		3/8" BENT. PELL.	[Diagonal lines pattern]						COLOR CHANGE TO GRAY/GREEN BROWN.
5			[Dotted pattern]						
6			[Dotted pattern]						
7			[Dotted pattern]						
8			[Dotted pattern]						
9			[Dotted pattern]						
10	0.000 INCH SLOT		[Dotted pattern]						
11			[Dotted pattern]						
12			[Dotted pattern]						COLOR CHANGE TO YELLOW BROWN, GRADES WET.
13			[Dotted pattern]						
14			[Dotted pattern]						
15			[Dotted pattern]						TEST BORING TERMINATED @ 15' ON 4-28-89



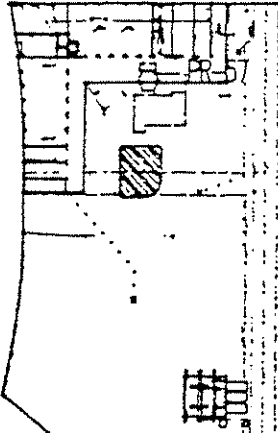
SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-059		PR-54	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR					
DRILLER		MIKE MOORE		DATE	DATE
DRILLING METHOD		HOLLOW STEM AUGER		4-28-89	4-28-89
SAMPLING METHOD		140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER		CHRIS NIELSON-CERQUONE			
N/S	2542.4	E/W	34-89-5	5219.6	ELEV. 14.33
BORING DIAMETER: 6 INCHES			WELL CASING DIAMETER: 2 INCHES		

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDMS PER 6 IN.	USCS	LOG OF MATERIAL			
	CASING	ANNULUS	LEGEND									
1	BLANK	4# BENTONITE CEMENT SLURRY						SM	PORTLAND CEMENT CONCRETE			
2									SANDY GRAVEL- MOIST, MEDIUM DENSE			
3									SILTY SAND- DARK BROWN TO BLACK, MOIST, MED DENSE, HYDROCARBON ODOR.			
4	0.030 INCH SLOT	3/8" BENT. PELL.							COLOR CHANGE TO GRAY/GREEN, SLIGHTLY PLASTIC, STRONG HYDROCARBON ODOR, NO CLASTICS.			
5												
6												
7											COLOR CHANGE TO YELLOW BROWN, MOIST TO WET.	
8												
9												
10												
11												
12												
13												
14												
15												
16							10.000					TEST BORING TERMINATED • 15' ON 4-28-89



SITE/LOCATION		CARNATION/DAYLAND		BORING NO.	
PROJECT NO.		004-88-059		PR-55	
WATER LEVEL				SHEET 1 of 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				12:00	
DRILLER		MIKE MOORE		DATE	DATE
DRILLING METHOD		HOLLOW STEM AUGER		4-28-89	4-28-89
SAMPLING METHOD		140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER		CHRIS NIELSEN-CERQUENE			
N/S	2525.1	E/W	3274.7	ELEV. 74.48	
BORING DIAMETER:			6 INCHES		WELL CASING DIAMETER:
			2 INCHES		

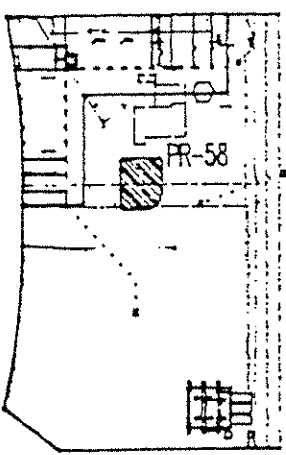
DIST. FROM SURF.	WELL CONST.		LEGEND	TLY. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS								
1			[Cross-hatched pattern]					SM	PORTLAND CEMENT CONCRETE	
2									SANDY GRAVEL - MOIST, MEDIUM DENSE	
3									SILTY SAND - BROWN, MOIST, MEDIUM DENSE, STRONG HYDROCARBON ODOR.	
4	BLANK	4x BENTONITE CEMENT SLURRY	[Diagonal hatched pattern]						COLOR CHANGE TO GRAY/GREEN, MOIST, HYDROCARBON ODOR.	
5										
6		3/8" BENT. PELL.	[Dotted pattern]							
7										
8										COLOR CHANGE TO YELLOW BROWN, GRADES MOIST TO WET.
9										
10	0.030 INCH SLOT									
11										
12										
13										
14										
15					3500					
16									TEST BORING TERMINATED @ 35' ON 4-28-89	



PROJECT NO. 004-85-050				PR-57	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR				TIME	TIME
DRILLER MIKE MOORE				10:30	11:20
DRILLING METHOD HOLLOW STEEL AUGER				DATE	DATE
SAMPLING METHOD 140# HAMMER 30' DROP, MODIFIED CALIFORNIA SAMPLER				5-11-88	5-11-88
LOGGER JOHN RUSSELL					
N/S 2572.7		E/W 3781.1		ELEV. 14.31	
BORING DIAMETER: 4 INCHES			WELL CASING DIAMETER: 2 INCHES		
REVIEWED BY: M.A.M.				DATE 8-29-88	

DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLOWS PER 4 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEND						
1		44 BENTONITE CEMENT SLURRY							PORTLAND CEMENT CONCRETE
2	BLANK								
3		3/8" BENT. PELL.						SP	
4									
5									SAND- BROWN, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS AND TRACE CLAY, SLIGHT HYDROCARBON ODOR.
6									
7									
8									
9	0.030 INCH SLOTS								
10		DRS #							SILTY SAND- BROWN, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS AND TRACE CLAY, SLIGHT HYDROCARBON ODOR.
11									
12									
13									
14									SLIGHT HYDROCARBON ODOR.
15									TEST BORING TERMINATED @ 15' ON 5-11-88
									MATERIALS: 2 BAGS OF SAND
									1/2 5 GALLON BUCKET OF BENTONITE

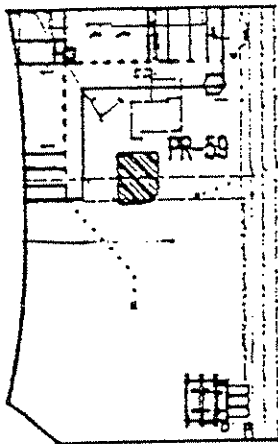
LOCATION OF BORING



SITE/LOCATION		CARNATION/OAKLAND		PR-58	
PROJECT NO.		004-88-068		SHEET 1	
WATER LEVEL				OF 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				5-12-89	5-12-89
DRILLER		MIKE MOORE		DATE	DATE
DRILLING METHOD		MOLLE STEW AUGER		5-12-89	5-12-89
SAMPLING METHOD		144# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER.			
LOGGER		JOHN RUSSELL			
N/S	2555 J	2555.6	E/W	3237 J	ELEV. 14.28
BORING DIAMETER:		8 INCHES		WELL CASING DIAMETER: 2 INCHES	
REVIEWED BY:		M.A.M.		DATE 8-29-89	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1	BLANK	44 BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					SM	PORTLAND CEMENT CONCRETE
2	BLANK	44 BENTONITE CEMENT SLURRY	[Cross-hatched pattern]						
3	BLANK	44 BENTONITE CEMENT SLURRY	[Cross-hatched pattern]						
4		3/8" BENT. PELL	[Diagonal line pattern]						
4				24					SILTY SAND- BROWN, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, WAFLES, HYDROCARBON ODOOR.
5									
6									
7									
8									
9									
10	0.030 INCH SLUT	34 SAND	[Dotted pattern]						COLOR CHANGE TO LIGHT BROWN WITH TRACE CLAY, FINE GRAINED, HYDROCARBON ODOOR.
11									
12									
13									
14									
15				1200					HYDROCARBON ODOOR.
									TEST BORING TERMINATED @ 15' ON 8-12-89
									MATERIALS: 2 BAGS OF SAND
									1/2 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING

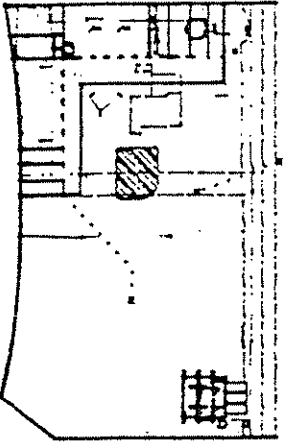


SITE/LOCATION CARPANTON/DARLAND

PROJECT NO.	004-88-060	PR-59	
WATER LEVEL		SHEET 1	
TIME		OF 1	
DATE		DRILLER	
CASING DEPTH		START	FINISH
DRILLING CONTRACTOR		TIME	TIME
DRILLER	MIKE MOORE	8:45	10:15
DRILLING METHOD	HOLLOW STEM AUGER	DATE	DATE
SAMPLING METHOD	140# HAMMER 34" DROP, MODIFIED CALIFORNIA SAMPLER.	6-12-89	6-12-89
LOGGER	JOHN RUSSELL		
N/S	2550.7	E/W	3254.2
		ELEV.	14.75
BORING DIAMETER:	4 INCHES	WELL CASING DIAMETER:	2 INCHES
REVIEWED BY:	M.A.M.	DATE	8-29-89

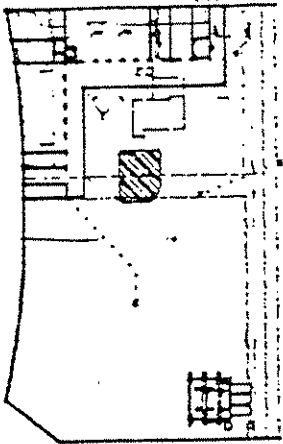
DIST. FROM SURF.	WELL CONST.		LEGEND	REACTING	SAMPLE NO.	RECOVERY	BLOBS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS							
1								SM	PORTLAND CEMENT CONCRETE
2									SILTY SAND- BROWN, MOIST, MEDIUM DENSE, FINE GRAINED, QUARTZ, MINOR, HYDROCARBON ODOUR.
3	BLANK	4# BENTONITE CEMENT SLURRY							
4		3/8" BENT. PELL.							
5				8					
6									
7									
8									
9	0.002 INCH SLOT								
10		3/4 SAND		18					
11									
12									
13									
14									
15									
				10000+					
									GRADES WITH TRACE CLAY, HYDROCARBON ODOUR.
									TEST BORING TERMINATED @ 15' ON 6-11-89
									MATERIALS: 2 BAGS OF SAND
									1/2 5 GALLON BUCKET OF BENTONITE

PR-60



PROJECT NO.	004-88-068	PR-60	
WATER LEVEL		SHEET 1	
TIME		OF 1	
DATE		DRILLER	
CASING DEPTH		START TIME	FINISH TIME
DRILLING CONTRACTOR		5-10-89	5-10-89
DRILLER	MIKE MOORE		
DRILLING METHOD	HOLLOW STEM AUGER		
SAMPLING METHOD	1408 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER.		
LOGGER	JOHN RUSSELL		
N/S	2811.4	E/W	3253.1
		BLEV.	14.87
BORING DIAMETER:	8 INCHES	WELL CASING DIAMETER:	2 INCHES
REVIEWED BY:	M.J.M.	DATE	8-29-89

DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6" IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS	LEGEND							
1			4" BENTONITE CEMENT SLURRY					SP	PORTLAND CEMENT CONCRETE	
2	BLANK									SAND- GRAY, DRY TO MOIST, FINE-GRAINED, MEDIUM DENSE WITH MICA, QUARTZ, MAFICS, HYDROCARBON ODOR.
3			3" BENTONITE CEMENT PELL					SM		
4										
6			3/4 SAND							
8										
10	0.000 INCH SLUT				18					SULTY SAND- LIGHT BROWN, MOIST, MEDIUM DENSE, FINE-GRAINED WITH MICA, QUARTZ, MAFICS.
11										
12										
13										
14										
15										
16					18					
										TEST BORING TERMINATED • 15' ON 5-10-89
									MATERIALS: 2 BAGS OF SAND 1/2 5 GALLON BUCKET OF BENTONITE	



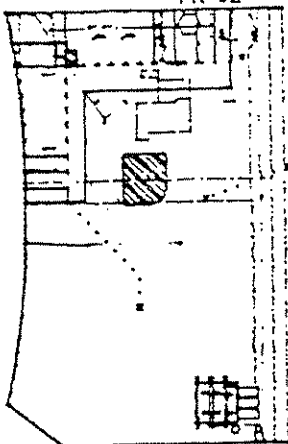
PROJECT NO. 004-85-060				SHEET 1	
WATER LEVEL				OF 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				DATE	DATE
DRILLER W.D. MOORE				5-18-88	5-18-88
DRILLING METHOD HOLLOW STEM AUGER					
SAMPLING METHOD 1400 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER					
LOGGER JOHN RUSSELL					
N/S	2585.3	2595.3	E/W	3248.1	3248.1
BORING DIAMETER: 6 INCHES				WELL CASING DIAMETER: 2 INCHES	
REVISED BY: M.A.M.				DATE 6-29-88	

DIST. FROM SURF.	WELL CONST.		LEGEND	TLY. READING	SAMPLE NO.	RECOVERY	BLDG. PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS								
1			[Cross-hatched pattern]					SP	PORTLAND CEMENT CONCRETE	
2	BLANK	4% BENTONITE CEMENT SLURRY								SAND- BROWN, DRY TO MOIST, MEDIUM DENSE, FINE GRAINED WITH MICA, QUARTZ, MAFICS, HYDROCARBON ODOOR.
3			[Diagonal hatched pattern]					SM		
4		3/8" BENT. PELL.								
5			[Dotted pattern]							
6										
7										
8										
9										
10	0.000 INCH SLOT									SAND- BROWN, DRY TO MOIST, MEDIUM DENSE, FINE GRAINED WITH MICA, QUARTZ, MAFICS, HYDROCARBON ODOOR.
11										
12										
13										SILTY SAND- FINE-GRAINED, BROWN, MOIST, SEMI-PLASTIC, MICA, QUARTZ, MAFICS, HYDROCARBON ODOOR.
14										
15										TEST BORING TERMINATED @ 15' ON 5-18-88
16										
17										
18										
19										
20										
21										
22										
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45										
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48										
49										
50										

MATERIALS: 2 BAGS OF SAND
1/2 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING

PR-62



SITE/LOCATION CANNATION/OAKLAND

BORING NO.

PR-62

PROJECT NO. 004-62-068

SHEET 1

OF 1

DRILLER

START TIME FINISH TIME

10:10 10:40

DATE DATE

5-17-89 5-17-89

WATER LEVEL

TIME

DATE

CASING DEPTH

DRILLING CONTRACTOR

DRILLER MIKE MOORE

DRILLING METHOD HOLLOW STEM AUGER

SAMPLING METHOD 140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER

LOGGER JOHN RUSSELL

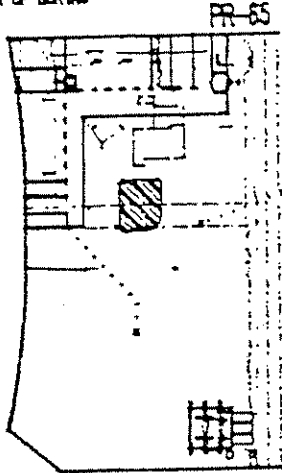
N/S 2629.0 2629.0 E/W 3240.0 ELEV. 14.53

BORING DIAMETER: 6 INCHES WELL CASING DIAMETER: 2 INCHES

REVIEWED BY: M.J.M. DATE 8-29-89

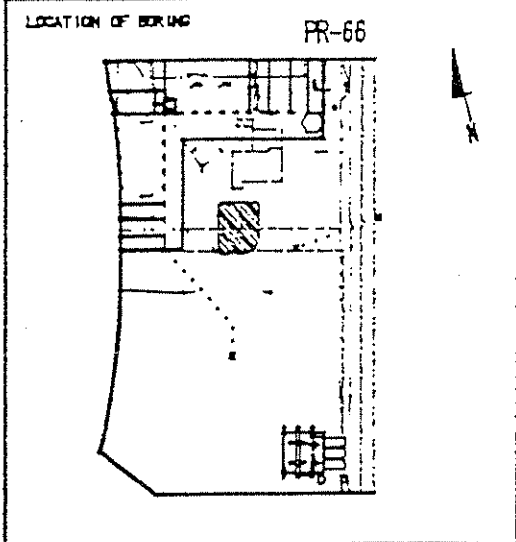
DIST. FROM SURF.	WELL CONST.			TLY READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEND						
1		4% BENTONITE CEMENT SLURRY						SP	PORTLAND CEMENT CONCRETE
2	BLANK								SAND- DARK GRAY, DRY TO MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON COOR.
3		3/8" BENT. PELL.							
4									
5				18					
6									
7									
8									
9	0.000 INCH SLOT								
10		3# SAND		100				SM	SILTY SAND- BROWN, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, HYDROCARBON COOR.
11									
12									
13									
14									
15				2000					HYDROCARBON COOR.
									TEST BORING TERMINATED @ 15' ON 5-17-89
									MATERIALS: 2 BAGS OF SAND
									1/2 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



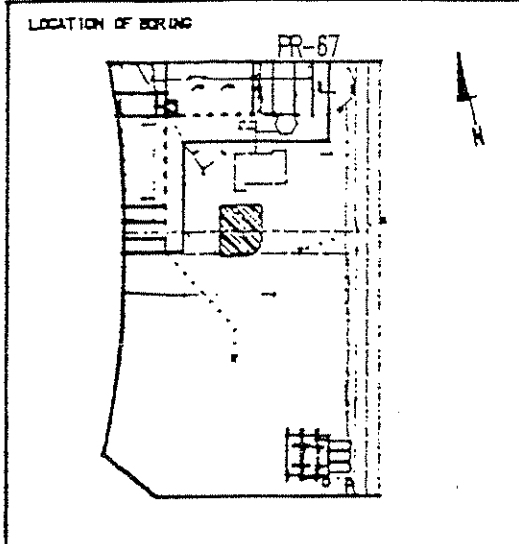
SITE/LOCATION CANNATION/OAKLAND				BORING NO. PR-65	
PROJECT NO. 004-88-058				SHEET 1	
WATER LEVEL				OF 1	
TIME				DRILLER	
DATE				START	FINISH
CASING DEPTH				TIME	TIME
DRILLING CONTRACTOR				13:15	13:45
DRILLER MIKE MOORE				DATE	DATE
DRILLING METHOD HOLLOW STEM AUGER				5-17-88	5-17-88
SAMPLING METHOD 140# HAMMER DR. DROP, MODIFIED CALIFORNIA SAMPLER.					
LOGGER JOHN RUSSELL					
N/S 2583.8		2583.6		E/W 3283.8	
				3263.8	
ELEV. 14.50					
BORING DIAMETER: 8 INCHES				WELL CASING DIAMETER: 2 INCHES	
REVIEWED BY: M.A.M.				DATE 5-29-88	

DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLDGS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEADER						
1		AN BENTONITE CEMENT SLURRY						SP	PORTLAND CEMENT CONCRETE
2	BLANK								SAND- BROWN, DRY TO MOIST, MEDIUM DENSE, FINE-GRAINED WITH QUARTZ, MAFICS, NO HYDROCARBON ODOR.
3		3/4" BENT. FILL							
4									
5								SM	
6									
7									
8									
9									
10	0.230 INCH SLIT			7000					SILTY SAND- MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON ODOR, SOME CLAY.
11									
12									
13									
14									
15				1000				HYDROCARBON ODOR.	
16								TEST BORING TERMINATED @ 16' ON 5-17-88	
									MATERIALS: 2 BAGS OF SAND 1/2 5 GALLON BUCKET OF BENTONITE



SITE/LOCATION		DANNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-66-068		PR-66	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR				TIME	TIME
DRILLER		MIKE MOORE		13:30	14:30
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		140# HAMMER 3/4" DROP, MODIFIED CALIFORNIA SAMPLER.		5-17-88	5-17-88
LOGGER		JOHN RUSSELL			
N/S	2544.1	E/W	3258.3	ELEV. 14.28	
BORING DIAMETER: 6 INCHES			WELL CASING DIAMETER: 2 INCHES		
REVIEWED BY: M.A.M.			DATE 6-28-88		

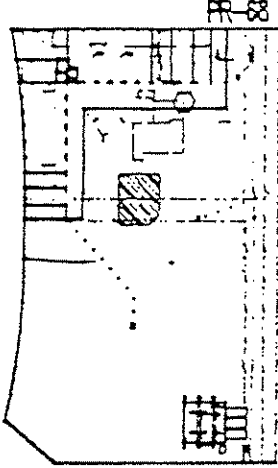
DIST. FROM SURF.	WELL CONST.			TV. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1	BLANK	4# BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					SP	PORTLAND CEMENT CONCRETE
2									SAND- BROWN, DRY TO MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, NO HYDROCARBON ODOR.
3									
4		3/8" BENT. FILL	[Diagonal line pattern]						
5			[Dotted pattern]	70				SM	
6									
7									
8									
9									
10	0.030 INCH SLOT			3200					SILTY SAND- BROWN, DRY TO MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON ODOR.
11									
12									
13									
14				8000					HYDROCARBON ODOR.
									TEST BORING TERMINATED @ 15' ON 5-17-88
									MATERIALS: 2 BAGS OF SAND
									1/2 5 GALLON BUCKET OF BENTONITE



SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-050		PR-67	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR				TIME	TIME
DRILLER		W. DE. MOORE		10:00	10:50
DRILLING METHOD		HOLLOW STEM AUGER		DATE	DATE
SAMPLING METHOD		1400 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		5-15-88	5-15-88
LOGGER		JOHN RUSSELL			
N/S	2575.3	E/W	3224.3	ELEV. 14.12	
BORING DIAMETER: 8 INCHES		WELL CASING DIAMETER: 2 INCHES			
REVIEWED BY: M.A.M.				DATE 6-29-88	

DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEIEND						
1		4% BENTONITE CEMENT SLURRY						SP	CONCRETE
2	BLANK								SAND- GRAY, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON ODDR.
3		3/8" BENT. PELL.							
4									
5				2800				SM	
6									
7									
8									
9	0.030 INCH SLOT			10000					SILTY SAND- BROWN, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON ODDR.
10									
11									
12									
13									
14									
15				8000					HYDROCARBON ODDR.
									TEST BORING TERMINATED @ 15' ON 5-15-88
									MATERIALS: 2 BAGS OF SAND
									1/2 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING

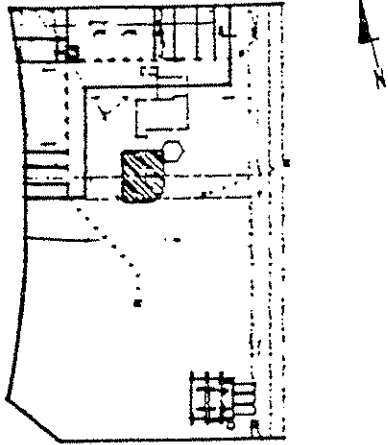


SITE/LOCATION		CARMATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-058		PR-68	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START	FINISH
DRILLING CONTRACTOR		BLAKE WOODS		TIME	TIME
DRILLER		HOLLOW STEM AUGER		10:55	11:40
SAMPLING METHOD		1400 HAMMER OR DROP, MODIFIED CALIFORNIA SAMPLER		DATE	DATE
LOGGER		JOHN RUSSELL		5-15-68	5-15-68
N/S	2541.5	E/W	3220.8	ELEV. 14.45	
BORING DIAMETER:		8 INCHES		WELL CASING DIAMETER: 2 INCHES	
REVIEWED BY:		M.A.M.		DATE 6-29-68	

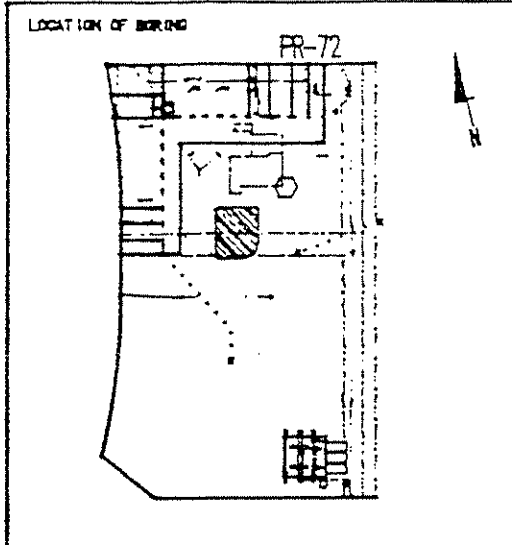
DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLDS. PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS	LEGEND							
1		4% BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					SB	PORTLAND CEMENT CONCRETE	
2	BLANK									
3		3/8" BENT. FILL	[Diagonal line pattern]							
4										
5			[Dotted pattern]	800				SM	SAND- MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON ODOOR.	
6										
7										
8										
9	0.030 INCH SLOT									
10		5% SAND	[Dotted pattern]	800						SILTY SAND- BROWN WITH GRAY STAINING ON SOIL, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON ODOOR.
11										
12										
13										
14										
15				8000					HYDROCARBON ODOOR.	
16									TEST BORING TERMINATED @ 15' ON 6-15-68	
									MATERIALS: 2 BAGS OF SAND 1/2 5 GALLON BUCKET OF BENTONITE	

LOCATION OF BORING		SITE/LOCATION		BORING NO.	
		CARNAVAL/DARLAND		PR-69	
		PROJECT NO. 004-85-050		SHEET 1 OF 1	
WATER LEVEL		TIME		DRILLER	
DATE		START TIME		FINISH TIME	
CASING DEPTH		DATE		DATE	
DRILLING CONTRACTOR		DRILLING METHOD		5-15-69 5-15-69	
DRILLER WIRE MOORE		SAMPLING METHOD		140# HAMMER 3/4" DROP, MODIFIED CALIFORNIA SAMPLER	
DRILLING METHOD HOLLOW STEM AUGER		LOGGER		JOHN RUSSELL	
N/S 2507 J		E/W 3107 J		ELEV. 14.27	
BORING DIAMETER: 6 INCHES		WELL CASING DIAMETER: 2 INCHES		REVIEWED BY: M.J.W. DATE 8-29-69	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEND						
1		4# BENTONITE CEMENT SLURRY						SM	PORTLAND CEMENT CONCRETE
2									SILTY SAND- GRAY, MOIST, MEDIUM DENSE, FINE TO COARSE GRAINED WITH COBBLES TO 5mm, HYDROCARBON ODOOR.
3	BLANK	3/8" BENT. FILL						ML	
4									
5				70					
6									
7									
8									
9									
10	0.030 INCH SLOT	5# SAND		5000					SANDY SILT- GRAY, MOIST, MEDIUM STIFF WITH TRACE CLAY, QUARTZ, MAFICS, HYDROCARBON ODOOR.
11									
12									
13								SW	
14									SILTY SAND- GRAY, MOIST, MEDIUM DENSE WITH TRACE CLAY, QUARTZ, HYDROCARBON ODOOR.
15				4400					TEST BORING TERMINATED @ 15' ON 5-15-69
									MATERIALS: 2 BAGS OF SAND 1/2 5 GALLON BUCKET OF BENTONITE

<p>LOCATION OF BORING PR-71</p> 	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">SITE/LOCATION</td> <td colspan="2">CAPRANION/DARLAND</td> <td colspan="2">BORING NO.</td> </tr> <tr> <td colspan="2">PROJECT NO.</td> <td colspan="2">004-66-059</td> <td colspan="2">PR-71</td> </tr> <tr> <td>WATER LEVEL</td> <td></td> <td></td> <td></td> <td colspan="2">SHEET 1</td> </tr> <tr> <td>TIME</td> <td></td> <td></td> <td></td> <td colspan="2">OF 1</td> </tr> <tr> <td>DATE</td> <td></td> <td></td> <td></td> <td colspan="2">DRILLER</td> </tr> <tr> <td>CASING DEPTH</td> <td></td> <td></td> <td></td> <td>START</td> <td>FINISH</td> </tr> <tr> <td>DRILLING CONTRACTOR</td> <td colspan="3"></td> <td>TIME</td> <td>TIME</td> </tr> <tr> <td>DRILLER</td> <td colspan="3">MIKE MOORE</td> <td>14-45</td> <td>15-45</td> </tr> <tr> <td>DRILLING METHOD</td> <td colspan="3">HOLLOW STEM AUGER</td> <td>DATE</td> <td>DATE</td> </tr> <tr> <td>SAMPLING METHOD</td> <td colspan="3">140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER</td> <td>5-18-89</td> <td>5-18-89</td> </tr> <tr> <td>LOGGER</td> <td colspan="3">JOHN RUSSELL</td> <td></td> <td></td> </tr> <tr> <td>N/S</td> <td>2486.7</td> <td>2496.7</td> <td>E/W</td> <td>3772.4</td> <td>ELEV. 14.87</td> </tr> <tr> <td>BORING DIAMETER:</td> <td colspan="2">8 INCHES</td> <td>WELL CASING DIAMETER:</td> <td colspan="2">2 INCHES</td> </tr> <tr> <td>REVIEWED BY:</td> <td colspan="3">M.A.M.</td> <td>DATE</td> <td>8-28-89S</td> </tr> </table>	SITE/LOCATION		CAPRANION/DARLAND		BORING NO.		PROJECT NO.		004-66-059		PR-71		WATER LEVEL				SHEET 1		TIME				OF 1		DATE				DRILLER		CASING DEPTH				START	FINISH	DRILLING CONTRACTOR				TIME	TIME	DRILLER	MIKE MOORE			14-45	15-45	DRILLING METHOD	HOLLOW STEM AUGER			DATE	DATE	SAMPLING METHOD	140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			5-18-89	5-18-89	LOGGER	JOHN RUSSELL					N/S	2486.7	2496.7	E/W	3772.4	ELEV. 14.87	BORING DIAMETER:	8 INCHES		WELL CASING DIAMETER:	2 INCHES		REVIEWED BY:	M.A.M.			DATE	8-28-89S
SITE/LOCATION		CAPRANION/DARLAND		BORING NO.																																																																																	
PROJECT NO.		004-66-059		PR-71																																																																																	
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DRILLER	MIKE MOORE			14-45	15-45																																																																																
DRILLING METHOD	HOLLOW STEM AUGER			DATE	DATE																																																																																
SAMPLING METHOD	140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			5-18-89	5-18-89																																																																																
LOGGER	JOHN RUSSELL																																																																																				
N/S	2486.7	2496.7	E/W	3772.4	ELEV. 14.87																																																																																
BORING DIAMETER:	8 INCHES		WELL CASING DIAMETER:	2 INCHES																																																																																	
REVIEWED BY:	M.A.M.			DATE	8-28-89S																																																																																

DIST. FROM SURF.	WELL CONST.			TLY. READING	SAMPLE NO.	RECOVERY	BLDGS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS	LEGEND							
1		4# BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					SB	ASPHALTIC CONCRETE	
2	BLANK									
3		3/8" BENT. PELL.								
4						X	15			
5			[Dotted pattern]	100	4137	X	22		SAND - LIGHT BROWN, MOIST, DENSE, FINE GRAINED WITH QUARTZ, MAFICS	
6									HYDROCARBON ODOUR.	
7										
8										
9										
10	0.030 INCH SLOT	3# SAND			84	4138	X	17		HYDROCARBON ODOUR.
11										
12										
13										
14							X	15		
15						X	12			
16				82	4138	X	17		HYDROCARBON ODOUR.	
									TEST BORING TERMINATED @ 15' ON 5-18-89	
									MATERIALS: 2 BAGS OF SAND	
									1/2 5 GALLON BUCKET OF BENTONITE	

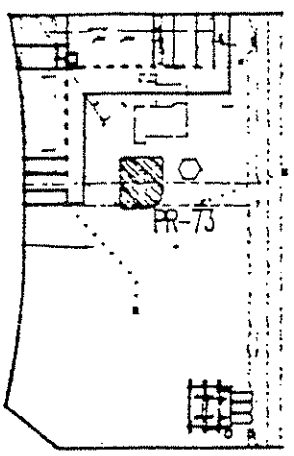


SITE/LOCATION				CARNATION/OAKLAND		BORING NO.	
PROJECT NO.				004-88-068		PR-72	
WATER LEVEL						SHEET 1 OF 1	
TIME						DRILLER	
DATE						START	FINISH
CASING DEPTH						TIME	TIME
						8:35	9:20
DRILLING CONTRACTOR						DATE	DATE
DRILLER				MOKE MOORE		5-18-89	5-18-89
DRILLING METHOD				HOLLOW STEM AUGER			
SAMPLING METHOD				140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER			
LOGGER				JOHN RUSSELL			
N/S		28 TO 3		E/W		3204 J	
						ELEV. 8.13	
BORING DIAMETER:				8 INCHES		WELL CASING DIAMETER: 2 INCHES	
REVIEWED BY:				M.A.M.		DATE 8-29-88	

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWES PER 6 IN.	USGS	LOG OF MATERIAL		
	CASING	ANNULUS	LEGEND								
1	BLANK	44 BENTONITE CEMENT SLURRY						SP			
2											
3											
4	0.030 INCH SLOT	2 1/2" BENT. FILL				X	13				
5				780	4745	X	21	SAND- LIGHT BROWN, MOIST, MEDIUM DENSE TO DENSE, FINE-GRAINED WITH QUARTZ, HYDROCARBON ODOOR.			
6	0.030 INCH SLOT	SF SAND				X	2				
7											
8											
9				4000	4744	X	25	HYDROCARBON ODOOR.			
10						X	8				
11						X	4				
12						X	6		GRADES LOOSE, HYDROCARBON ODOOR.		
13									TEST BORING TERMINATED @ 15' ON 5-18-89		
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
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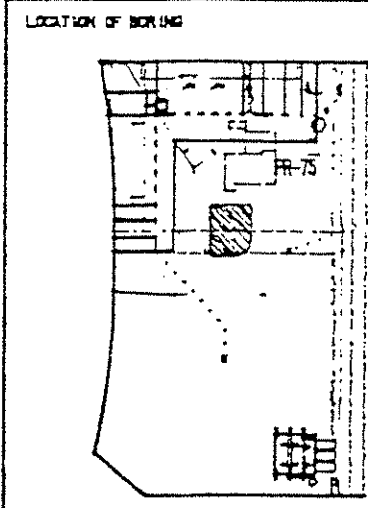
MATERIALS: 2 BAGS OF SAND
1/2 5 GALLON BUCKET OF BENTONITE

LOCATION OF BORING



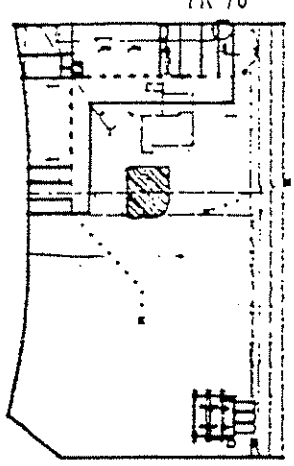
SITE/LOCATION: CARNATION/OAKLAND
PROJECT NO.: 004-88-052
BORING NO.: PR-73
SHEET: 1 OF 1
DRILLER:
DATE:
START TIME: 8:30 **FINISH TIME:** 10:10
CASING DEPTH:
DRILLING CONTRACTOR:
DRILLER: MIKE MOORE
DRILLING METHOD: HOLLOW STEM AUGER
SAMPLING METHOD: 140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER
LOGGER: JOHN RUSSELL
N/S: 2477.5 **E/W:** 3785.7 **3173.7** **ELEV.:** 15.10
BORING DIAMETER: 6 INCHES **WELL CASING DIAMETER:** 2 INCHES
REVIEWED BY: M.A.M. **DATE:** 8-29-89

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLENDS PER 6 IN.	USGS	LOG OF MATERIAL
	CASING	WHELLS	LEGEND						
1	BLANK	4# BENTONITE CEMENT SLURRY	[Cross-hatched pattern]					SP	ASPHALTIC CONCRETE
2	BLANK	4# BENTONITE CEMENT SLURRY	[Cross-hatched pattern]						
3	BLANK	4# BENTONITE CEMENT SLURRY	[Cross-hatched pattern]						
4	3/4" BENT. FILL		[Diagonal lines pattern]			X	80		
4						X	2		
6			[Dotted pattern]	100	4141	X	10		SAND- LIGHT BROWN, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, HYDROCARBON ODOR.
6			[Dotted pattern]						
7			[Dotted pattern]						
8			[Dotted pattern]			X	11		
9			[Dotted pattern]			X	7		
10	0.030 INCH SLIT		[Dotted pattern]	117	4142	X	12		COLOR CHANGE WITH GRAY STAINING, HYDROCARBON ODOR.
11			[Dotted pattern]						
12			[Dotted pattern]						
13			[Dotted pattern]			X	8		
14			[Dotted pattern]			X	7		
15			[Dotted pattern]	108	4143	X	11	HYDROCARBON ODOR.	
								TEST BORING TERMINATED @ 15' ON 5-18-89	
								MATERIALS: 2 BAGS OF SAND 1/2 5 GALLON BUCKET OF BENTONITE	

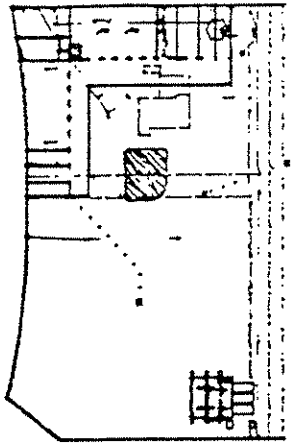


SITE/LOCATION		CARNATION/OAKLAND		BORING NO.	
PROJECT NO.		004-88-050		PR-75	
WATER LEVEL				SHEET 1	
TIME				OF 1	
DATE				DRILLER	
CASING DEPTH				START TIME	
DRILLING CONTRACTOR				FINISH TIME	
DRILLER		MARK MOORE		8:30 10:10	
DRILLING METHOD		HOLLOW STEM AUGER		DATE	
SAMPLING METHOD		1408 HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER		DATE	
LOGGER		JOHN RUSSELL		5-25-89 5-25-89	
N/S ? 3477.6		E/W ? 3183.7		ELEV. ? 15.70	
BORING DIAMETER: 8 INCHES		WELL CASING DIAMETER: 2 INCHES			
REVIEWED BY: M.J.M.		DATE 6-29-89			

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLDGS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LENDG						
1		44 BENTONITE CEMENT SLURRY						SB	ASPHALTIC CONCRETE
2									
3	BLANK								
4		3/8" BENT. POLL.				X	60		
5						X	12		
6				100	4141	X	10		SAND- LIGHT BROWN, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, HYDROCARBON ODR.
7									
8						X	11		
9	0.030 INCH SLOT					X	7		
10		3/8 SAND		177	4142	X	12		COLOR CHANGE WITH GRAY STAINING, HYDROCARBON ODR.
11									
12									
13						X	8		
14						X	7		
15				108	4143	X	11		HYDROCARBON ODR.
									TEST BORING TERMINATED @ 15' ON 6-19-89
									MATERIALS: 2 BAGS OF SAND
									1/2 5 GALLON BUCKET OF BENTONITE

<p>LOCATION OF BORING PR-76</p> 	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">SITE/LOCATION CANNATION/OAKLAND</td> <td colspan="2">BORING NO. PR-76</td> </tr> <tr> <td colspan="2">PROJECT NO. 004-88-050</td> <td colspan="2">SHEET 1 OF 1</td> </tr> <tr> <td colspan="2">WATER LEVEL</td> <td colspan="2">DRILLER</td> </tr> <tr> <td colspan="2">TIME</td> <td>START</td> <td>FINISH</td> </tr> <tr> <td colspan="2">DATE</td> <td>TIME</td> <td>TIME</td> </tr> <tr> <td colspan="2">CASING DEPTH</td> <td>14:30</td> <td>15:10</td> </tr> <tr> <td colspan="2">DRILLING CONTRACTOR</td> <td>DATE</td> <td>DATE</td> </tr> <tr> <td colspan="2">DRILLER W. ROSE MOORE</td> <td>5-25-89</td> <td>5-25-89</td> </tr> <tr> <td colspan="2">DRILLING METHOD HOLLOW STEM AUGER</td> <td colspan="2">SAMPLING METHOD 140# HAMMER 34" DROP, MODIFIED CALIFORNIA SAMPLER.</td> </tr> <tr> <td colspan="2">LOGGER JOHN RUSSELL</td> <td colspan="2"></td> </tr> <tr> <td>N/S</td> <td>2627.6</td> <td>E/W</td> <td>3275.7</td> </tr> <tr> <td colspan="2"></td> <td>ELEV.</td> <td>14.54</td> </tr> <tr> <td colspan="2">BORING DIAMETER: 6 INCHES</td> <td colspan="2">WELL CASING DIAMETER: 2 INCHES</td> </tr> <tr> <td colspan="2">REVIEWED BY: M.A.W.</td> <td colspan="2">DATE 8-26-89</td> </tr> </table>	SITE/LOCATION CANNATION/OAKLAND		BORING NO. PR-76		PROJECT NO. 004-88-050		SHEET 1 OF 1		WATER LEVEL		DRILLER		TIME		START	FINISH	DATE		TIME	TIME	CASING DEPTH		14:30	15:10	DRILLING CONTRACTOR		DATE	DATE	DRILLER W. ROSE MOORE		5-25-89	5-25-89	DRILLING METHOD HOLLOW STEM AUGER		SAMPLING METHOD 140# HAMMER 34" DROP, MODIFIED CALIFORNIA SAMPLER.		LOGGER JOHN RUSSELL				N/S	2627.6	E/W	3275.7			ELEV.	14.54	BORING DIAMETER: 6 INCHES		WELL CASING DIAMETER: 2 INCHES		REVIEWED BY: M.A.W.		DATE 8-26-89	
SITE/LOCATION CANNATION/OAKLAND		BORING NO. PR-76																																																							
PROJECT NO. 004-88-050		SHEET 1 OF 1																																																							
WATER LEVEL		DRILLER																																																							
TIME		START	FINISH																																																						
DATE		TIME	TIME																																																						
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DRILLING CONTRACTOR		DATE	DATE																																																						
DRILLER W. ROSE MOORE		5-25-89	5-25-89																																																						
DRILLING METHOD HOLLOW STEM AUGER		SAMPLING METHOD 140# HAMMER 34" DROP, MODIFIED CALIFORNIA SAMPLER.																																																							
LOGGER JOHN RUSSELL																																																									
N/S	2627.6	E/W	3275.7																																																						
		ELEV.	14.54																																																						
BORING DIAMETER: 6 INCHES		WELL CASING DIAMETER: 2 INCHES																																																							
REVIEWED BY: M.A.W.		DATE 8-26-89																																																							

DIST. FROM SLUFF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL	
	CASING	ANNULUS	LEGEND							
1			4" BENTONITE CEMENT SLURRY					SP	PORTLAND CEMENT CONCRETE	
2										
3	BLANK									
4		3/8" BEAT-CELL	3/4" SAND					SH		
5										
6					78					SAND- DARK GRAY, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON ODOOR.
7										
8										
9										
10	0.000 INCH SLOT				200					SILTY SAND- DARK GRAY, MOIST, MEDIUM DENSE, FINE GRAINED WITH TRACE CLAY, QUARTZ, MAFICS, HYDROCARBON ODOOR.
11										
12										
13										
14										
15				180					GRADES MOIST TO WET, HYDROCARBON ODOOR.	
									TEST BORING TERMINATED @ 15' ON 5-25-89	
									MATERIALS: 2 BAGS OF SAND	
									1/2 5 GALLON BUCKET OF BENTONITE	

LOCATION OF BORING 	SITE/LOCATION CANNATION/DARLAND				BORING NO. PR-77	
	PROJECT NO. 004-88-050				SHEET 1 OF 1	
	WATER LEVEL				DRILLER	
	TIME				START TIME	
	DATE				FINISH TIME	
	CASING DEPTH				15:30 16:10	
	DRILLING CONTRACTOR				DATE	
	DRILLER MIKE MOORE				DATE 5-25-88	
	DRILLING METHOD HOLLOW STEM AUGER				DATE	
	SAMPLING METHOD 140# HAMMER 30" DROP, MODIFIED CALIFORNIA SAMPLER				DATE 5-25-88	
LOGGER JOHN RUSSELL						
N/S 2807.1 2607.1		E/W 3287.8 3267.9		ELEV. 14.25		
BORING DIAMETER: 6 INCHES			WELL CASING DIAMETER: 2 INCHES			
REVIEWED BY: M.J.M.				DATE 8-28-88		

DIST. FROM SURF.	WELL CONST.			TLV READING	SAMPLE NO.	RECOVERY	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL
	CASING	ANNULUS	LEGEND						
1									PORTLAND CEMENT CONCRETE
2	BLANK	4% BENTONITE CEMENT SLURRY							
3		3/8" BENT. WELL							
4									
5				230				SP	SAND- DARK GRAY, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON ODOUR.
6									
7									
8									
9	0.030 INCH SLOT	3% SAND		270					SAND- FINE-GRAINED, DARK GRAY, SOME SILT, MOIST, NON-PLASTIC, QUARTZ, MAFICS, HYDROCARBON ODOUR.
10									
11									
12									
13									
14									
15				500				SM	SILTY SAND- DARK GRAY, MOIST, MEDIUM DENSE, FINE GRAINED WITH QUARTZ, MAFICS, HYDROCARBON ODOUR.
									TEST BORING TERMINATED @ 15' ON 5-25-88
									MATERIALS: 2 BAGS OF SAND
									1/2 5 GALLON BUCKET OF BENTONITE

DATE STARTED: 7/13/89

SURFACE CONDITIONS: Asphalt Pavement

DATE COMPLETED: 7/13/89

SURFACE ELEVATION: 14.76

DRILLING EQUIPMENT: Hollow Stem Auger

COORDINATES: N 2,512.4 E 3,151.0

DRILLING CONTRACTOR: Accubore

GROUNDWATER CONDITIONS:

LOGGED BY: Jim Wallace

TOTAL DEPTH: 15.5

CASING DEPTH: 15.5 feet

BORING DIAMETER: 6"

FILTER PACK: #2/16 sand SLOT SIZE:.020"

REMARKS	FIELD					DEPTH (feet)	USCS CLASS.	SOIL DESCRIPTION
	WELL	SAMP. NO.	FIELD READ.	BLOWS / 6"	SAMP TYPE			
2 inch Diameter Casing			280					Asphaltic Concrete
5% Bentonite Cement Grout			300			2		SILTY SAND(SM) black stained, dry to moist, medium dense, strong hydrocarbon odor
Bentonite Pellets						4		color change to gray green
#2/16 Sand			300			6		
			300			8		grades moist to wet, fine grained
						10		color change to red brown
0.02 inch Slot Screen			30			12		grades with some clay, no hydrocarbon odor
			30			14		grades with increasing clay content

AGE
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation/Oakland
 1310 14th St., Oakland, Ca.
 LOG OF PR-78

Sheet 1 of 2

REMARKS	FIELD					DEPTH (feet)	USCS CLASS.	SOIL DESCRIPTION
	WELL	SAMP. NO.	FIELD READ.	BLOWS / 8"	SAMP TYPE			
	III		800			16		Test Boring Terminated at 15 1/2 feet on 7-13-89 Materials: 2 bags #2/16 sand 1/2 bucket bentonite
						18		
						20		
						22		
						24		
						26		
						28		
						30		
						32		
						34		
						36		
						38		

DATE STARTED: 7/13/89

SURFACE CONDITIONS: Asphalt Pavement

DATE COMPLETED: 7/13/89

SURFACE ELEVATION: 14.56

DRILLING EQUIPMENT: Hollow Stem Auger

COORDINATES: N 2,514.9 E 3,127.4

DRILLING CONTRACTOR: Accubore

GROUNDWATER CONDITIONS:

LOGGED BY: Jim Wallace

TOTAL DEPTH: 15.0

CASING DEPTH: 15 feet

BORING DIAMETER: 6"

FILTER PACK: #2/16 sand SLOT SIZE:.020"

REMARKS	FIELD					DEPTH (feet)	USCS CLASS.	SOIL DESCRIPTION
	WELL	SAMP. NO.	FIELD READ.	BLOWS / 6"	SAMP TYPE			
2 inch Diameter Casing			18				Asphaltic Concrete	
5% Bentonite Cement Grout			28			2	Aggregate Base rock	
Bentonite Pellets						4	SILTY SAND(SM) black, moist, loose, with nails, wood, brick and concrete (FILL)	
#2/16 Sand			40			6	SILTY SAND(SM) black, dry to moist, medium dense, grading to red brown	
			40			8	color change to green gray	
			28			10	color change to red brown	
0.02 inch Slot Screen			50			12	grades with increasing clay and moisture content	
						14	no hydrocarbon odor	
						14	Test Boring Terminated at 15 feet on 7-13-89 Materials: 2 bags of #2/16 sand 1/2 bucket bentonite	

AGE

ANANIA GEOLOGIC ENGINEERING

Carnation/Oakland
1310 14th St., Oakland, Ca.

LOG OF PR-79

Sheet 1 of 1

PROJECT NO. 004-88-059

DATE STARTED: 7/13/89

SURFACE CONDITIONS: Asphalt Pavement

DATE COMPLETED: 7/13/89

SURFACE ELEVATION: 14.43

DRILLING EQUIPMENT: Hollow Stem Auger

COORDINATES: N 2,539.5 E 3,129.5

DRILLING CONTRACTOR: Accubore

GROUNDWATER CONDITIONS:

LOGGED BY: Jim Wallace

TOTAL DEPTH: 15.0

CASING DEPTH: 15 feet

BORING DIAMETER: 6"

FILTER PACK: #2/16 sand SLOT SIZE:.020"

REMARKS	FIELD					DEPTH (feet)	USCS CLASS.	SOIL DESCRIPTION
	WELL	SAMP. NO.	FIELD READ.	BLOWS / 6"	SAMP TYPE			
2 inch Diameter Casing							Asphaltic Concrete	
5% Bentonite Cement Grout							Aggregate Baserock	
Bentonite Pellets						2	SILTY SAND(SM) black, moist, loose, strong hydrocarbon odor (FILL)	
#2/16 Sand			200			4	SILTY SAND(SM) green gray, dry to moist, medium dense	
			300			6		
			340			8		
0.02 inch Slot Screen						10		
			20			12	no hydrocarbon odor	
			150			14	Test Boring Terminated at 15 feet on 7-13-89 Materials: 2 bags of #2/16 sand 1/2 bucket bentonite	

AGE _____
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation/Oakland
 1310 14th St., Oakland, Ca.
 LOG OF PR-80

Sheet 1 of 1

DATE STARTED: 7/13/89

SURFACE CONDITIONS: Asphalt Pavement

DATE COMPLETED: 7/13/89

SURFACE ELEVATION: 14.86

DRILLING EQUIPMENT: Hollow Stem Auger

COORDINATES: N 2,490.3 E 3,155.0

DRILLING CONTRACTOR: Accubore

GROUNDWATER CONDITIONS:

LOGGED BY: Jim Wallace

TOTAL DEPTH: 15.0

CASING DEPTH: 15 feet

BORING DIAMETER: 6"

FILTER PACK: #2/16 sand SLOT SIZE:.020"

REMARKS	FIELD				DEPTH (feet)	USCS CLASS.	SOIL DESCRIPTION
	WELL	SAMP. NO.	FIELD READ.	BLOWS / 6" SAMP TYPE			
2 inch Diameter Casing							Asphaltic Concrete
5% Bentonite Cement Grout			60		2		Aggregate Baserock
Bentonite Pellets			68		4		SILTY SAND(SM) black, dry to moist, medium dense, strong hydrocarbon odor
#2/16 Sand			38		6		grades with fine grained sand
0.02 inch Slot Screen					8		color change to green gray
					10		
					12		
					14		color change to red brown
			150		15		Test Boring Terminated at 15 feet on 7-13-89 Materials: 2 bags of #2/16 sand 1/2 bucket bentonite

AGE
ANANIA GEOLOGIC ENGINEERING

Carnation/Oakland
1310 14th St., Oakland, Ca.
LOG OF PR-81

Sheet 1 of 1

PROJECT NO. 004-88-059



EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY, INC.

LOG OF SOIL BORING **AS1**

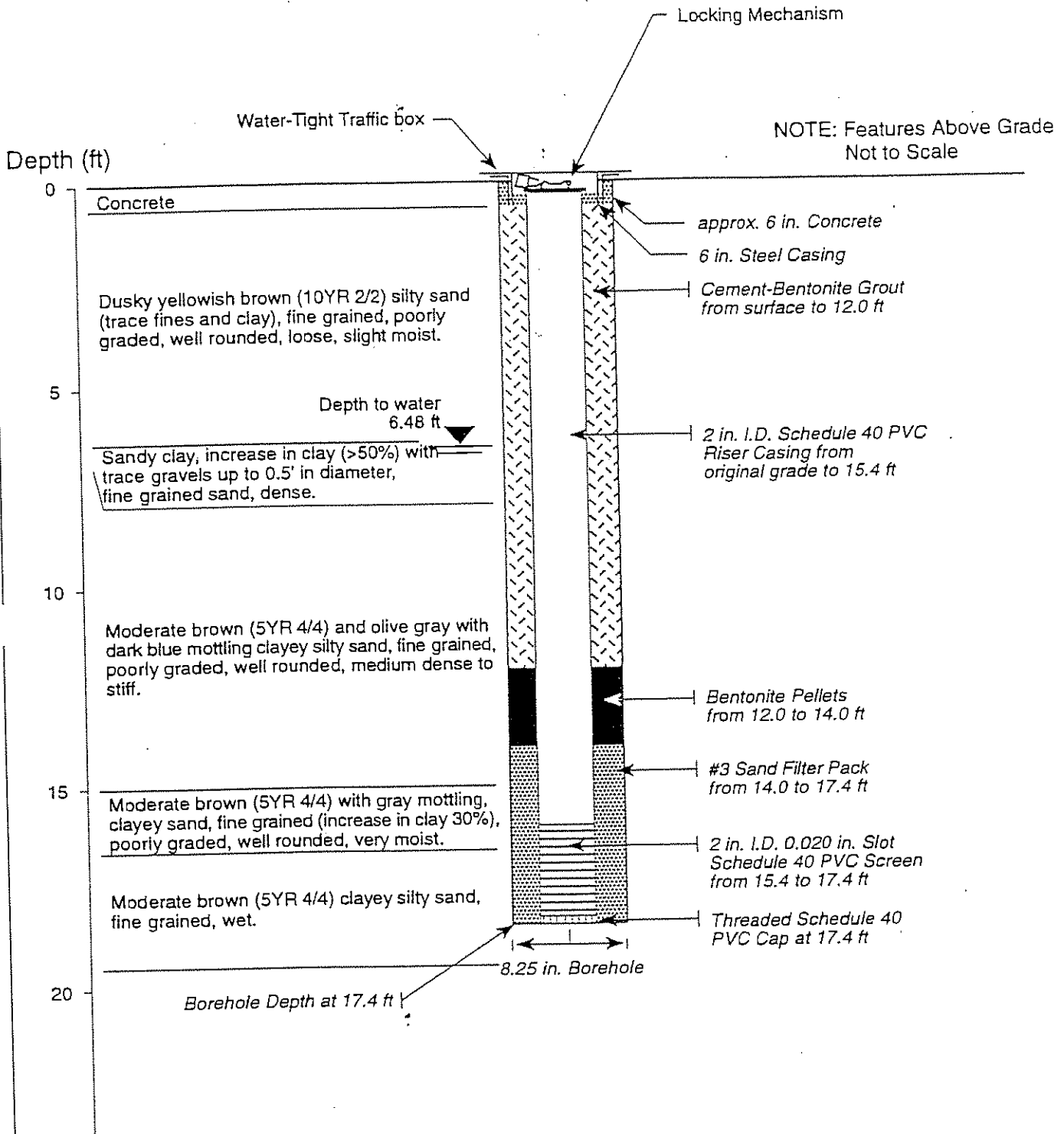
Coordinates

CLIENT Nestle USA	PROJECT NUMBER 60966.01	LOCATION 1310 14th Street Oakland, CA
DRILLING AND SAMPLING METHODS Hollow Stem Auger, 8.25" O.D., 2.5" Split Spoon Sampler.		
Water Level	8.7	6.48
Time	1100	1535
Date	3/18/96	3/18/96
Reference	Ground Surface	Ground Surface
		DRILLING START FINISH TIME TIME 0930 1030 DATE DATE 3/18/96 3/18/96

Inches Driven	Inches Recovered	Blows/6" Sampler	OVA Reading	WELL DETAIL	DEPTH (feet)	GRAPHIC LOG	SURFACE CONDITIONS
							Concrete (5")
							DESCRIPTION by: D. Conkie
					0		Concrete
					1		At 0.5' - dusky yellowish brown (10YR 2/2) silty sand, trace fines and clay, fine grained, poorly graded, well rounded, loose, slightly moist, no odor.
					2		Lighter color with depth.
					3		
					4	SM/SC	
18	18	16 22	8,500		5		At 5' - moderate brown (5YR 4/4), silty clayey sand, trace fines (10-15%), fine grained, poorly graded, well rounded, dense, moist, HC odor.
18	18	25 12	>10,000 (2% LEL)		6		At 6.5' - sandy clay, increase in clay (>50%), dense, sand is fine grained, HC odor.
		16 25			7	CL	At 7' - moderate brown (5YR 4/4) clayey silty sand, trace fines (10-15%), poorly graded, well rounded, very moist to wet, HC odor.
18	14	8 10	>10,000 (>2% LEL)		8		
		10 10			9		
18	18	10 12 12			10	SM/SC	
					11		At 11' - moderate brown (5YR 4/4) clayey silty sand, trace fines (10-15%), fine grained, poorly graded, well rounded, very moist to wet, HC odor.
					12		
18	18	8 10 12	710,000 (5% LEL)		13	SM/SC	At 13' - olive gray with dark blue mottling clayey silty sand, fine grained, well rounded, poorly graded, medium dense, very moist, HC odor.
					14		
18	18	3 4 5	>10,000 (>3% LEL)		15	SC	At 15' - moderate brown (5YR 4/4) with gray mottling clayey sand, increase in clay (30%), poorly graded, well rounded, very moist, HC odor.
					16		
18	13	3 6 7	1,920		17	SM/SC	At 17' - moderate brown (5YR 4/4) with dark brown mottling clayey silty sand, decrease in clay (<10%), wet, HC odor.
					18		
					19		
					20		TOTAL DEPTH: 17.4'

60966.01..._last-1.in4

WELL COMPLETION DIAGRAM FOR AIR SPARGING WELL AS1



EA ENGINEERING, SCIENCE, AND TECHNOLOGY

Client: Nestle, U.S.A.

Site: 60966.01

Location: 1310 14th Street, Oakland, California.



EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY, INC.

LOG OF SOIL BORING **AS2**

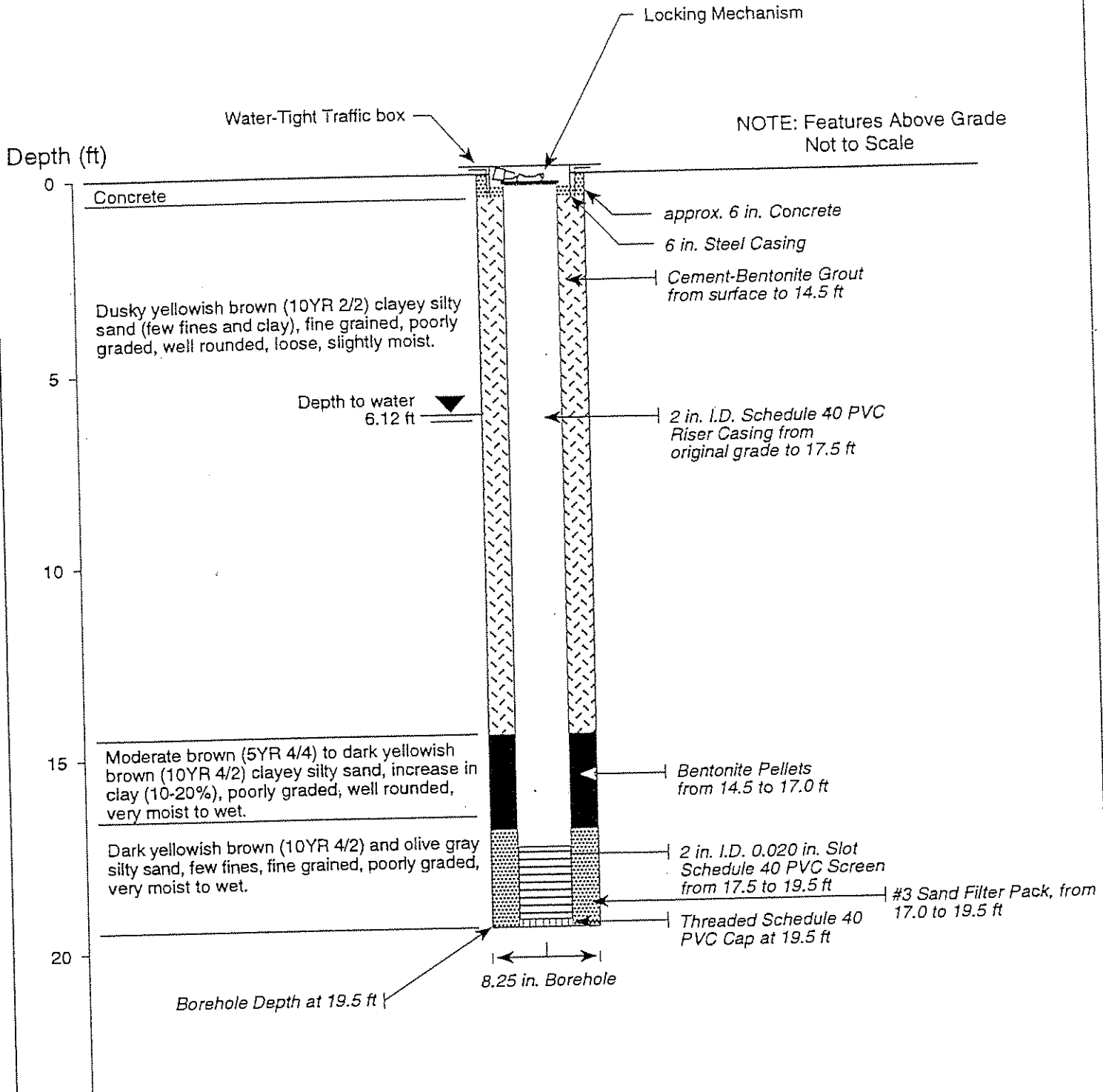
Coordinates

CLIENT Nestle USA	PROJECT NUMBER 60966.01	LOCATION 1310 14th Street Oakland, CA
DRILLING AND SAMPLING METHODS Hollow Stem Auger, 8.25" O.D., 2.5" Split Spoon Sampler.		
Water Level	7.20	6.12
Time	1235	1525
Date	3/18/96	3/18/96
Reference	TOC	TOC
		DRILLING START FINISH TIME TIME 1100 1200 DATE DATE 3/18/96 3/18/96

Inches Driven	Inches Recovered	Blows/6" Sampler	OVA Reading	WELL DETAIL	DEPTH (feet)	GRAPHIC LOG	SURFACE CONDITIONS
							DESCRIPTION by: D. Conkie
					0		Concrete.
					1		At 0.5' - dusky yellowish brown (10YR 2/2) silty sand, trace fines and clay, fine grained, poorly graded, well rounded, slightly moist, no odor.
					2		
					3		
					4		
18	18	14 20 25	>10,000 (1.3% LEL)		5		Dark yellowish brown (10YR 2/2) with rusty mottling silty sand, trace fines, fine grained, poorly graded, well rounded, slightly moist, HC odor.
					6		
					7		
					8		
					9		
18	18	10 12 14	>10,000 (1.5% LEL)		10		Dark yellowish brown (10YR 2/2) clayey silty sand, (trace fines and clay), fine grained, poorly graded, well rounded, medium dense, very moist to wet, HC odor. At 11.5' - olive gray (staining).
					11		
					12		
					13		
					14		
18	18	2 3			15		At 15' - moderate brown (5YR 4/4) to dark yellowish brown (10YR 4/2) clayey silty sand, increase in clay (30%), poorly graded, well rounded, loose, very moist to wet, HC odor.
					16		At 16.5' - dark yellowish brown (10YR 4/2) to dark olive gray silty sand, poorly graded, well rounded, very moist to wet.
18	18	5 10	3,095		17		At 18' - olive gray silty sand, trace fines, well sorted, poorly graded, wet, HC odor.
					18		At 19' - moderate brown (5YR 3/4) silty sand, few fines poorly graded, well rounded, wet, no HC odor.
18	18	20 25 33	365		19		TOTAL DEPTH: 19.5'
					20		

60966.011...kas2-1.lh4

WELL COMPLETION DIAGRAM FOR AIR SPARGING WELL AS2



EA ENGINEERING, SCIENCE, AND TECHNOLOGY

Client: Nestle, U.S.A.

Site: 60966.01

Location: 1310 14th Street, Oakland, California.



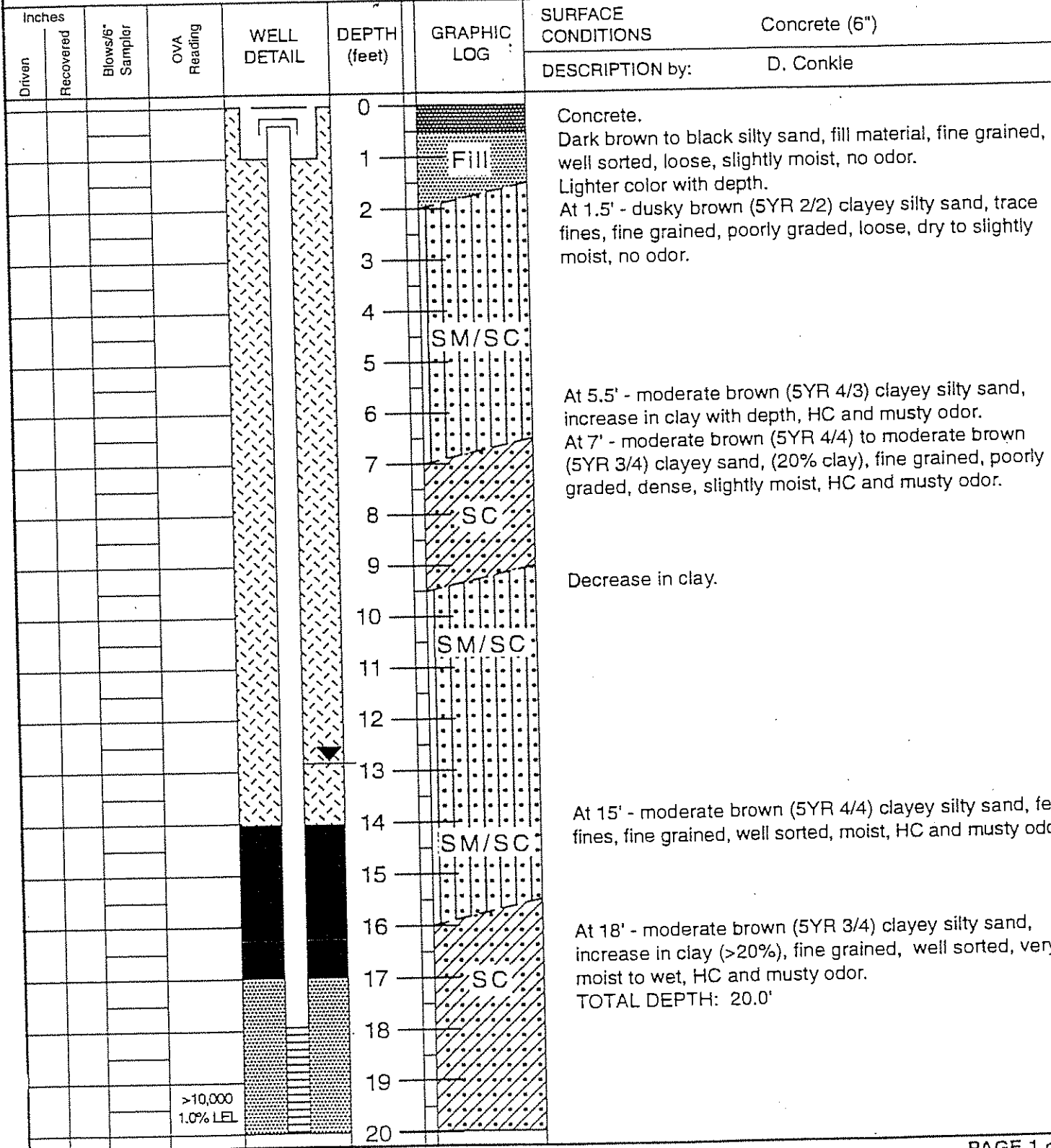
EA ENGINEERING,
SCIENCE, AND
TECHNOLOGY, INC.

LOG OF SOIL BORING

AS3

Coordinates

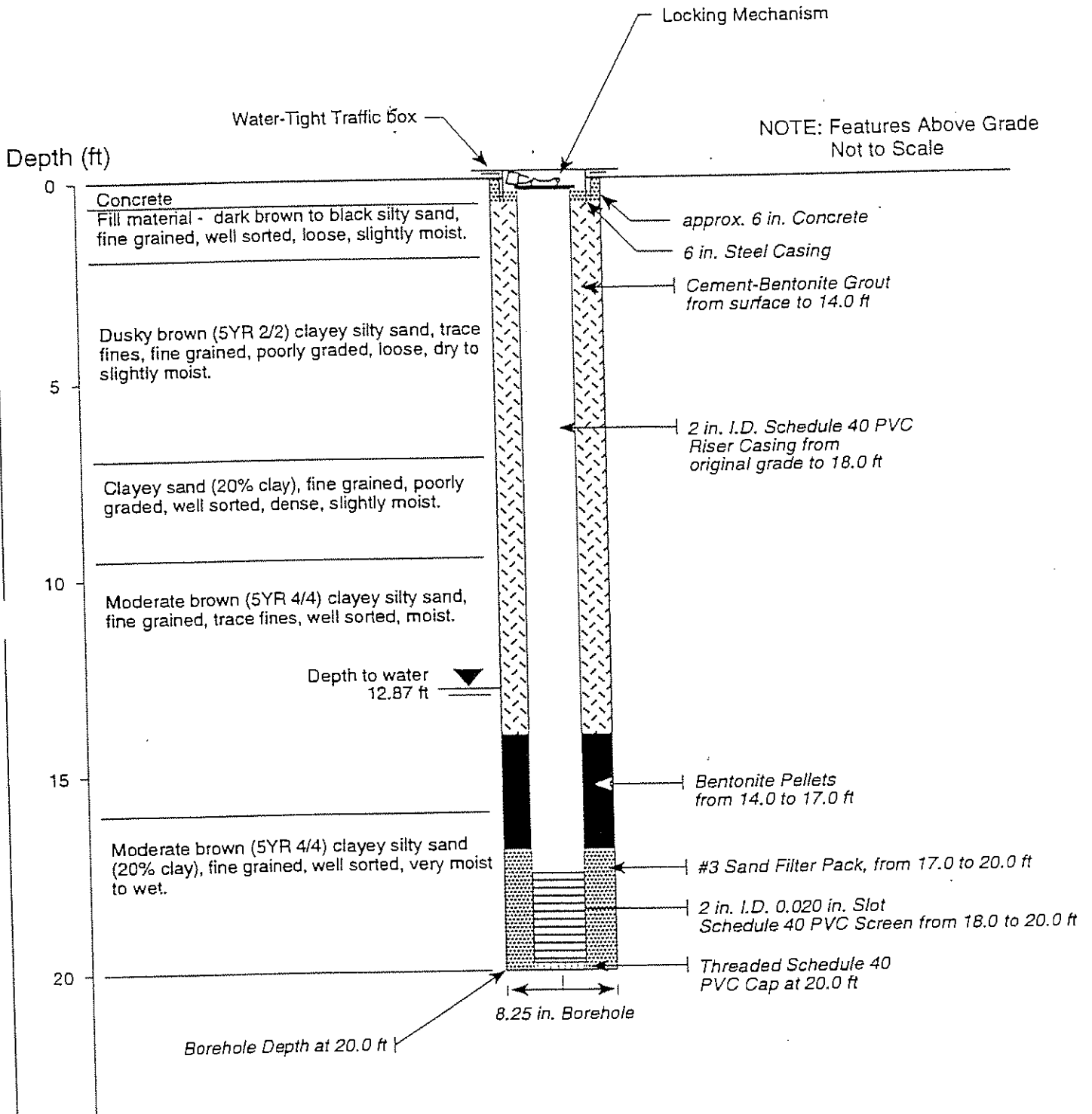
CLIENT Nestle USA	PROJECT NUMBER 60966.01	LOCATION 1310 14th Street Oakland, CA
DRILLING AND SAMPLING METHODS Hollow Stem Auger, 8.25 O.D. No samples collected. (Drilled with mast down.)		
Water Level	12.87	DRILLING
Time	1555	START TIME 1300
Date	3/18/96	FINISH TIME 1340
Reference	Ground Surface	DATE 3/18/96
		DATE 3/18/96



>10,000
1.0% LEL

60966.01/.../as3-1.fht

WELL COMPLETION DIAGRAM FOR AIR SPARGING WELL AS3



EA ENGINEERING, SCIENCE, AND TECHNOLOGY

Client: Nestle, U.S.A.

Site: 60966.01

Location: 1310 14th Street, Oakland, California.

APPENDIX A
BORING LOGS

DATE STARTED: 8/23/89

DATE COMPLETED: 8/23/89

TIME STARTED: 10:25

TIME COMPLETED:

DRILLING EQUIPMENT: Hollow Stem Auger

DRILLING CONTRACTOR: Accubore

BORING DIAMETER: 10 inches

CASING DIAMETER: 4 inches

LOGGED BY: Jim Wallace

SURFACE CONDITIONS: Asphaltic Concrete

SURFACE ELEVATION: 13.25

COORDINATES: N 2,694.8 E 3,150.6

GROUNDWATER CONDITIONS: Free Groundwater Encountered at 14 feet during drilling

SLOT SIZE: 0.020 inch

BORING DEPTH: 22.5 feet

CASING DEPTH: 22.5 feet

FILTER PACK: #2/16 sand

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP. TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
								Asphaltic Concrete
								Portland Cement Concrete
		400						Aggregate Baserock
	2089	750				2	SM	SILTY SAND(SM) Dark Gray, dry to moist, medium dense,
		80						
	2090	220				4		
Hydrocarbon Odor		240						
		100					SC	CLAYEY SAND(SC) Dark Gray to Black, (diesel staining), wet, medium dense
	2091	45				6	SM	
		95						
No Hydrocarbon Odor	2092	95	4			7		SILTY SAND(SM) Dark Gray, dry to moist, medium dense color change to Light Gray
	2093		5			8		
			7					
			5					
			7					color change to Mottled Red Brown
	2094	180	13			10		
			5					
			5					
No Hydrocarbon Odor	2095	160	8			12		grades moist, with trace clay
			5					
			5					
	2096	48	9			14		Free Groundwater Encountered at 14 feet during drilling
						16		

AGE _____
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation Dairy Facility
 1310 14th St., Oakland, Ca.
 LOG OF MW-OS25

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
						20		
						22		
						24		Boring Terminated at 22.5 feet on 8-23-89
						26		
						28		
						30		
						32		
						34		
						36		
						38		
						40		
						42		
AGE ANANIA GEOLOGIC ENGINEERING PROJECT NO. 004-88-059						Carnation Dairy Facility 1310 14th St., Oakland, Ca. LOG OF MW-OS25		Sheet 2 of 2

DATE STARTED: 8/24/89

DATE COMPLETED: 8/24/89

TIME STARTED:

TIME COMPLETED:

DRILLING EQUIPMENT: Hollow Stem Auger

DRILLING CONTRACTOR: Accubore

BORING DIAMETER: 10 inches

CASING DIAMETER: 4 inches

LOGGED BY: Robyn McKinney

SURFACE CONDITIONS: Asphaltic Concrete

SURFACE ELEVATION: 13.55

COORDINATES: N 2,676.8 E 3,206.4

GROUNDWATER CONDITIONS: Free
Groundwater Encountered at 17 feet during drilling

SLOT SIZE: 0.02 inch

BORING DEPTH: 25.0 feet

CASING DEPTH: 25 feet

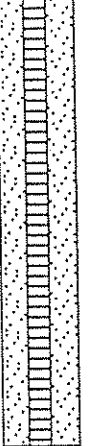
FILTER PACK: #2/16 sand

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP TYPE	WELL CONST (FT.)	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
								Asphaltic Concrete
		75						SM Portland Cement Concrete
	2097	100				2		Aggregate Baserock, does not appear to be stained
		110						
	2098	110						Silty SAND (SM) Dark Gray to Black, dry to moist, medium dense, color change to Black color change to Light Gray grades moist
		110						
	2099	130				4		
Hydrocarbon Odor		230						color change to Green Gray, grades with some clay
	2100	150						
Slight Hydrocarbon Odor		200						color change to Green Gray, slightly moist
	2101	180				6		
Hydrocarbon Odor			5					color change to Red, grades moist
			7					
	2103	5500	12			8		
Hydrocarbon Odor			3					color change to Red, grades moist
	2109		12					
Hydrocarbon Odor		500	10			10		grades with increasing clay content
Pulled auger to ream with plug								
		600				14		Free Water Encountered at 17 feet during drilling
		600				16		

AGE _____
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation Dairy Facility
 1310 14th St., Oakland, Ca.
 LOG OF MW-OS26

Sheet 1 of 2

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
						20 22 24		
						26 28 30 32 34 36 38 40 42		Boring Terminated at 25 feet on 8-24-89

AGE _____
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation Dairy Facility
 1310 14th St., Oakland, Ca.
LOG OF MW-OS26

Sheet 2 of 2

DATE STARTED: 8/28/89

DATE COMPLETED: 8/28/89

TIME STARTED:

TIME COMPLETED:

DRILLING EQUIPMENT: Hollow Stem Auger

DRILLING CONTRACTOR: Accubore

BORING DIAMETER: 10 inches

CASING DIAMETER: 4 inch

LOGGED BY: Robyn McKinney

SURFACE CONDITIONS: Asphaltic Concrete

SURFACE ELEVATION: 14.33

COORDINATES: N 2,666.4 E 3,271.2

GROUNDWATER CONDITIONS: Free
Groundwater Encountered at 14 feet during drilling

SLOT SIZE: .020 inch

BORING DEPTH: 24.5 feet



CASING DEPTH: 24 feet

FILTER PACK: #2/16 sand

REMARKS	SAMP. ND.	TLV READ	BLOWS / 6"	SAMP. TYPE	WELL CONST.	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
								Asphaltic Concrete
	1172	400	7 10 15			2 4 6	SM	SILTY SAND(SM) Gray, dry-to-moist, medium dense with some clay
	1173	200	7 9 20			8 10 12		grades with increasing sand, color change to Gray-Brown
						14		color change to Red-Brown, grades wet, grades with increasing clay content
TLV reading 70ppm at well head								

AGE
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation Dairy Facility
 1310 14th St., Oakland, Ca.
 LOG OF MW-OS27

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
No Hydrocarbon Odor						20		color change to brown
						22		24
						26		
						28		
						30		
						32		
						34		
						36		
						38		
						40		
						42		


DATE STARTED: 8/29/89
 DATE COMPLETED: 8/29/89
 TIME STARTED:
 TIME COMPLETED:
 DRILLING EQUIPMENT: Hollow Stem Auger

SURFACE CONDITIONS: Asphaltic Concrete
 SURFACE ELEVATION: 13.90
 COORDINATES: N 2,704.7 E 3,220.1
 GROUNDWATER CONDITIONS: Free Groundwater Encountered at 14 feet during drilling

DRILLING CONTRACTOR: Accubore
 BORING DIAMETER: 10 inches
 CASING DIAMETER: 4 inch
 LOGGED BY: Robyn McKinney

SLOT SIZE: 0.02 inch
 BORING DEPTH: 27.0 feet
 CASING DEPTH: 27 feet
 FILTER PACK: #2/16 Sand

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
							SM	Asphaltic Concrete
								Aggregate Baserock
Hydrocarbon Odor	1176					2	SM	SILTY SAND(SM) Dark Gray to Black, dry-to-moist, medium dense
	1177					4		grades moist
	1178					6	SC	CLAYEY SAND(SC) Blue Gray, moist-to-wet, medium dense
Hydrocarbon Odor	1179	100	7 8 12			8	SM	SILTY SAND(SM) Brown, dry-to-moist, medium dense
Hydrocarbon Odor	1180		5 5 9			10		color change to Mottled Gray Brown
No Hydrocarbon Odor		70				12		grades moist to wet
		70				14		Free Groundwater Encountered at 14 feet during drilling
No Hydrocarbon Odor		80				16		

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
No Hydrocarbon Odor						20 22 24 26 28 30 32 34 36 38 40 42		Boring Terminated at 27 feet on 8-29-89

AGE _____
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation Dairy Facility
 1310 14th St., Oakland, Ca.
LOG OF MW-OS28

Sheet 2 of 2

DATE STARTED: 8/29/89

DATE COMPLETED: 8/30/89

TIME STARTED:

TIME COMPLETED:

DRILLING EQUIPMENT: Hollow Stem Auger

DRILLING CONTRACTOR: Accubore

BORING DIAMETER: 10 inches

CASING DIAMETER: 4 inches

LOGGED BY: J R and R Mc

SURFACE CONDITIONS: Asphaltic Concrete

SURFACE ELEVATION: 13.38

COORDINATES: N 2,729.2 E 3,146.2

GROUNDWATER CONDITIONS: Free Groundwater Encountered at 12 feet during drilling

SLOT SIZE: 0.02 inch

BORING DEPTH: 25.0 feet

CASING DEPTH: 25 feet

FILTER PACK: #2/16 Sand

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SOIL	WELL CONST	DEPTH (FT.)	USCS CLASS.	SOIL DESCRIPTION
						0	SM	Asphaltic Concrete
						1	SM	Aggregate Baserock
						2		SILTY SAND (SM) Dark Brown, dry-to-moist, medium dense
						4		
Abandoned 4" clay pipe						6		
						6 1/2		
						7	SC	clayey SAND (SM) lense between 6 1/2 and 7 feet
						7	SM	
		60				8		Free Groundwater Encountered at 12 feet during drilling grades moist, medium dense with trace clay grades wet
			7			10		
No Hydrocarbon Odor	1277		7			12		
			12			14		
						16		

AGE _____
 ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation Dairy Facility
 1310 14th St., Oakland, Ca.
 LOG OF MW-OS29

Sheet 1 of 2

REMARKS	SAMP. NO.	TLU READ	BLOWS / 6"	SAMP TYPE	WELL CONST	DEPTH (FT.)	USCS CLASS.	SDIL DESCRIPTION
		90		H		20 22 24		
						26 28 30 32 34 36 38 40 42		Boring Terminated at 25 feet on 8-30-89

AGE _____
ANANIA GEOLOGIC ENGINEERING
 PROJECT NO. 004-88-059

Carnation Dairy Facility
 1310 14th St., Oakland, Ca.
LOG OF MW-OS29

Sheet 2 of 2



Engineering, Inc.

LOG OF SOIL BORING: **MW100**

COORDINATES:
ELEVATION TOP OF CASING:
CASING BELOW SURFACE:

DRILLING COMPANY: Woodward Drilling Co
LICENSE NUMBER: C57-710079

CLIENT Nestle	SITE NUMBER Nestle Oakland	LOCATION 1310 14th Street Oakland, CA
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DRILLING AND SAMPLING METHODS: Mobile Rig BK-81
Hollow Stem Auger
8.25" O.D. Split Spoon Sampler

WATER LEVEL	▽ 9.85	▽ 9.81		
TIME	1012	1020	START TIME 0840	FINISH TIME 1130
DATE	6/29/01	6/29/01	DATE	DATE
REFERENCE	GS	GS	6/29/01	6/29/01

INCHES				DEPTH (feet)	AIR SAMPLE	WATER SAMPLE	SOIL SAMPLE RECOVERED	GRAPHIC LOG	SURFACE CONDITIONS	
DRIVEN	RECOVER	BLOWS / 6" SAMPLER	OVA READING						DESCRIPTION BY	DETAILS
				0					Asphalt 4"	
				1					Hand augered to 4.5 ft.	Water-Tight Traffic box
				2						Cement-Grout from 0.5 to 2.0 ft
				3					SILTY SAND: dark yellowish brown (10YR 3/4), poorly graded fine sand, weak cementation, non-plastic fines, damp.	Bentonite Chips from 2.0 to 4.0 ft
				4					SAME color changes to yellowish brown (10YR 5/4)	2 in. I.D. Schedule 40 PVC Riser Casing from original grade to 5.0 ft
18	18	18	3.1	5						
		18		6						
		20		7						
18	16	7	2.6	7					SILTY, CLAYEY, SAND: dark yellowish brown (10YR 4/4), greenish gray mottling, poorly graded fine sand, moderate cementation, damp to moist.	#2/12 Sand Filter Pack from 4.0 to 15.5 ft
		9		8						
		12		9						
18	18	10	1.2	10					SILTY SAND: light olive brown (2.5Y 5/3), fine sand, moderate cementation, non-plastic to low plastic fines, moist to wet, iron oxide traces.	
		12		11						
		18		12						
18	14	12	2.0	12					SILTY, CLAYEY SAND: light olive brown (2.5Y 5/4), moderate cementation, low plastic fines, moist, iron oxide traces, silt content increase (12-12.5') to sandy silt.	2 in. I.D. 0.010 in. Slot, Schedule 40 PVC Screen from 5.0 to 15.0 ft
		22		13						
		15		14						
18	18	20	1.1	15					CLAYEY SAND: olive gray (5Y 5/2), yellowish brown mottling, poorly graded fine sand, moderate cementation, medium plastic fines, wet.	
		25		16						
18	16	4	1.9	17						
		4		18						
		5		19						
18	18	4	1.7	20					SILTY SAND: light olive brown (2.5Y 5/3), yellowish brown mottling, fine sand, low plastic fines, wet. Boring terminated at 15 ft bgs. Sampled to 15.5 ft bgs.	
		4								
		4								
		6								

LOG OF SOIL BORING MW100.GPJ ETIC.GDT 9/6/01

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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-16**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/19/08**

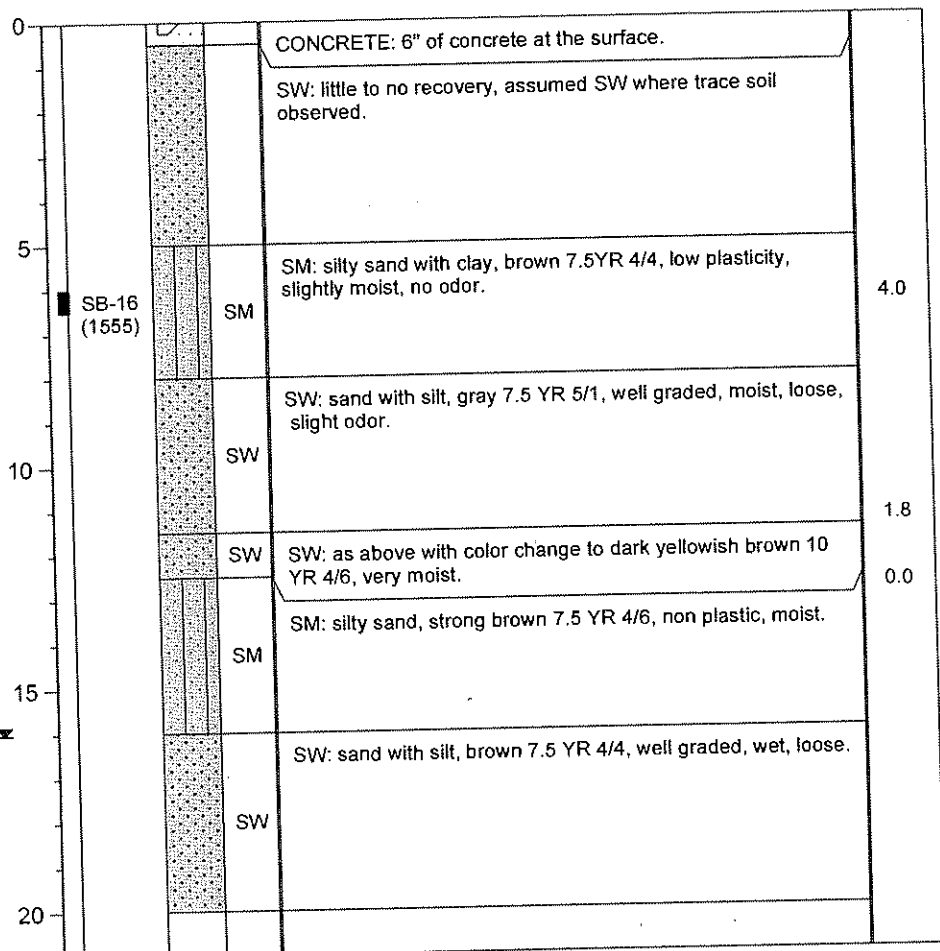
DRILLING INFORMATION

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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wet at 16' bgs.

total depth of boring at 20' bgs.

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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-17**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

DRILLING INFORMATION

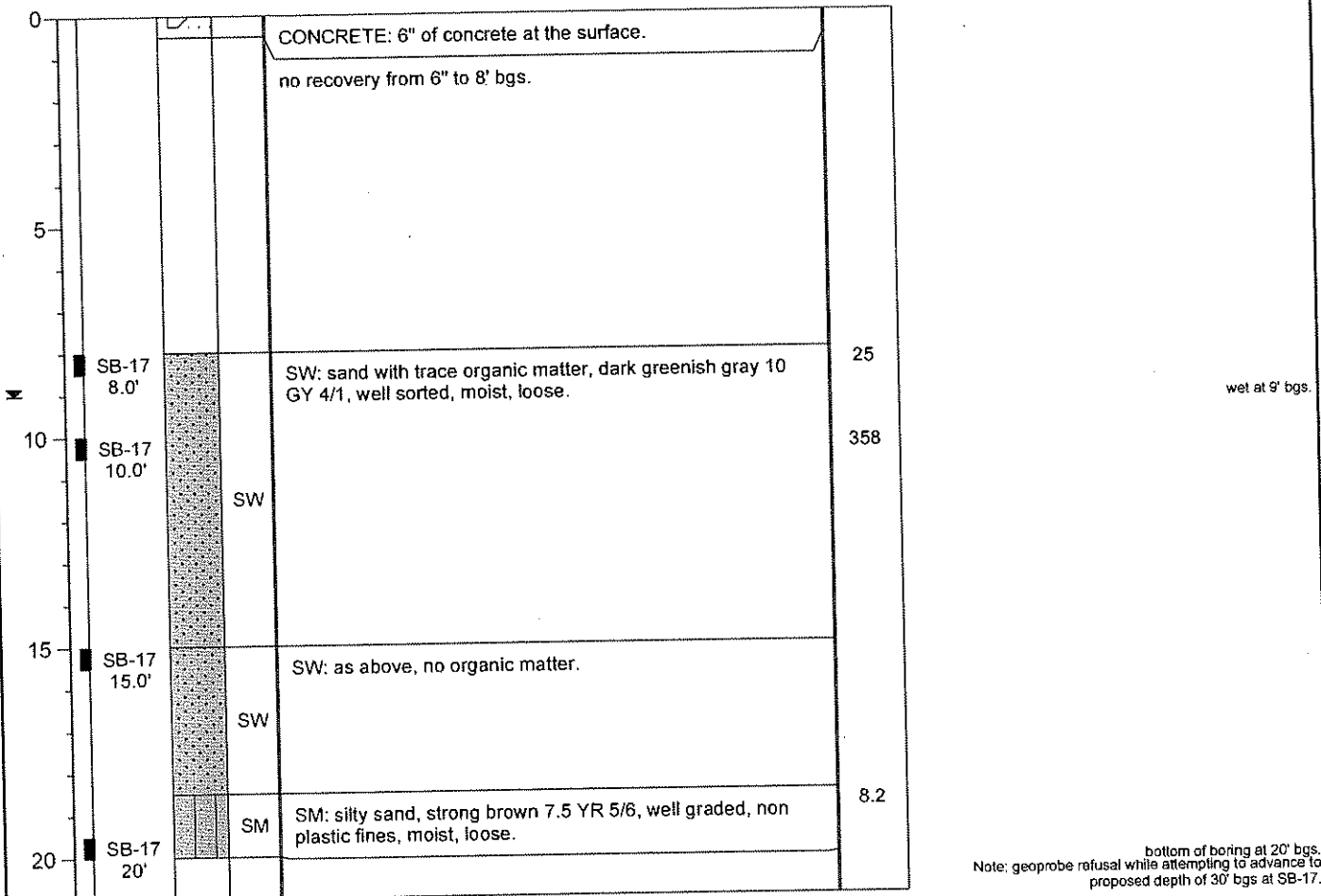
PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/22/08**

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-18**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

DRILLING INFORMATION

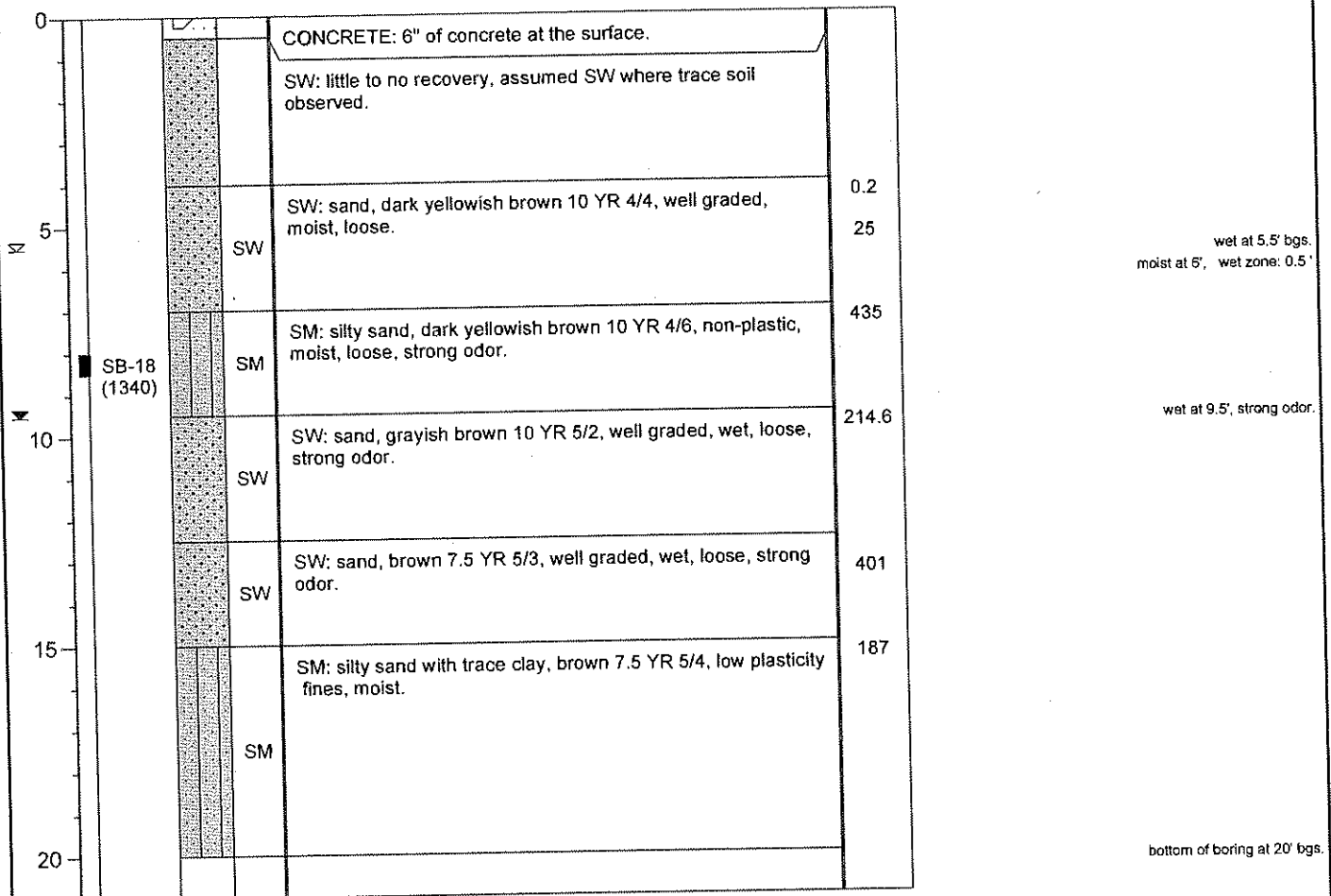
PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/21/08**

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

Water Table Encountered During Drilling

Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-19**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

DRILLING INFORMATION

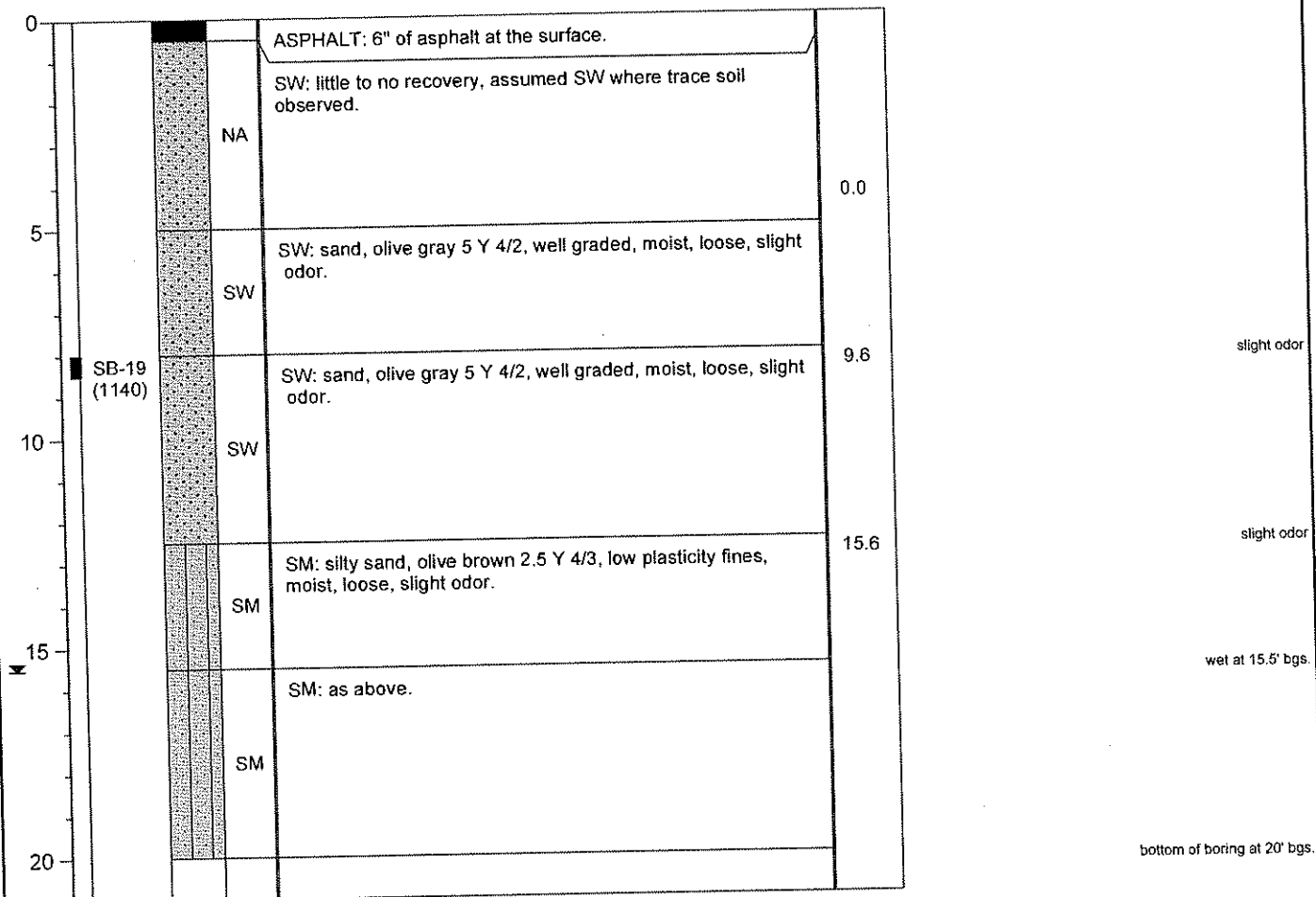
PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/21/08**

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-20/ PCB-7**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/22/08**

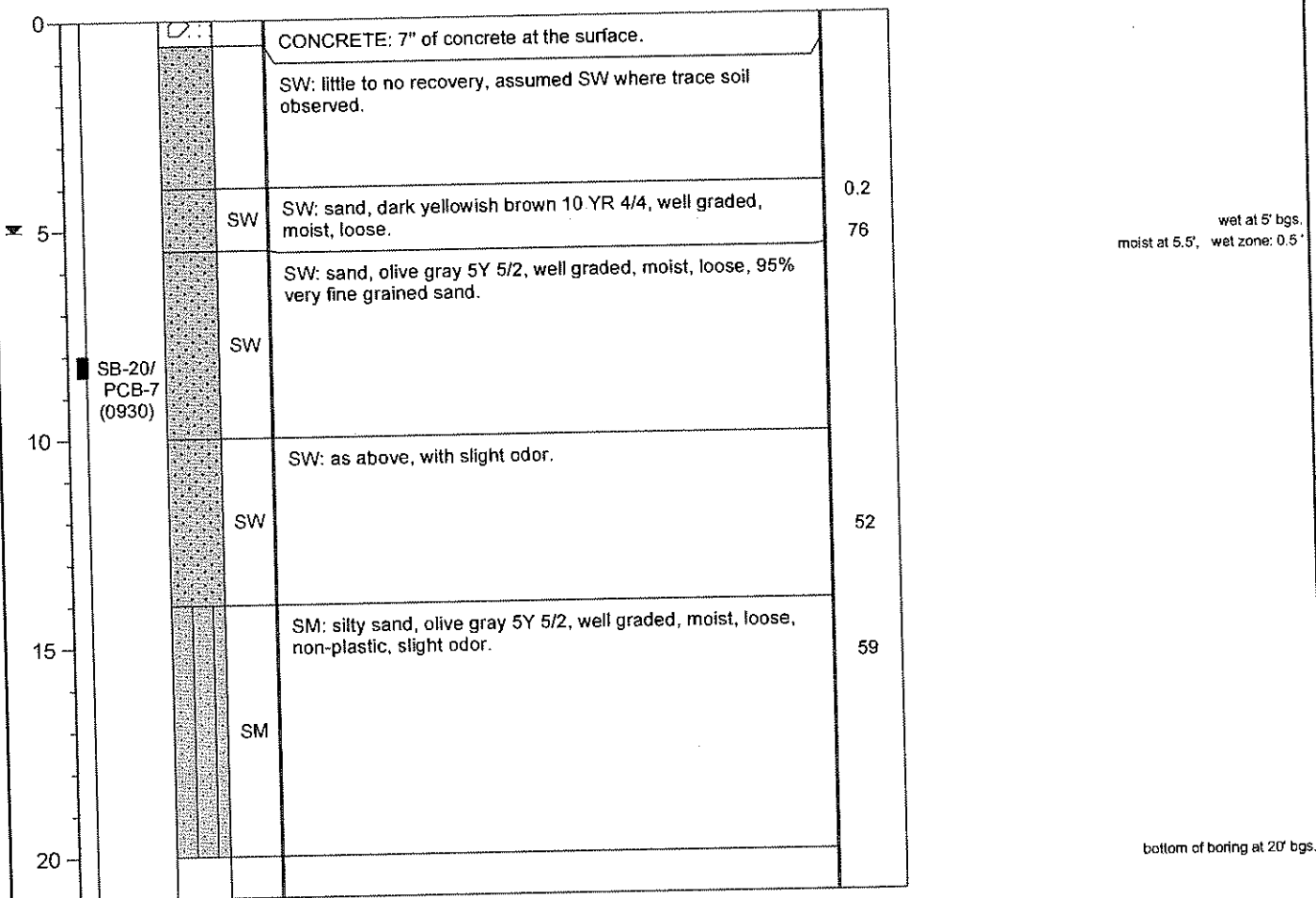
DRILLING INFORMATION

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

Water Table Encountered During Drilling

Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-21/ PCB-8**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/21/08**

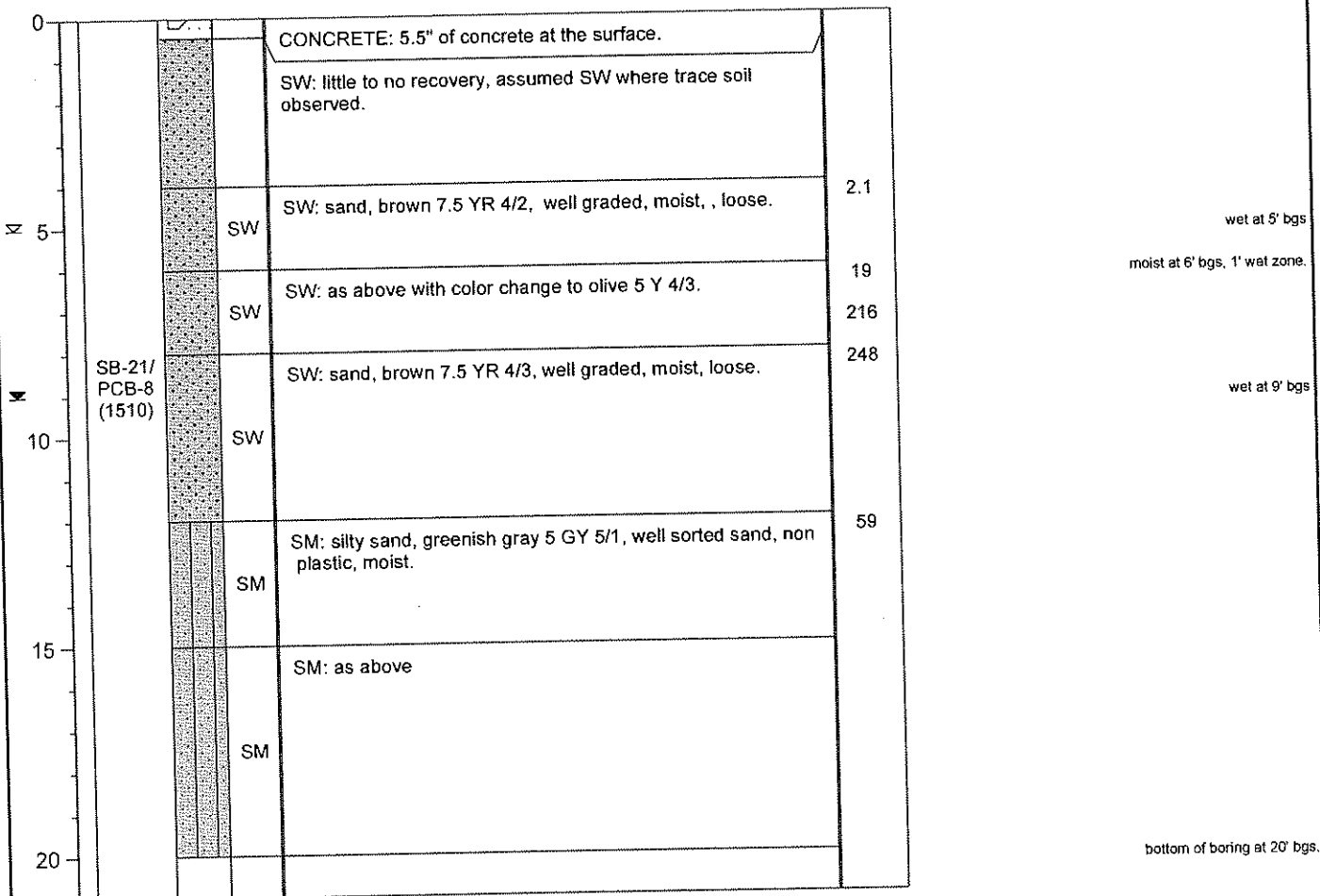
DRILLING INFORMATION

DRILLING CO.: **TEG**
 DRILLER: **Tim**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

Water Table Encountered During Drilling

Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-22**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

DRILLING INFORMATION

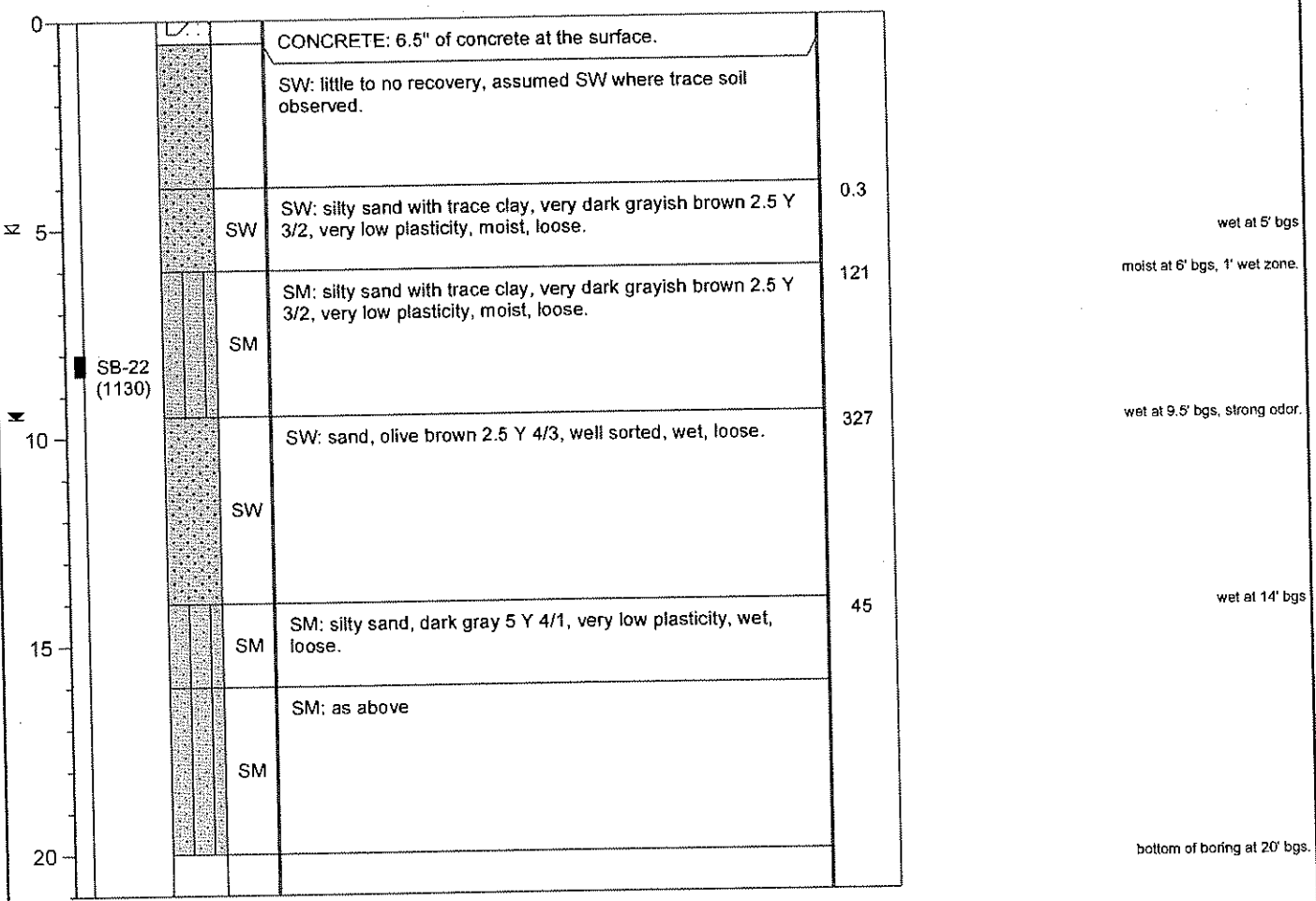
PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/21/08**

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-23**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

DRILLING INFORMATION

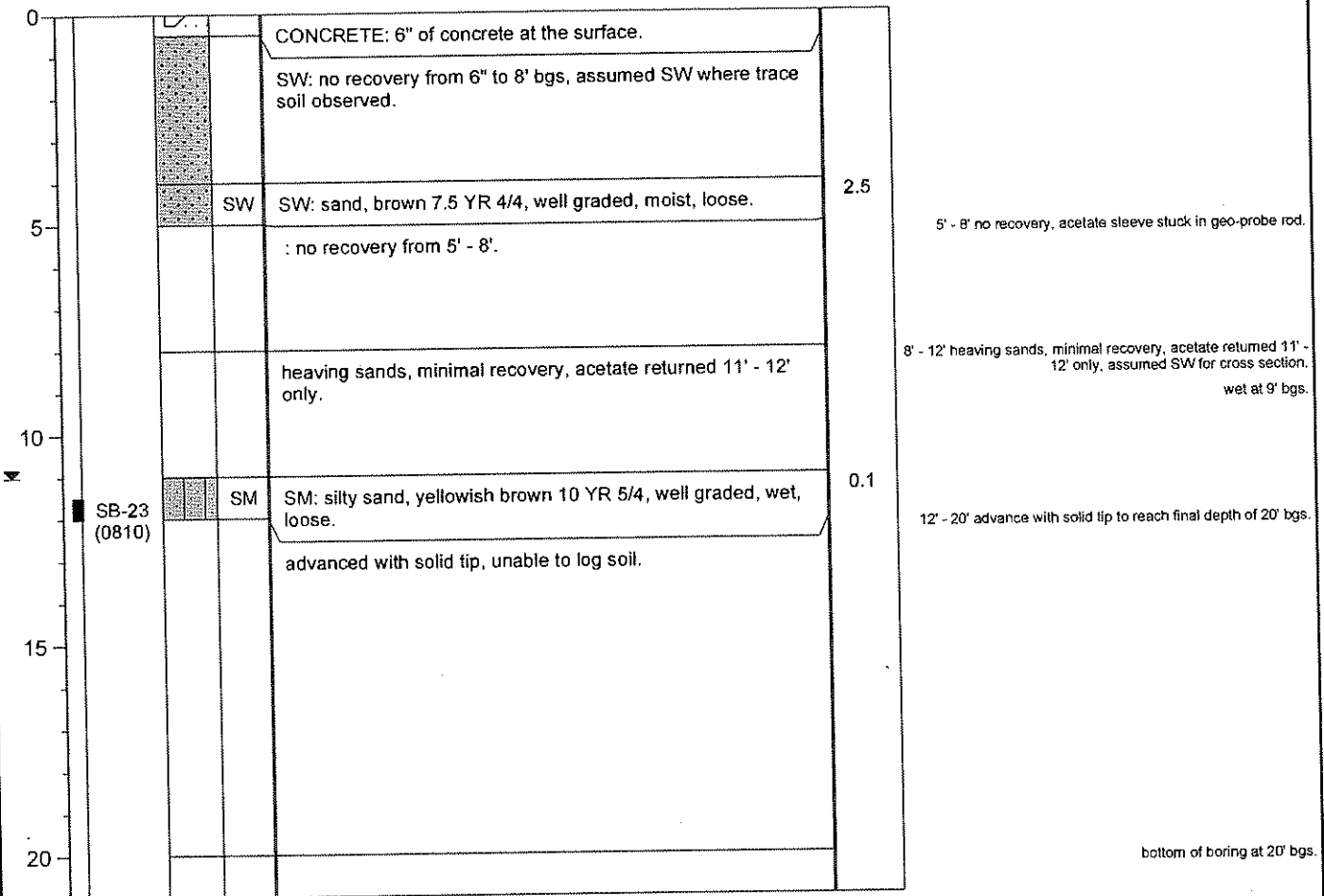
PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/22/08**

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-24/ PCB-1**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/20/08**

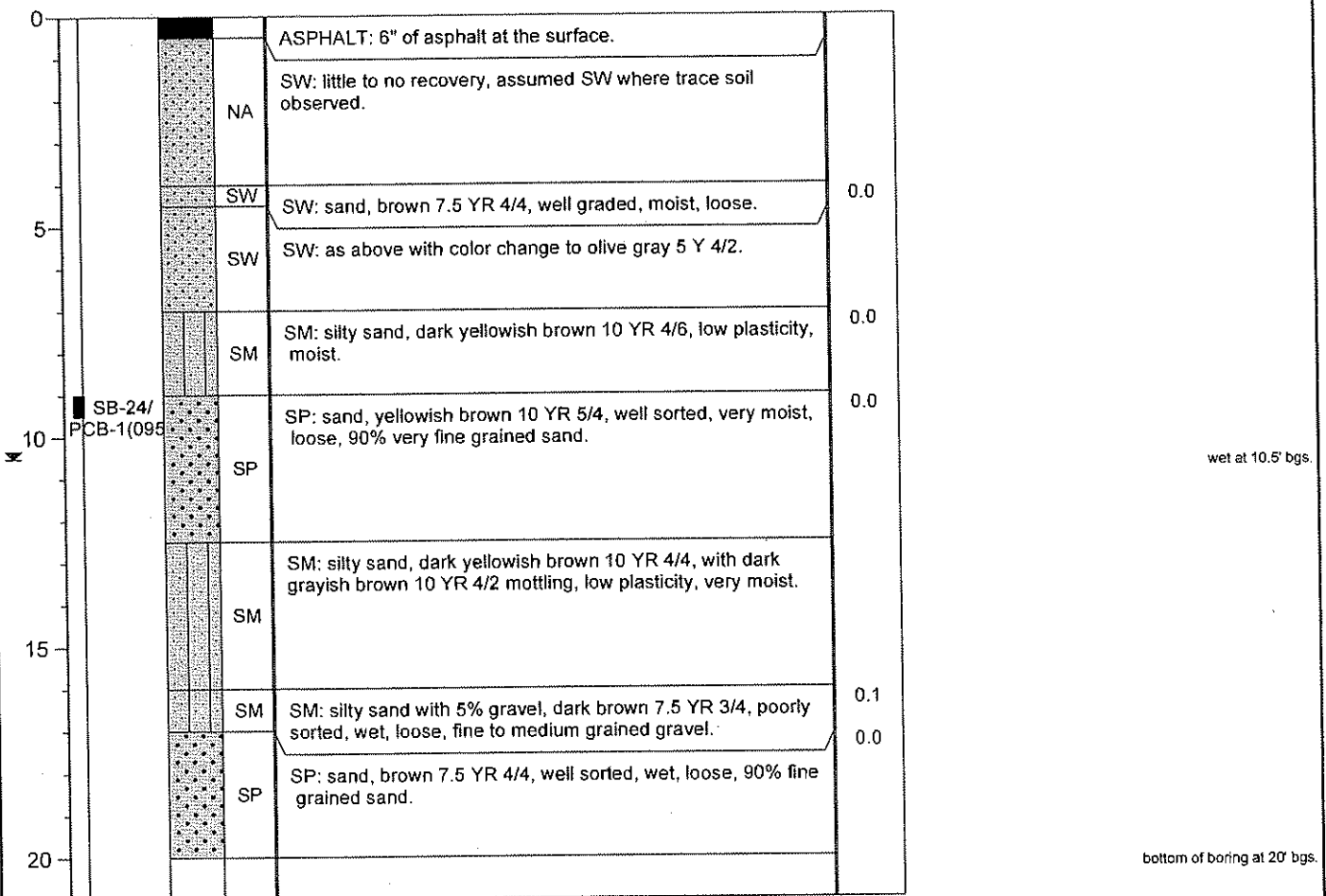
DRILLING INFORMATION

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-25/ PCB-2**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/20/08**

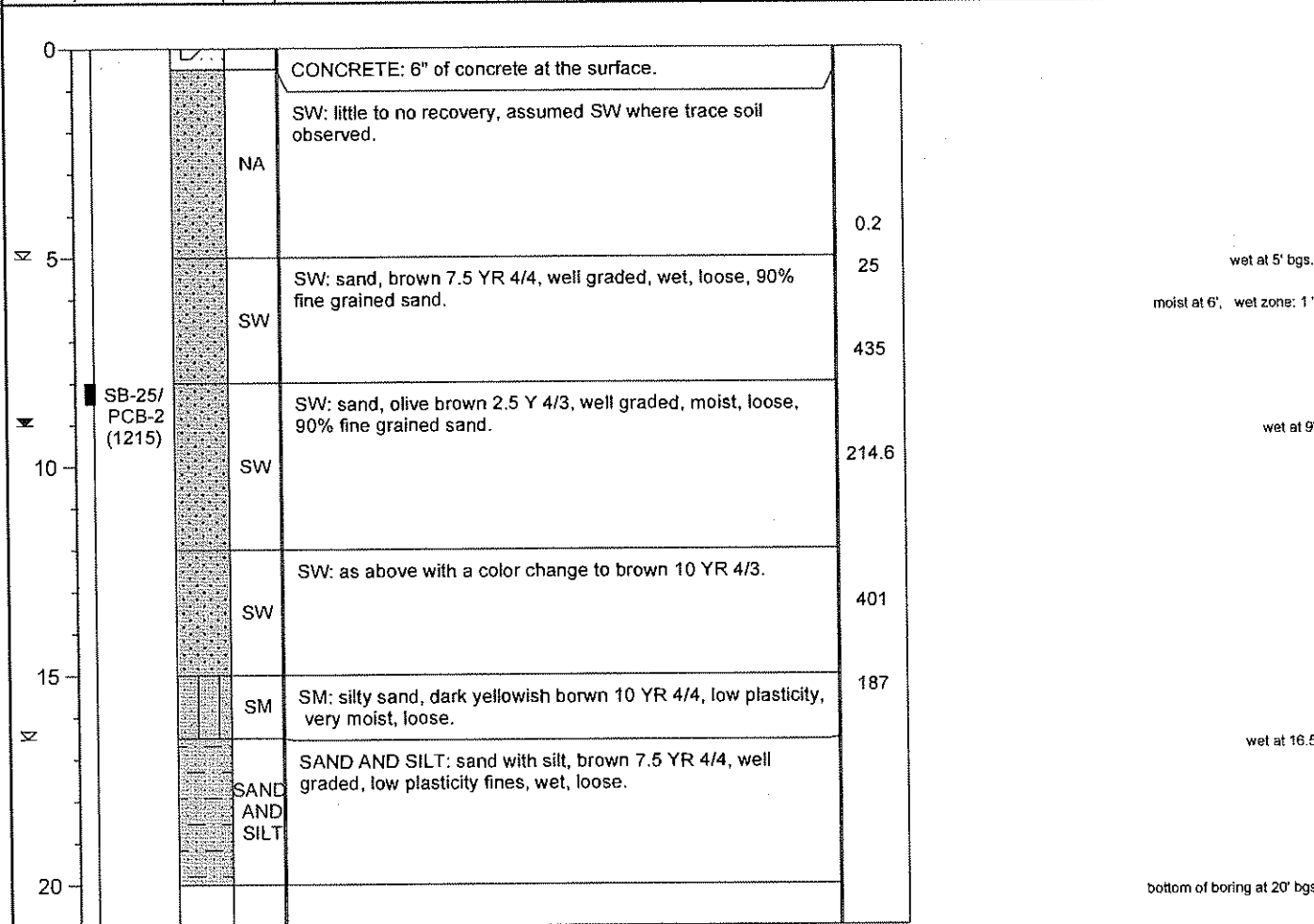
DRILLING INFORMATION

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-26**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

DRILLING INFORMATION

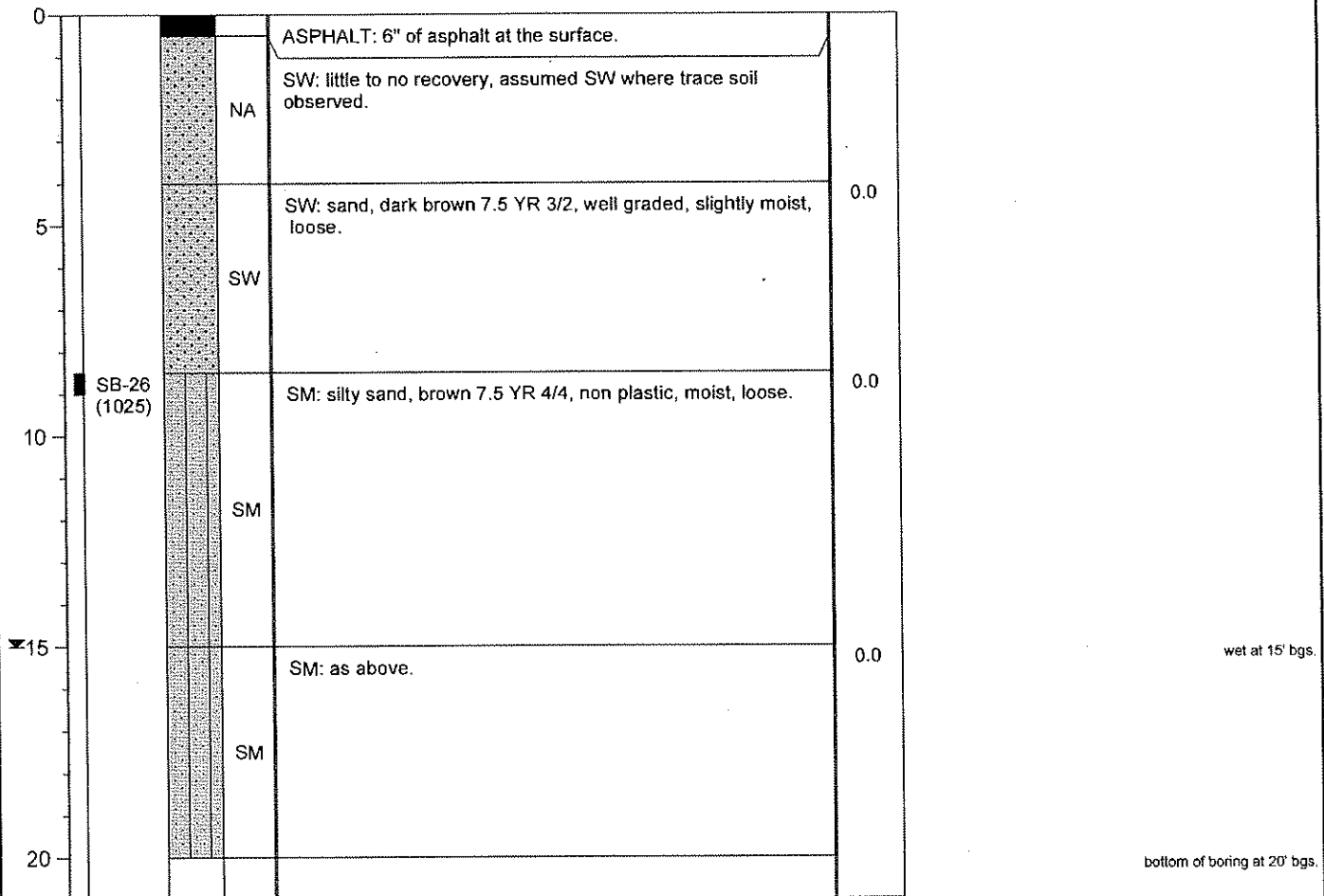
PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/21/08**

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **SB-27/ PCB-3**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/20/08**

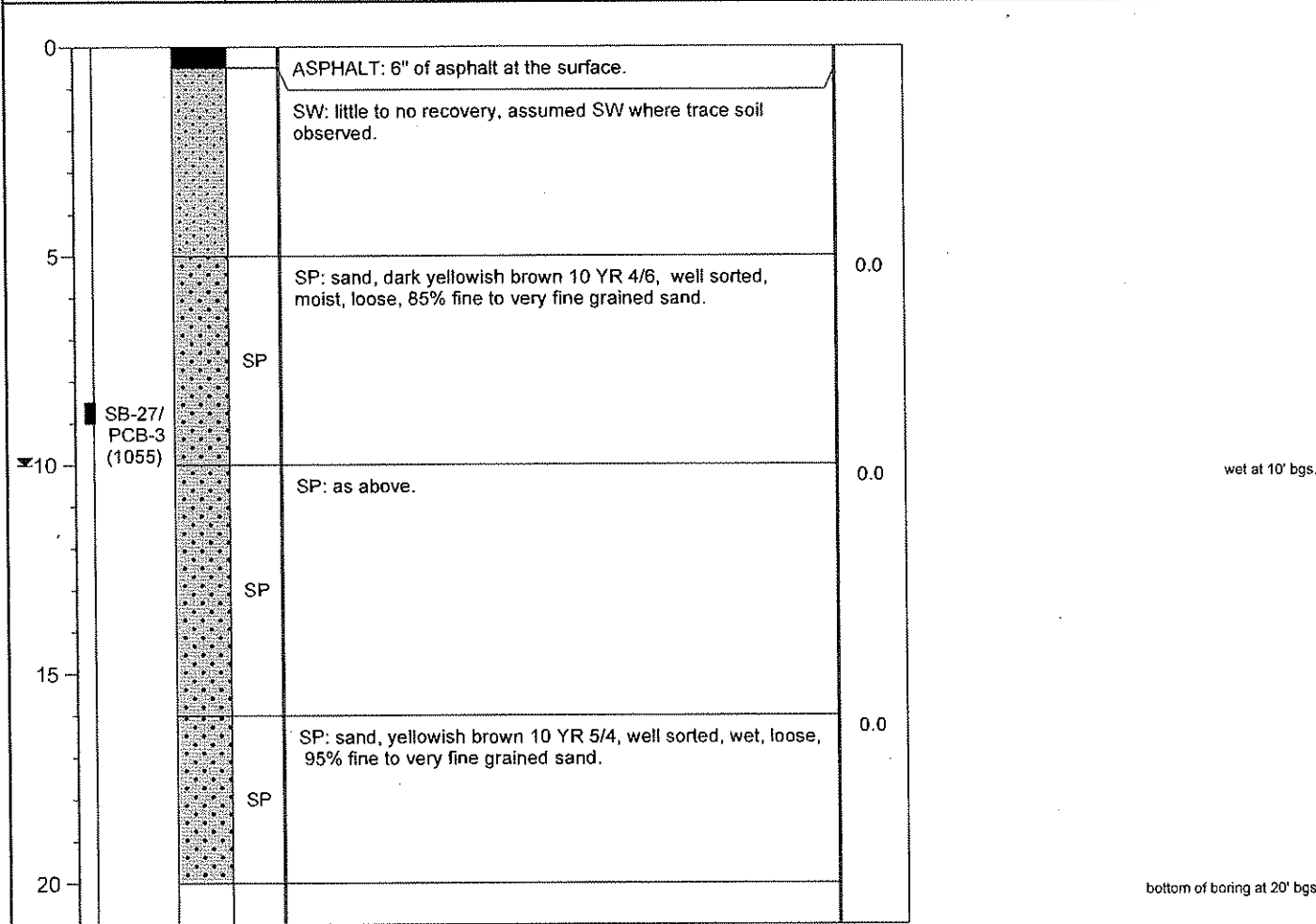
DRILLING INFORMATION

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **PCB-4**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/21/08**

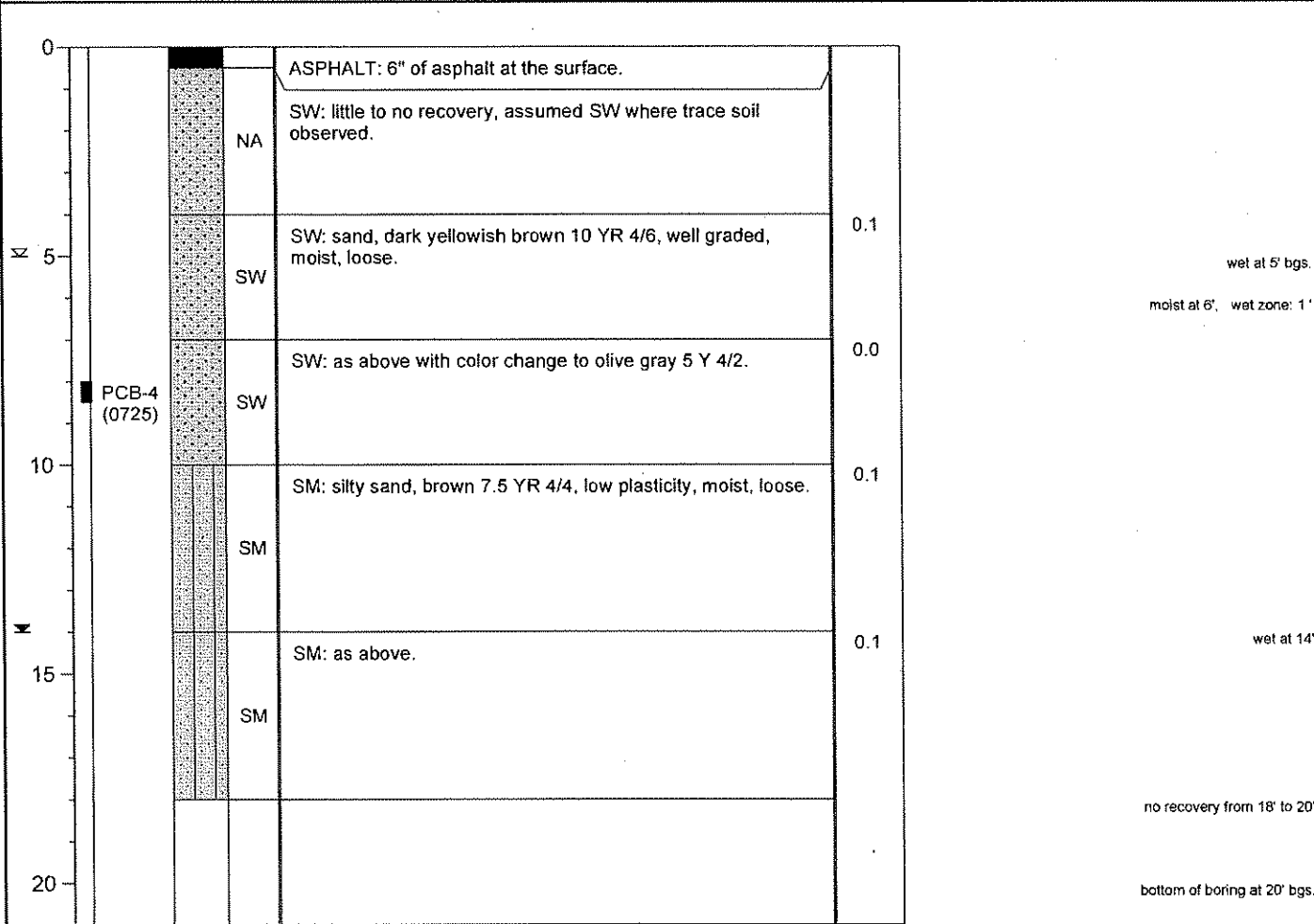
DRILLING INFORMATION

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

▼ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
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FIELD BOREHOLE LOG

BOREHOLE NO.: **PCB-5**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

DRILLING INFORMATION

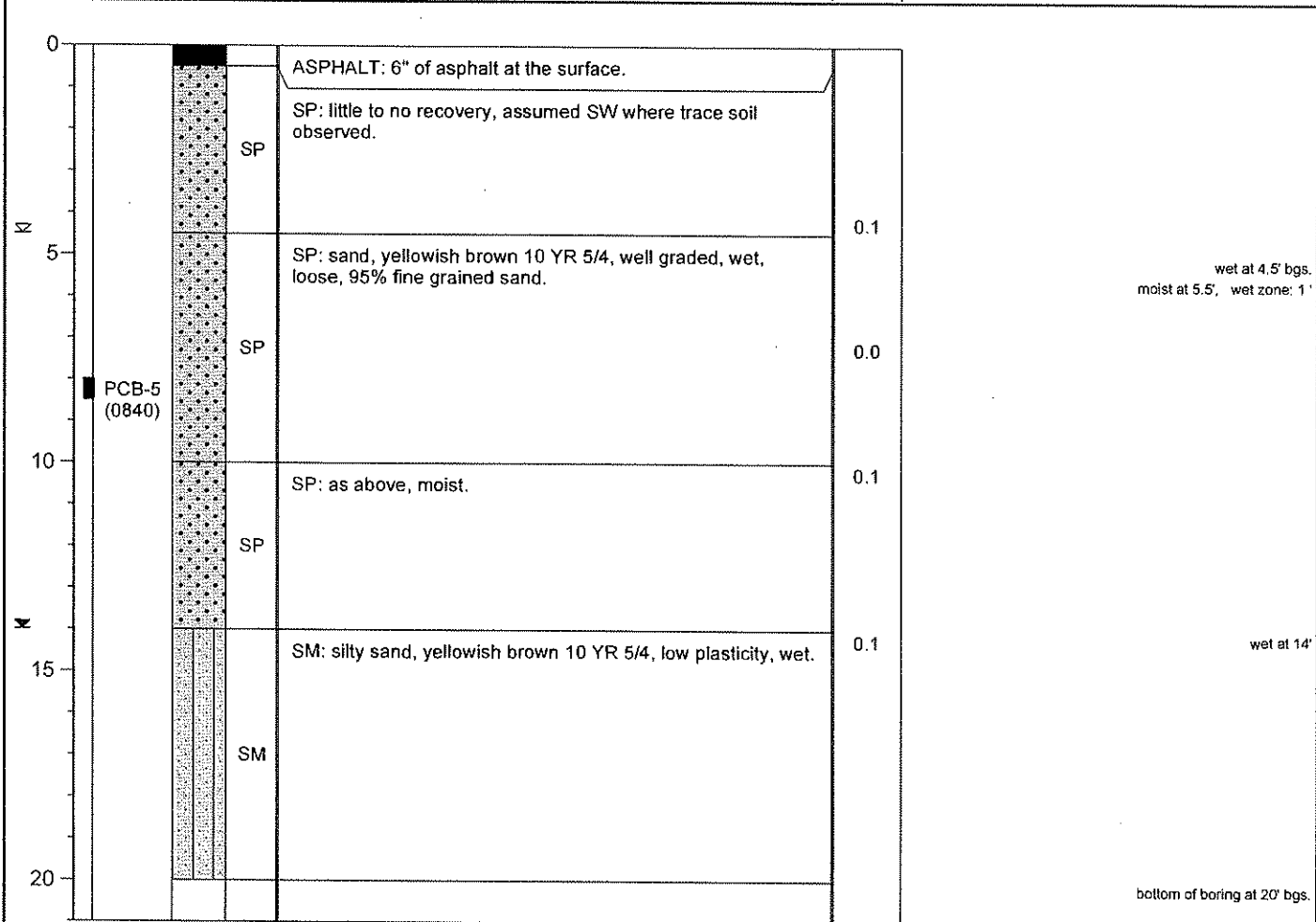
PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/21/08**

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
-----------	---------------------	------	------------------	-----------	----------



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FIELD BOREHOLE LOG

BOREHOLE NO.: **PCB-6**

TOTAL DEPTH: **20 Feet**

PROJECT INFORMATION

DRILLING INFORMATION

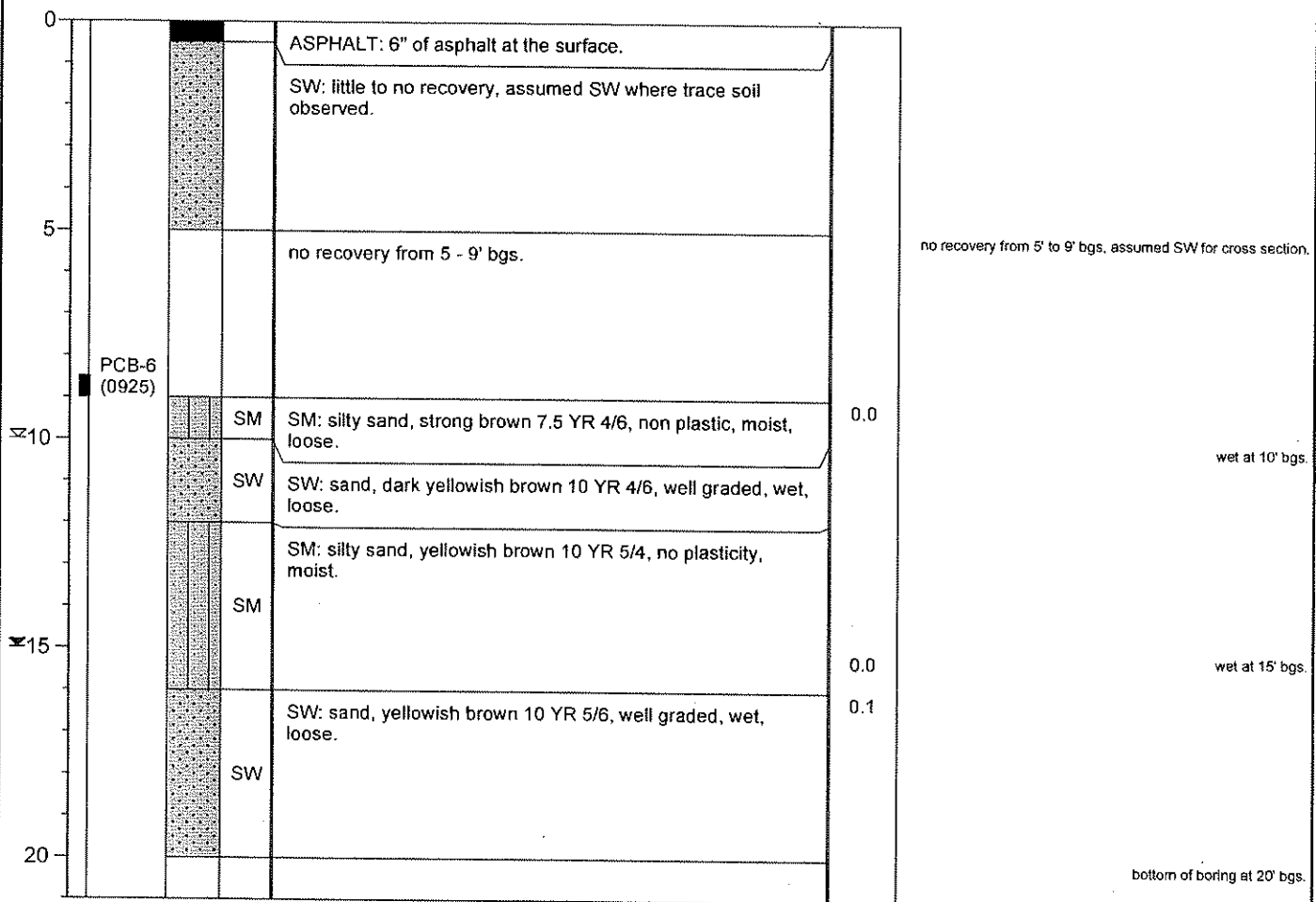
PROJECT: **Nestlé Oakland**
 SITE LOCATION: **Oakland, California**
 JOB NO.: **Nestlé Oakland**
 GEOLOGIST: **Joseph Plummer**
 PROJECT MANAGER: **Brent Searcy**
 DATES DRILLED: **5/21/08**

DRILLING CO.: **TEG**
 DRILLER: **Tim Hyde**
 RIG TYPE: **Geoprobe**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHODS: **Continuous Core**
 BOREHOLE DIAMETER: **2 Inches**

☒ Water Table Encountered During Drilling

☒ Static Water Level

DEPTH bgs	SAMPLES / LITHOLOGY	USCS	SOIL DESCRIPTION	PID (ppm)	Comments
-----------	---------------------	------	------------------	-----------	----------





2011066645

02/25/2011 09:02 AM

OFFICIAL RECORDS OF ALAMEDA COUNTY
PATRICK O'CONNELL

RECORDING FEE 132.00
Document Recorded



40 PGS

Recording Requested By:

Encinal 14th Street, LLC
c/o Hall Equities Group
1855 Olympic Boulevard, Suite 250
Walnut Creek, CA 94596

When Recorded, Mail To:

Ari Levi, Director
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Alameda, California 94502

**COVENANT AND ENVIRONMENTAL RESTRICTION
ON PROPERTY**

(APN: 005-0482-2)

This Covenant and Environmental Restriction on Property (this "Covenant") is made as of the 9th day of February, 2011, by Encinal 14th Street, LLC, a California limited liability company ("Covenantor") who is the Owner of record of that certain property situated at 1385 16th Street, in the City of Oakland, County of Alameda, State of California, which is more particularly described as Parcel "B" on Exhibit A attached hereto and incorporated herein by this reference (such portion hereinafter referred to as the "Burdened Property"), for the benefit of the Alameda County Environmental Health Services (the "County"), with reference to the following facts:

A. The Burdened Property and groundwater underlying the property contains hazardous materials.

B. Contamination of the Burdened Property. Soil at the Burdened Property was contaminated by releases from petroleum underground storage tanks. These releases resulted in contamination of soil and groundwater with organic chemicals including benzene, toluene, ethylbenzene, xylenes, and 1,2-dichloromethane, which are hazardous materials as that term is defined in Health & Safety Code Section 25260. Removal of underground storage tanks and remediation of the petroleum hydrocarbons was initiated in January 1988 and is summarized below:

Tank, Line and Dispenser Removal

Four (4) underground fuel storage tanks containing gasoline and diesel fuel and associated piping were removed in December 1988. One (1) 1,000 gallon used-oil tank was removed in January 1989.

Remedial Actions

Soil Excavation: Between January and March 1989, 1,200 cubic yards of soil

were removed in the area of the former underground storage tanks and associated piping. This soil was treated onsite and replaced back in the excavated area.

Liquid Petroleum Hydrocarbon Removal: Liquid petroleum hydrocarbons were removed using a product skimming system from the subsurface during January through March 1989. Approximately 1,800 gallons were removed during this time period.

Soil Vapor Extraction: A soil vapor extraction system operated from January 1994 to December 1995 and removed an estimated 5,200 gallons of hydrocarbon.

Multi-phase Extraction: A multi-phase extraction system has been operating at the site since August 1997. Approximately 10,500 pounds of hydrocarbons have been removed using this system. Thickness of petroleum hydrocarbons decreased since August 1997.

C. Exposure Pathways. The contaminants addressed in this Covenant are present in soil and groundwater on the Burdened Property. Without the mitigation measures which have been performed on the Burdened Property, exposure to these contaminants could take place via

- ingestion and dermal contact with surface soils and
- inhalation of volatile emissions from subsurface soils and groundwater.

The risk of public exposure to the contaminants has been substantially lessened by the remediation and controls described herein.

D. Adjacent Land Uses and Population Potentially Affected. The Burdened Property is currently an unused industrial facility and is adjacent to industrial, commercial, and residential land uses.

E. Full and voluntary disclosure to the County of the presence of hazardous materials on the Burdened Property has been made and extensive sampling of the Burdened Property has been conducted.

F. Covenantor desires and intends that in order to benefit the County, and to protect the present and future public health and safety, the Burdened Property shall be used in such a manner as to avoid potential harm to persons or property that may result from hazardous materials that may have been deposited on portions of the Burdened Property.

ARTICLE I GENERAL PROVISIONS

1.1 Provisions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions") upon and subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. The restrictions set forth in Article III are reasonably necessary to protect present and future human health and safety or the environment as a result of the presence

on the land of hazardous materials. Each and all of the Restrictions shall run with the land, and pass with each and every portion of the Burdened Property, and shall apply to, inure to the benefit of, and bind the respective successors in interest thereof, for the benefit of the County and all Owners and Occupants. Each and all of the Restrictions are imposed upon the entire Burdened Property unless expressly stated as applicable to a specific portion of the Burdened Property. Each and all of the Restrictions run with the land pursuant to section 1471 of the Civil Code. Each and all of the Restrictions are enforceable by the County.

1.2 Concurrence of Owners and Lessees Presumed. All purchasers, lessees, or possessors of any portion of the Burdened Property shall be deemed by their purchase, leasing, or possession of such Burdened Property, to be in accord with the foregoing and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees of such owners, heirs, successors, and assignees, that the Restrictions as herein established must be adhered to for the benefit of the County and the Owners and Occupants of the Burdened Property and that the interest of the Owners and Occupants of the Burdened Property shall be subject to the Restrictions contained herein.

1.3 Incorporation into Deeds and Leases. Covenanter desires and covenants that the Restrictions set out herein shall be incorporated in and attached to each and all deeds and leases of any portion of the Burdened Property. Recordation of this Covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant and Agreement has been attached to or incorporated into any given deed or lease.

1.4 Purpose. It is the purpose of this instrument to convey to the County real property rights, which will run with the land, to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

A R T I C L E I I D E F I N I T I O N S

2.1 County. "County" shall mean the Alameda County Environmental Health Services and shall include its successor agencies, if any.

2.2 Improvements. "Improvements" shall mean all buildings, roads, driveways, regradings, and paved parking areas, constructed or placed upon any portion of the Burdened Property.

2.3 Occupants. "Occupants" shall mean Owners and those persons entitled by ownership, leasehold, or other legal relationship to the exclusive right to use and/or occupy all or any portion of the Burdened Property.

2.4 Owner or Owners. "Owner" or "Owners" shall mean the Covenantor and/or its successors in interest, who hold title to all or any portion of the

Burdened Property.

A R T I C L E I I I
DEVELOPMENT, USE AND CONVEYANCE OF THE BURDENED
PROPERTY

3.1 Restrictions on Development and Use. Covenantor promises to restrict the use of the Burdened Property as follows:

- a. Development of the Burdened Property shall be restricted to industrial and commercial use;
- b. No residence for human habitation shall be permitted on the Burdened Property;
- c. No hospitals shall be permitted on the Burdened Property;
- d. No schools for persons under 21 years of age shall be permitted on the Burdened Property;
- e. No day care centers for children or day care centers for Senior Citizens shall be permitted on the Burdened Property;
- f. No Owners or Occupants of the Property or any portion thereof shall conduct any excavation work on the Property, unless expressly permitted in writing by the County. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed by Covenantor or his agent in accordance with all applicable provisions of local, state and federal law;
- g. All uses and development of the Burdened Property shall be consistent with any applicable County Cleanup Order or Risk Management Plan (Exhibit B), each of which is hereby incorporated by reference including future amendments thereto. All uses and development shall preserve the integrity of any cap, any remedial measures taken or remedial equipment installed, and any groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the County, unless otherwise expressly permitted in writing by the County.
- h. No Owners or Occupants of the Property or any portion thereof shall drill, bore, otherwise construct, or use a well for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the County.
- i. The Owner shall notify the County of each of the following: (1) The type, cause, location and date of any disturbance to any cap, any remedial measures taken or remedial equipment installed, and of the groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the County, which could affect the ability of such cap or remedial measures, remedial equipment, or monitoring system to perform their respective functions and (2) the type and date of repair of such disturbance. Notification to the County shall be made by registered mail within ten (10) working days of both the discovery of such disturbance and the completion of repairs. The Covenantor agrees that the County, and/or any persons acting pursuant to County

cleanup orders, shall have reasonable access to the Burdened Property for the purposes of inspection, surveillance, maintenance, or monitoring, as provided for in Division 7 of the Water Code

J No Owner or Occupant of the Burdened Property shall act in any manner that will aggravate or contribute to the existing environmental conditions of the Burdened Property. All use and development of the Burdened Property shall preserve the integrity of any capped areas. In the event that the site is to be redeveloped for commercial or industrial land use, replacement of the existing building slab during site development may be acceptable provided that

- 1 The new building slab provides a similar or greater level of protection from vapor intrusion as the existing building slab
- 2 No subsurface structures are constructed other than utility trenches
- 3 No unexpected conditions are encountered during removal of the existing slab
- 4 The new perimeter building foundation will extend to a similar depth as the existing perimeter foundation to potentially provide a similar barrier to off-site contaminant migration
- 5 Approved development/construction plans are to be submitted to the County for review and approval to assure that the above conditions are met and the integrity of the cap will be maintained

3.2 Enforcement Failure of an Owner or Occupant to comply with any of the restrictions, as set forth in paragraph 3.1, shall be grounds for the County, by reason of this Covenant, to have the authority to require that the Owner modify or remove any Improvements constructed in violation of that paragraph. Violation of the Covenant shall be grounds for the County to file civil actions against the Owner as provided by law.

3.3 Notice in Agreements After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to the property. Any such instrument shall contain the following statement:

The land described herein contains hazardous materials in soils and in the ground water under the property, and is subject to a deed restriction dated as of _____, _____, 2011, and recorded on _____, 2011, in the Official Records of _____ County, California, as Document No _____, which Covenant and Restriction imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

A R T I C L E I V
VARIANCE AND TERMINATION

4.1 Variance. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or any portion thereof may apply to the County for a written variance from the provisions of this Covenant.

4.2 Termination. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or a portion thereof may apply to the County for a termination of the Restrictions as they apply to all or any portion of the Burdened Property.

4.3 Term. Unless terminated in accordance with paragraph 4.2 above, by law or otherwise, this Covenant shall continue in effect in perpetuity.

A R T I C L E V
MISCELLANEOUS

5.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public.

5.2 Notices. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (1) when delivered, if personally delivered to the person being served or official of a government agency being served, or (2) three (3) business days after deposit in the mail if mailed by United States mail, postage paid certified, return receipt requested:

If To: "Covenantor"
Encinal 14th Street, LLC
c/o Hall Equities Group
1855 Olympic Boulevard, Suite 250
Walnut Creek, CA 94596

If To: "County"
Alameda County Environmental Health
Services Attention: Director
1131 Harbor Bay Parkway
Alameda, California 94502

5.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.4 Article Headings. Headings at the beginning of each numbered article of this Covenant are solely for the convenience of the parties and are not a part of the Covenant.

5.5 Recordation. This instrument shall be executed by the Covenantor and by the

Director of Environmental Health Services. This instrument shall be recorded by the Covenantor in the County of Alameda within ten (10) days of the date of execution.

5.6 References. All references to Code sections include successor provisions.

5.7 Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the Covenant to effect the purpose of this instrument and the policy and purpose of the Water Code. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

Covenantor: Encinal 14th Street, LLC,
a California limited liability company

By: Hall Encinal, Inc.,
a California corporation,
its Manager

By: 
Mark D. Hall, President

Date: 2/9/11

Agency: Alameda County Environmental Health Services

By: 

Title: Director

Date: 2/9/11

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

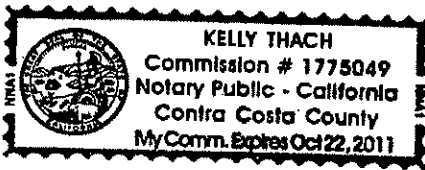
State of California

County of Contra Costa

On Feb. 4, 2011 before me, Kelly Thach, Notary Public

personally appeared Mark D. Hall

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: Kelly Thach
Signature of Notary Public

Place Notary Seal and/or Stamp Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____ Signer's Name: _____

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Corporate Officer — Title(s): _____
<input type="checkbox"/> Individual
<input type="checkbox"/> Partner — <input type="checkbox"/> Limited <input type="checkbox"/> General
<input type="checkbox"/> Attorney in Fact
<input type="checkbox"/> Trustee
<input type="checkbox"/> Guardian or Conservator
<input type="checkbox"/> Other: _____ | RIGHT THUMBPRINT OF SIGNER
Top of thumb here
<div style="border: 1px solid black; height: 100px; width: 100%;"></div> | <input type="checkbox"/> Corporate Officer — Title(s): _____
<input type="checkbox"/> Individual
<input type="checkbox"/> Partner — <input type="checkbox"/> Limited <input type="checkbox"/> General
<input type="checkbox"/> Attorney in Fact
<input type="checkbox"/> Trustee
<input type="checkbox"/> Guardian or Conservator
<input type="checkbox"/> Other: _____ | RIGHT THUMBPRINT OF SIGNER
Top of thumb here
<div style="border: 1px solid black; height: 100px; width: 100%;"></div> |
|---|--|---|--|

Signer Is Representing: _____ Signer Is Representing: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

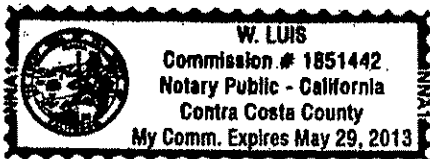
State of California

County of Alameda }

On 2/9/11 before me, W. Luis Notary Public
Date Here Insert Name and Title of the Officer

personally appeared Ariw Levi
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~/they executed the same in his/~~her~~/their authorized capacity(ies), and that by his/~~her~~/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal
 Signature: [Handwritten Signature]

Place Notary Seal and/or Stamp Above

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____ Signer's Name: _____

Corporate Officer — Title(s): _____

Corporate Officer — Title(s): _____

Individual

Individual

Partner — Limited General

Partner — Limited General

Attorney in Fact

Attorney in Fact

Trustee

Trustee

Guardian or Conservator

Guardian or Conservator

Other: _____

Other: _____

Signer Is Representing: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

RIGHT THUMBPRINT OF SIGNER

Top of thumb here

EXHIBIT A

LEGAL DESCRIPTION OF PROPERTY

OWNER'S STATEMENT

THE UNDERSIGNED HEREBY STATES THAT THEY ARE THE OWNER OF THE LAND DELINEATED AND EMBRACED WITHIN THE EXTERIOR BOUNDARY LINES ON THE HEREIN EMBODIED MAP ENTITLED "PARCEL MAP 9733, CITY OF OAKLAND, ALAMEDA COUNTY, STATE OF CALIFORNIA"; THAT SAID OWNERS ACQUIRED TITLE TO SAID LAND BY VIRTUE OF THE DEED RECORDED ON JUNE 12, 2000 UNDER SERIES NO. 2000175666, OFFICIAL RECORDS OF ALAMEDA COUNTY, CALIFORNIA; THAT THEY CONSENT TO THE PREPARATION AND FILING OF THIS MAP.

THIS MAP SHOWS ALL EASEMENTS ON THE PREMISES, OR OF RECORD.

OWNER:
ENCINAL 14TH STREET, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY

BY: HALL ENCINAL INC., A CALIFORNIA CORPORATION
ITS: MANAGER

BY: Mark D. Hall
MARK D. HALL
ITS: PRESIDENT

OWNER'S ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF Contra Costa) SS

ON September 3, 2008 BEFORE ME,
Kelly Tracht A

NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, PERSONALLY
-APPEARED

Mark D. Hall

WHO PROVED TO ME ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON(S) WHOSE NAME(S) IS/ARE SUBSCRIBED TO THE WITHIN INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE/SHE /THEY EXECUTED THE SAME IN HIS/HER/THEIR AUTHORIZED CAPACITIES AND THAT BY HIS/HER/THEIR SIGNATURE(S) ON THE INSTRUMENT THE PERSON(S), OR THE ENTITY UPON BEHALF OF WHICH THE PERSON(S) ACTED, EXECUTED THE INSTRUMENT.

I CERTIFY UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING PARAGRAPH IS TRUE AND CORRECT.

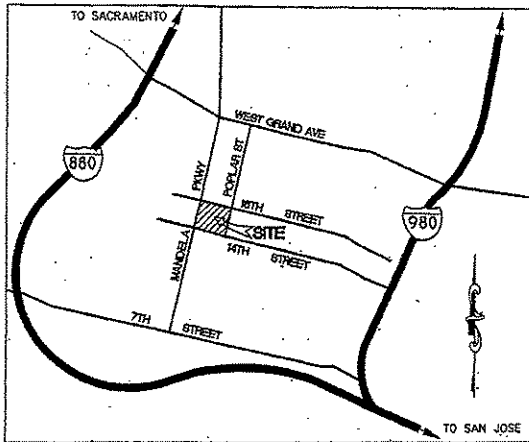
WITNESS MY HAND:
SIGNATURE Kelly Tracht
Kelly Tracht
NAME (TYPED OR PRINTED), NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE.

PRINCIPAL COUNTY OF BUSINESS: Contra Costa
COMMISSION EXPIRES: Oct 22, 2011
COMMISSION # OF NOTARY: 1775049

SURVEYOR'S STATEMENT

THIS MAP WAS PREPARED BY ME OR UNDER MY DIRECTION AND IS BASED UPON A FIELD SURVEY IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION MAP ACT AND LOCAL ORDINANCE AT THE REQUEST OF THE ENCINAL 14TH STREET, LLC IN JULY OF 2008. I HEREBY STATE THAT THIS PARCEL MAP SUBSTANTIALLY CONFORMS TO THE APPROVED OR CONDITIONALLY APPROVED TENTATIVE PARCEL MAP, IF ANY. I HEREBY STATE THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED.

DATE: 08/27/08 V. J. O'ALO
VINCENT J. O'ALO
L.S. 4210
EXPIRATION DATE, 6-30-10



VICINITY MAP
NTS

CITY ENGINEER'S STATEMENT

I, RAYMOND M. DERANIA, INTERIM CITY ENGINEER, HAVING BEEN AUTHORIZED TO PERFORM THE FUNCTIONS OF THE CITY ENGINEER OF THE CITY OF OAKLAND, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, FOR THE PURPOSE OF REVIEWING SUBDIVISION MAPS, DO HEREBY CERTIFY THAT I HAVE EXAMINED THE HEREON EMBODIED PARCEL MAP ENTITLED "PARCEL MAP 9733, CITY OF OAKLAND, ALAMEDA COUNTY, CALIFORNIA," THAT THE SUBDIVISION AS SHOWN UPON SAID PARCEL MAP IS SUBSTANTIALLY THE SAME AS THAT APPEARING ON THE TENTATIVE PARCEL MAP AND ANY APPROVED ALTERATIONS THEREOF, THAT SAID PARCEL MAP COMPLIES WITH ALL PROVISIONS OF THE SUBDIVISION MAP ACT OF THE GOVERNMENT CODE AND THE LOCAL ORDINANCES APPLICABLE AT THE TIME OF THE TENTATIVE MAP; AND THAT I AM SATISFIED THAT THE PARCEL MAP IS TECHNICALLY CORRECT.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND THIS 15th DAY OF September, 2008

RM Derania
RAYMOND M. DERANIA, RCE 27815
INTERIM CITY ENGINEER
ALAMEDA COUNTY, STATE OF CALIFORNIA
LICENSE EXPIRES: 03-31-10.



SEISMIC HAZARD DISCLOSURE NOTE:

THIS REAL PROPERTY LIES WITHIN A SEISMIC HAZARD ZONE—LIQUEFACTION ZONE PURSUANT TO SECTION 26866 OF THE STATE OF CALIFORNIA PUBLIC RESOURCES CODE. THESE HAZARDS MAY LIMIT YOUR ABILITY TO DEVELOP THE REAL PROPERTY, TO OBTAIN INSURANCE, OR TO RECEIVE ASSISTANCE AFTER A DISASTER. THE MAPS PREPARED BY THE STATE GEOLOGIST ON WHICH THESE DISCLOSURES ARE BASED ESTIMATE WHERE NATURAL DISASTERS EXIST. THEY ARE NOT DEFUTIVE INDICATORS OF WHETHER OR NOT A PROPERTY WILL BE AFFECTED BY A NATURAL DISASTER. TRANSFEREE(S) AND TRANSFEROR(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE REGARDING THOSE HAZARDS AND OTHER HAZARDS THAT MAY AFFECT THE PROPERTY.

PARCEL MAP 9733

ALL OF LOTS 7, 8, 9, 10, 11, 12, 13, AND 14 AND PORTIONS OF LOTS 5, 6, AND 15, BLOCK 583, FILED APRIL 25, 1891 (10 M 56); ALL OF LOTS 7, 8, 19, 30, 31, AND 32 AND A PORTION OF LOT 29, BLOCK 583, MAP NO. 1 OF A PORTION OF THE SCOTCHLER TRACT AND VICINITY FILED DECEMBER 10, 1874 (7 M 21); ALL OF LOTS 6, 9, 10, 11, 14, 16, 17, 18, 20 AND 21 AND PORTIONS OF LOTS 4, 5, 12, 13, 15, AND 22, BLOCK 583, MAP OF THE SCOTCHLER TRACT FILED NOVEMBER 3, 1870 (2 M 10); A PORTION OF 15TH STREET (2 M 10); A PORTION OF KIRKHAM STREET (2 M 10); ALL OF LOTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 19, 20, 21, 22, 23 AND PORTIONS OF LOTS 13, 16, 17, 18, 24, AND 25, BLOCK 584, REDIVISION OF BLOCKS 584, 585, 601, 153, AND 580A FILED MAY 1, 1885 (4 M 25)
ALL IN ALAMEDA COUNTY RECORDS.
CITY OF OAKLAND, ALAMEDA COUNTY, CALIFORNIA

AUGUST 2008

CLERK OF THE BOARD OF SUPERVISORS STATEMENT

I, Torral Hissin Graf, CLERK OF THE BOARD OF SUPERVISORS OF THE COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DO HEREBY STATE THAT CERTIFICATES HAVE BEEN FILED AND DEPOSITS HAVE BEEN MADE IN CONFORMANCE WITH THE REQUIREMENTS OF SECTIONS 66492 AND 66493 OF THE GOVERNMENT CODE OF THE STATE OF CALIFORNIA.

DATE: 9/16/08
BY: [Signature]
DEPUTY CLERK

CLERK OF THE BOARD OF SUPERVISORS, COUNTY OF ALAMEDA, STATE OF CALIFORNIA
182,416-09

RECORDER'S CERTIFICATE

FILED AT THE REQUEST OF FIRST AMERICAN TITLE INSURANCE COMPANY AT 12:00 PM ON THE 16th DAY OF September, 2008
RECORDERS SERIAL NO. 200827956
IN BOOK 318 OF MAPS AT PAGES 71-72 IN THE OFFICE OF THE COUNTY RECORDER OF THE COUNTY OF ALAMEDA, STATE OF CALIFORNIA. Fee: 911.00

COUNTY RECORDER OF THE COUNTY OF ALAMEDA,
STATE OF CALIFORNIA
BY: [Signature]



Parcel Map 9733

Map Bk 310 pp 17-12

NOTES

- ① SUBJECT TO ANY RIGHTS RESERVED PER 431 M 521 AND SERIES 83-212906.
- ② RIGHTS OF INGRESS/EGRESS TO ANY PROPOSED STATE OF CALIFORNIA FREEWAY ARE RESERVED BY 7804 OR 225 AND 7749 OR 447.

PARCEL MAP 9733

ALL OF LOTS 7, 8, 9, 10, 11, 12, 13, AND 14 AND PORTIONS OF LOTS 5, 6, AND 15, BLOCK 583, FILED APRIL 25, 1891 (10 M 56); ALL OF LOTS 7, 8, 19, 30, 31, AND 32 AND A PORTION OF LOT 29, BLOCK 583, MAP NO. 1 OF A PORTION OF THE SCOTCHLER TRACT AND VICINITY FILED DECEMBER 10, 1874 (7 M 21); ALL OF LOTS 6, 9, 10, 11, 14, 16, 17, 18, 20 AND 21 AND PORTIONS OF LOTS 4, 5, 12, 13, 15, AND 22, BLOCK 583, MAP OF THE SCOTCHLER TRACT FILED NOVEMBER 3, 1870 (2 M 10); A PORTION OF 15TH STREET (2 M 10); A PORTION OF KIRKHAM STREET (2 M 10); ALL OF LOTS 1, 2, 3, 4, 5, 8, 7, 8, 9, 10, 11, 12, 14, 15, 19, 20, 21, 22, 23 AND PORTIONS OF LOTS 13, 16, 17, 18, 24, AND 25, BLOCK 584, REDIVISION OF BLOCKS 584, 585, 601, 153, AND 580A FILED MAY 1, 1885 (4 M 25) ALL IN ALAMEDA COUNTY RECORDS.

CITY OF OAKLAND, ALAMEDA COUNTY, CALIFORNIA

AUGUST 2008 1"=50'



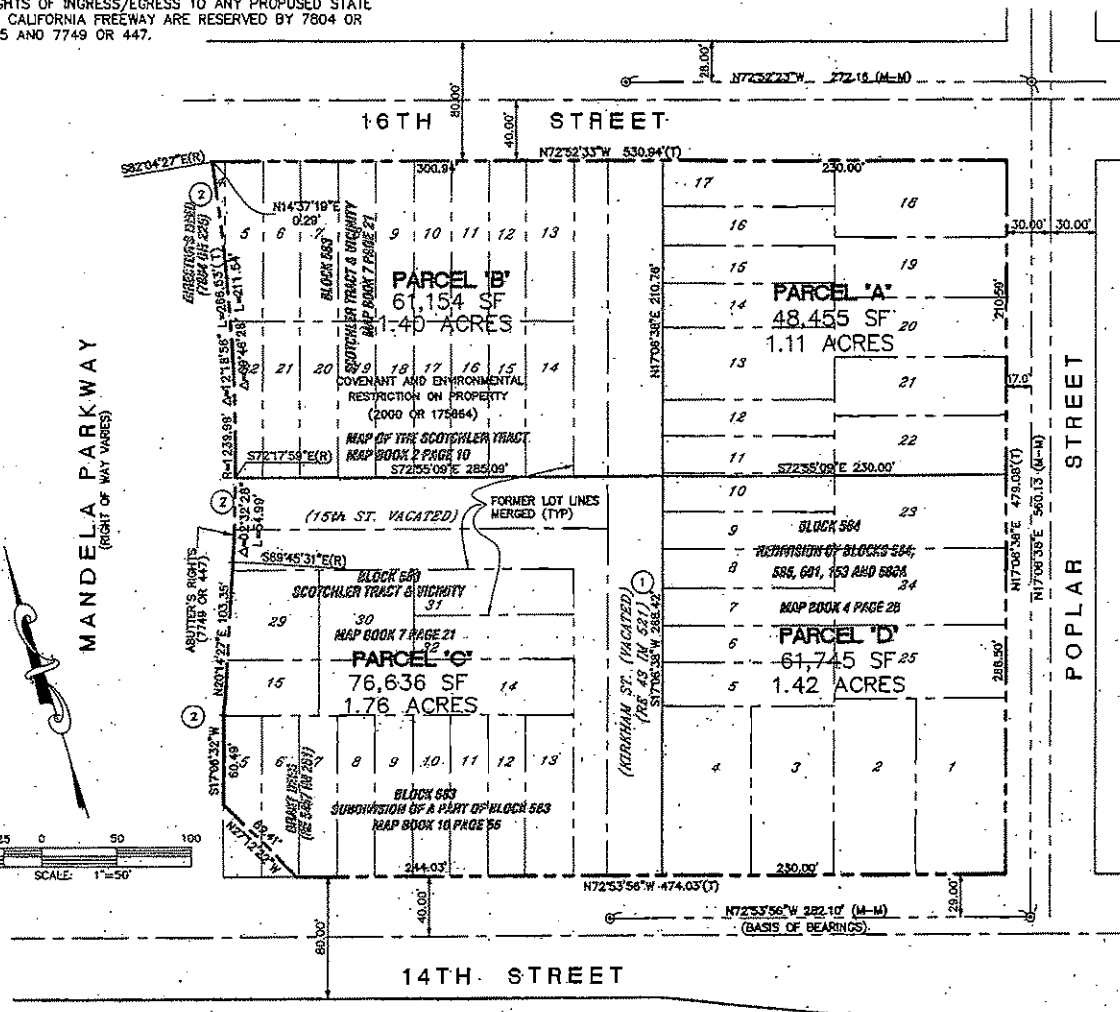
ALIQUOT
PLANNERS
CIVIL ENGINEERS
SURVEYORS
1390 SOUTH MAIN STREET, SUITE 310
WALNUT CREEK, CA. 94596

LEGEND

- ⊙ FOUND STANDARD STREET MONUMENT
- (M-M) MONUMENT TO MONUMENT
- BOUNDARY
- LOT LINE
- MONUMENT LINE
- CENTER LINE
- SF SQUARE FEET
- (T) TOTAL

REFERENCES

- R1: BLOCK 583, APRIL 25, 1891 (10 M 56)
- R2: BLOCK 583, MAP NUMBER 1 OF A PORTION OF THE SCOTCHLER TRACT AND VICINITY, DECEMBER 10, 1874 (7 M 21)
- R3: BLOCK 583, MAP OF THE SCOTCHLER TRACT NOVEMBER 3, 1870 (2 M 10)
- R4: BLOCK 584, REDIVISION OF BLOCKS 584, 585, 601, 153 AND 580A MAY 1, 1885 (4 M 25)



09/12

EXHIBIT B

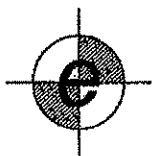
Report to:

Nestlé USA, Inc.
800 North Brand Boulevard
Glendale, California 91203

Risk Management Plan
1310 14th Street, Oakland, CA

February 3, 2011

Prepared By:



Binayak Acharya

Binayak Acharya
Program Manager

February 3, 2011
Date

Brent Searcy

Brent Searcy, P.E.
Senior Engineer

February 3, 2011
Date



Contents

1.	Introduction	1
2.	Site Background	2
2.1.	Site Location	2
2.2.	Site History	2
2.2.1.	Adjacent Land Use	2
2.3.	Summary of Site Investigations and Current Environmental Conditions	3
2.3.1.	Soil Gas Characterization	3
2.3.2.	Soil Characterization.....	3
2.3.3.	Groundwater Characterization.....	4
2.4.	Deed Restriction	5
3.	Summary of Health Risks.....	5
4.	Risk Management Measures During Site Development	6
4.1.	Protocols For Future Excavation Activities	7
4.2.	Site-Specific Health and Safety Requirements and Safety Plan	7
4.3.	Construction Impact Mitigation Measures.....	8
4.3.1.	Dust Control.....	8
4.3.2.	Minimizing Soil and Groundwater Contact by Construction Worker	9
5.	Long-Term Risk Management Measures.....	9
5.1.	Maintenance of the Surface Cap	9
5.2.	Use of Groundwater.....	10
6.	Endnotes.....	11

FIGURES

- Figure 1: Site Location
Figure 2: Deed Restricted Area

APPENDICES

- Appendix A: Covenant and Environmental Restriction (Deed Restriction)

ACRONYMS and ABBREVIATIONS

AB	Assembly Bill
ACEH	Alameda County Environmental Health
BTEX	benzene, toluene, ethylbenzene, total xylenes
bgs	below ground surface
Cal/EPA	California Environmental Protection Agency
CAP	<i>Corrective Action Plan</i>
CCR	California Code of Regulations
CFR	Code of Federal Regulations
COFS	City of Oakland Fire Services
COPCs	chemicals of potential concern
1,2-DCA	1,2-dichloroethane
HASP	health and safety plan
HVOCs	halogenated volatile organic compounds
IIPP	Injury and Illness Prevention Program
LPH	liquid-phase hydrocarbons
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
ND	non-detect
PCBs	polychlorinated biphenyls
RBCA	risk-based corrective action
RMP	<i>Risk Management Plan</i>
SCM	<i>Site Conceptual Model</i>
TPH-d	Total petroleum hydrocarbons in the diesel range
TPH-g	Total petroleum hydrocarbons in the gasoline range
TPH-mo	Total petroleum hydrocarbons in the motor oil range
USEPA	United States Environmental Protection Agency
USTs	underground storage tanks
VOCs	volatile organic compounds

1. INTRODUCTION

On behalf of Nestlé USA, Inc. (Nestlé), Environmental Cost Management, Inc. (ECM) has prepared this *Revised Risk Management Plan* (RMP) for the Site located at 1310 14th Street, Oakland, California (**Figure 1**). **Figure 2** outlines the area for which the restrictions and risk management protocols discussed in this document apply. This RMP responds to requests made in a June 9, 2010 letter from the Alameda County Environmental Health Care Services (ACEH). The June 9, 2010 letter acknowledged ECM's submittal of the April 2010 *Corrective Action Plan (CAP) Report*¹ and requested the RMP as part of the recommended final corrective action and institutional controls for the Site. The RMP includes the Deed Restriction filed for the portion of the property formerly operated by Nestlé (**Appendix A**). In addition, potential health risks associated with commercial/industrial occupants at the Site have been evaluated and documented in the May 18, 2009 *Screening Health Risk Evaluation* and the March 22, 2010 *Sub-slab Soil Gas Sampling and Analysis Report*.

This RMP describes the specific risk management measures that will be implemented prior to, during, and after any future development of the Site. It was prepared solely for use within the Site and is not intended for management of risks outside of this area. Although this RMP sets forth the requirements to appropriately manage the chemicals in soil and groundwater, the RMP is not intended to catalog all other legal requirements that may apply to the project or to activities conducted within the Site area.

Current and future owners and lessees, occupants and managers, or contractors delegated or authorized to perform property maintenance or construction are required to comply with the measures identified in the RMP when engaging in the relevant activities discussed. A Deed Restriction for the portion of the property formerly operated by Nestlé (Site) has been recorded in February 2011 with the ACEH (**Appendix A**). **Figure 2** shows the deed-restricted portion of the property, referred to as the Site in this RMP report. The Deed Restriction requires Owner and/or Lessee compliance with the RMP measures. Specifically, the Deed Restriction places responsibility for compliance with the Owner and/or Lessee of the Site at the time the activity is conducted, even when such Owner or Lessee has contracted with another party to perform those measures. The term "Owner" or "Owners", as used in this RMP, shall mean those persons (whether individuals, corporations, or other legal entities) who, at such time when activities regulated by this RMP are conducted, hold title to the Site. The term "Lessee" or "Lessees", as used in this RMP, shall mean those persons who are entitled by ownership, leasehold, license, permit, or other legal relationship with the Owner, to enter and exclusively occupy the Site and to engage in activities that are regulated by this RMP. A former Owner or former Lessee, licensee, permittee, or other former holder of a property or contract right who, at such time when activities regulated by this RMP are conducted, no longer holds an interest in title to a parcel or no longer has a property or contract interest in a parcel, will not be considered an Owner or Lessee for the purposes of this RMP.

The California Environmental Protection Agency (Cal/EPA) has designated ACEH as the "Administering Agency" under Assembly Bill (AB) 2061, in December 1998. As the Administering Agency, ACEH is responsible for overseeing implementation of the CAP recommendations, approval of the necessary institutional control documents (i.e., this RMP and the associated Deed Restriction (**Appendix A**)), and closure requirements of the Site.

The *Screening Health Risk Evaluation* and *2010 Sub-slab Soil Gas Sampling and Analysis Report* concluded that the chemicals of potential concern (COPCs) observed at the Site do not pose a significant risk to daily site occupants under a commercial/industrial land use scenario, provided that a surface cap of the soil, exclusive of minor landscape areas, is maintained. The surface cap consists of the existing building foundation and paved surfaces that prevent direct exposure to residual contamination. In addition, implementation of risk management practices, as described in this RMP, is recommended to address potential health risks associated with direct exposure of construction workers to chemicals beneath the site during any work requiring disturbance of the cap.

2. SITE BACKGROUND

2.1. SITE LOCATION

The property is located at 1310 14th Street, Oakland, California. The deed-restricted area is located in the northwest portion of the property (**Figure 1**). The deed-restricted portion of the property is bounded by 16th Street to the north and Mandela Parkway to the west. As of the date of this RMP, an "L" shaped building is present on the Site. The "L" shaped building once housed warehouse and service bay facilities.

The topography slopes gently to the west, toward San Francisco Bay. Land use in the immediate area is primarily light industrial, with some commercial property and residences located east and west of the property.

2.2. SITE HISTORY

Ice cream and packaged milk were once manufactured on the Site. The Site was also used for the distribution of ice cream and packaged fresh milk by trucks. A maintenance yard for vehicles used in the distribution of dairy products operated at the facility and included underground fuel and waste oil storage tanks.

The original facilities were constructed by American Creamery in 1915. The Carnation Company purchased the property in 1929 and made additions and improvements to the buildings between 1946 and 1973 for dairy product processing and distribution. Nestlé (as Nestlé USA, Inc.) assumed operation of the property following the purchase of Carnation in approximately 1985. Nestlé ceased operations at the property in 1991, and the property, including the Site (northwestern portion of property) was sold to Encinal 14th Street, LLC in July 2000.

2.2.1. ADJACENT LAND USE

Land use surrounding the property/Site is light industrial and residential. Facilities to the north and south of the Site are primarily light industrial. Immediately east of the site are light industrial facilities, with residential land use extending from approximately one block east of the Site to Interstate 980 (I-980). West of the Site is a mixed light industrial and residential area.

ETIC Engineering conducted database searches and door-to-door well surveys for areas surrounding the site in November 1999². No active water supply wells were identified during

these efforts. The January 2001 *Comprehensive Site Characterization Report*³ documents the aforementioned well surveys and database searches.

2.3. SUMMARY OF SITE INVESTIGATIONS AND CURRENT ENVIRONMENTAL CONDITIONS

Following the discovery of hydrocarbons in the subsurface during the December 1988 and January 1989 excavation of underground storage tanks (USTs) at the Site, multiple phases of site characterization and remediation have taken place. The following sections provide an overview of the delineation of COPCs, as well as the various remediation activities undertaken to address impacts at the Site.

2.3.1. SOIL GAS CHARACTERIZATION

Soil gas samples were collected across the Site during three separate studies (August 1999, May 2008, and January 2010) to evaluate the magnitude and extent of volatile organic compounds (VOCs) in shallow soil gas. All soil gas investigations addressed soil vapor conditions following active remediation activities. As directed by ACEH, a focused sub-slab vapor sampling event was conducted in January 2010.

Following the May 2009 submittal of a Draft CAP Report and the *Screening Health Risk Evaluation*, ACEH requested additional subslab sampling to verify the site-specific calculation of exposure risks to on-site commercial workers. Sub-slab soil gas sampling was performed on January 6, 2010 at six locations beneath the existing, unoccupied onsite commercial/industrial building. The results of the subslab sampling were reported in the March 2010 *Sub-slab Soil Gas Sampling and Analysis Report*.

The findings of the sub-slab soil gas data evaluation included:

- No chemical was detected in any sample at a concentration exceeding its cancer-based or noncancer-based screening level.
- The estimated cumulative cancer risk at every sampling location is below the accepted exposure level of 1×10^{-6} , as defined, and endorsed by, relevant state and federal agencies⁴.
- The estimated cumulative noncancer hazard index ranges from 0.0094 to 0.12 across the six primary sub-slab soil gas samples, and thus is below the threshold noncancer level of 1.0 at all locations.

These results are consistent with the previous screening-level vapor intrusion evaluation of the building, and confirm the lack of exposure risks to on-site commercial workers posed by residual hydrocarbon impacts currently beneath the Site.

2.3.2. SOIL CHARACTERIZATION

Three separate historical field investigations in 1991, 1999, and 2008 involved subsurface soil sampling and analysis. Soil data gathered after active remediation activities were integrated into the three dimensional model of hydrocarbon impacts presented in the November 2008 *Revised Site Conceptual Model Report (Revised SCM Report)*⁵.

The 1991 soil boring investigation data indicated that impacts from total petroleum hydrocarbons in the gasoline range (TPH-g) were mainly limited to the 5 to 15-foot interval

below ground surface (bgs). The maximum TPH-g concentration at 5 feet bgs was 2,500 milligrams per kilogram (mg/kg). At 10 feet bgs, the maximum TPH-g concentration was 10,000 mg/kg. By 15 feet bgs, the maximum TPH-g concentration dropped to 1,900 mg/kg, and at 20 feet bgs, the maximum TPH-g level decreased to 260 mg/kg.

The distribution of total petroleum hydrocarbons in the diesel range (TPH-d) followed a pattern similar to that of TPH-g. The maximum TPH-d impact at 5 feet bgs was 470 mg/kg. At 10 feet bgs, the maximum TPH-d concentration increased to 940 mg/kg. By 20 feet bgs, the maximum TPH-d concentration dropped to 23 mg/kg.

Thirteen soil borings were advanced and sampled during the August 1999 soil investigation. The locations of the borings represented subsurface conditions in the area downgradient (NNW) of the UST source areas and assessed impacts beneath the footprint of the L-shaped building on the northwest edge of the property. Low levels (at or below 2.7 micrograms per kilogram [$\mu\text{g}/\text{kg}$]) of 1,2-dichloroethane (1,2-DCA), toluene, ethylbenzene and total xylenes were observed in the 3.5 to 4-foot bgs interval. The maximum TPH-d was 1,200 mg/kg in this interval.

Sporadic concentrations of hydrocarbons and halogenated-VOCs (HVOCs) characterized the soil at the water table (6.5 to 7 feet bgs). Concentrations of 1,2-DCA ranged from below laboratory reporting limits at multiple locations, to 430 $\mu\text{g}/\text{kg}$ of 1,2-DCA. Concentrations of TPH-g ranged from 2.25 to 10,100 mg/kg, and TPH-d ranged from 60 to 2,900 mg/kg. Benzene concentrations ranged from 0.07 to 76 mg/kg.

For the May 2008 soil sampling investigation, 15 soil borings were advanced using a 2-inch diameter direct-push Geoprobe[®] coring method and logged⁶. Soil samples were analyzed for TPH-g, TPH-d, and TPH as motor oil (TPH-mo). Soil samples were also analyzed for 1,2-DCA. Elevated levels of hydrocarbons were detected at borings located to the north and northwest of the former UST locations. TPH-g ranged from non-detect (ND) up to 12,000 mg/kg. TPH-d ranged from ND up to 17,000 mg/kg. TPH-mo ranged from ND up to 13,000 mg/kg. Concentrations of 1,2-DCA were not detected above detection limits at any of the soil boring sampling locations.

2.3.3. GROUNDWATER CHARACTERIZATION

As many as 65 monitoring wells were sampled quarterly and semi-annually to characterize dissolved hydrocarbons and VOCs in groundwater between 1994 and 2004. The number of wells monitored was reduced in 2004, consistent with ACEH approval in November 2002. Between December 2002 and late 2004, 11 monitoring wells were sampled. Grab groundwater samples were collected during the May 2008 soil boring investigation. Cumulative groundwater monitoring results (1993 through 2008) are provided in the November 2008 Revised SCM Report⁷

Historical groundwater results indicate that TPH-g and benzene detections above reportable limits are generally limited to the area immediately downgradient (NNW) of the former USTs. Groundwater monitoring data do not indicate any predominant or persistent source of HVOCs.

ACEH had also requested delineation of the potential presence of polychlorinated biphenyls (PCBs) in the subsurface at the Site⁸, which was completed as part of the May 2008 soil investigation discussed in Section 2.3.2. Groundwater samples were collected during this

investigation and analyzed for PCBs at eight boring locations. No PCBs were detected⁹. The absence of PCB detections in groundwater confirms that PCBs are not present at the Site.

Liquid phase hydrocarbons (LPH) were first observed at the Site in the area of the USTs and maintenance bays during UST removal in 1988. Following the cessation of regular LPH monitoring in August 2001, semi-annual groundwater sampling was continued at 11 on- and off-site wells from November 2002 through November 2004. LPH was not observed in any of the 11 monitoring wells monitored as part of the semi-annual sampling events.

2.4. DEED RESTRICTION

A Covenant and Environmental Restriction on Property (Deed Restriction) between Encinal 14th Street LLC and ACEH. The entire property was sold by Nestlé to Encinal 14th Street, LLC in July 2000. A complete copy of the Deed Restriction is included as **Appendix A**. The Deed Restriction included in Appendix A replaces Covenants and Environmental Restrictions signed by the City of Oakland Fire Services on June 12, 2000.

3. SUMMARY OF HEALTH RISKS

Risk assessments were performed in support of the April 2010 Revised CAP Report for the site in order to document any human health risks associated with residual comprehensive site characterization and the low risk designation requirement for the Site. These risk analyses focus on potential health risks to construction workers and future daily occupants at and in the vicinity of the Site.

The Revised SCM Report provides a basis for the characterization of residual COCs used in the assessment of the fate and transport, and potential exposure scenarios, considered in the *Screening Health Risk Evaluation* and the *Sub-slab Soil Gas Sampling and Analysis Report*. As indicated in these risk assessment documents, complete exposure pathways associated with daily onsite and offsite occupants include:

- Ingestion, inhalation, and dermal contact with surface soils (onsite industrial/commercial workers);
- Inhalation of volatile emissions and/or particulates from subsurface soils and groundwater to indoor air (onsite industrial/commercial workers);
- Inhalation of volatile emissions and/or particulates from subsurface soils and groundwater to outdoor air (onsite industrial/commercial workers);
- Inhalation of volatile emissions and/or particulates from groundwater to indoor air (offsite residents); and
- Inhalation of volatile emissions and/or particulates from groundwater to outdoor air (offsite residents).

The risk assessment documents do not include an evaluation of health risks to potential intermittent receptors such as site visitors and/or trespassers; however, the risks to daily site occupants may be used as a conservative estimate of risks to intermittent receptors.

Conclusions of the risk-based corrective action (RBCA) analyses for onsite and offsite receptors include:

- Risks/hazards associated with direct exposure of daily site (commercial/industrial) occupants to observed levels of chemicals in surface soils are protective of United States Environmental Protection Agency (USEPA)-defined target risk/hazard levels;
- Risks/hazards associated with onsite (commercial/industrial) indoor and outdoor air inhalation of volatiles detected in shallow soil vapor samples are protective of USEPA-defined target risk/hazard levels;
- Risks/hazards associated with offsite (residential) indoor and outdoor air inhalation of volatiles detected in groundwater at offsite locations are protective of USEPA-defined target risk/hazard levels; and
- Risks/hazards associated with onsite outdoor intrusive construction workers are above the accepted exposure levels as defined, and endorsed by, relevant state and federal agencies¹⁰. However, this cancer risk and noncancer hazard were attributable entirely to assumed dermal contact with COPCs in groundwater at the bottom of a construction trench, and do not account for personal protective equipment that intrusive construction workers would be required to use. Therefore, to protect construction workers from potentially hazardous exposure levels at the Site, the recommendations in this RMP document should be implemented.

4. RISK MANAGEMENT MEASURES DURING SITE DEVELOPMENT

As of December 2010, specific future development and/or construction plans for this site are unknown. This section discusses risk management measures to be followed in the event that disturbance of the cap (existing building or paved surfaces) is necessary as part of site development for commercial or industrial land use. For any activities that will disturb the existing cap, including construction of a new structure, excavation or grading, or other alterations to the cap, approved development/construction plans are to be submitted to ACEH for review and approved to assure that integrity of the cap will be maintained. As noted in the Deed Restriction, replacement of the existing building slab during site development may be acceptable provided that:

1. The new building slab provides a similar or greater level of protection from vapor intrusion as the existing building slab.
2. No subsurface structures are constructed other than utility trenches.
3. No unexpected conditions are encountered during removal of the existing slab.
4. The new perimeter building foundation will extend to a similar depth as the existing perimeter foundation to potentially provide a similar barrier to off-site contaminant migration.
5. Approved development/construction plans are to be submitted to the County for review and approval to assure that the above conditions are met and the integrity of the cap will be maintained.

Should excavation be permitted as part of redevelopment, the primary exposure to chemicals at the Site will be associated with construction workers. As indicated in Section 3, risk management measures are recommended for protection of construction workers. To this end, risk management measures were developed to provide adequate protection to human health for onsite construction workers during development of the Site. Additional measures may be necessary to protect nearby residents and site visitors during the excavation and construction activities.

Development activities at the facilities may include various site preparation activities such as, but not limited to, excavation, stockpiling, trenching, site grading, backfilling, and dewatering that may disturb the native soils and/or groundwater beneath the Site. Specifically, potential events or activities associated with development of the Site that may result in potential health impacts to onsite construction workers during development include:

- Dust generation associated with soil excavation and trenching, grading, loading activities, backfilling, movement of construction and transportation equipment, and fugitive dust generation from winds traversing an exposed soil stockpile; and
- Potential contact with subsurface chemicals during trenching and excavation.

The risk management measures that will control potential impacts associated with each of these activities are described below. Management measures that are recommended to control potential impacts on construction workers, contractors, and short-term intrusive workers who may be engaged in limited excavation activities, such as utility repair, are also described below.

4.1. PROTOCOLS FOR FUTURE EXCAVATION ACTIVITIES

If plans for excavation activities are approved by ACEH, proper health and safety protocol should be followed during any excavation activity. Any impacted soil subject to excavation and brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of local, state, and federal laws.

4.2. SITE-SPECIFIC HEALTH AND SAFETY REQUIREMENTS AND SAFETY PLAN

The construction contractor shall assume full responsibility and liability for the compliance with provisions of the Work Hours and Safety Standard Act (40 U.S.C. 327 et seq.). The construction contractor shall comply with all applicable safety regulations and other requirements, including, but not limited to, the following:

- Code of Federal Regulations (CFR), Title 29-Labor
- State of California, California Code of Regulations (CCR), Industrial Relations
- Medical Surveillance Programs (e.g., OSHA, 29 CFR 1200)
- Injury and Illness Prevention Programs (e.g., SB 198, 8 CCR, CAL/OSHA, GISO 3203 Section 5192, and CSO 1509/GISO 3203)
- Implementation of mitigation measures under California Environmental Quality Act (CEQA), if any

- The Construction Standard (29 CFR 1926)
- Workers' Right to Know (29 CFR 1910.120)
- Section 6360-99 of the California Labor Code (Hazard Communication)

During construction and site development activities, workers that may directly contact contaminated soil or groundwater at the Site must perform their activities in accordance with a hazardous operations site-specific health and safety plan (HASP). The construction contractor will be responsible for development and implementation of the HASP in compliance with all applicable federal, state, and local regulations and requirements. The HASP shall be prepared by a Certified Industrial Hygienist. Preparation of a HASP will be required for, but not limited to, site preparation work including grading, utility installation, foundation construction, service pit construction, and other activities where workers might directly contact impacted soil or groundwater beneath the Site.

4.3. CONSTRUCTION IMPACT MITIGATION MEASURES

Measures must also be implemented to mitigate potential health impacts on construction workers, should they be exposed directly to chemicals in soil and groundwater underlying the Site. Potential exposure pathways associated with onsite construction workers include inhalation, incidental ingestion, and dermal contact with chemicals in soils and groundwater.

Specifically, measures that must be implemented to mitigate potential impacts during construction include the following:

- Each contractor will prepare and implement a site-specific HASP to address the potential exposure to contaminated soils and groundwater during construction;
- Dust control through spraying of water and other techniques to minimize mobility of impacted soils toward offsite locations; and
- Minimize soil and groundwater contact by onsite construction worker.

Details of these mitigation measures, except the site-specific HASP, are described below.

4.3.1. DUST CONTROL

Dust controls must be implemented to prevent offsite dispersion and accumulation of impacted soils and to comply with applicable regulations pertaining to air quality and nuisance control. Potential construction activities that could generate dust and warrant risk management measures include: (1) excavation and stockpile control; (2) onsite construction vehicle traffic, and (3) windblown soil.

Alameda County may require monitoring of dust generation during site construction at the Site. Results of the monitoring will be used by the construction contractor for determining the needs and appropriate dust control practices in accordance with the regulations for excavating and restoring streets in Alameda County.

Dust generation will be minimized by all appropriate measures, which may include, but not be limited to, the following:

- Wetting of surface soils and spoil piles during excavation, trenching, compaction, and site grading and paving;

- Control of excavation techniques to minimize dust generation such as minimizing drop distances; and
- Covering of stockpiles, if present, with visqueen or other suitable membrane covers.

Additional measures, if required, may be utilized at the discretion of the construction contractor.

4.3.2. MINIMIZING SOIL AND GROUNDWATER CONTACT BY CONSTRUCTION WORKER

Existing data indicate the subsurface presence of chemicals in unsaturated soils, saturated soils, and groundwater beneath the Site. Shallow groundwater beneath the Site occurs at depths ranging from 5 to 10 feet bgs. Details of the hydrogeological characterization are presented in the Revised SCM Report¹¹.

Future construction work at the site may involve excavation and/or direct contact with chemicals above and below the water table. To mitigate risks associated with this exposure, the construction contractor shall develop and implement a site-specific HASP. Examples of health and safety measures are the use of protective clothing, protective gloves and boots, and suitable respirators with cartridges during construction activities.

5. LONG-TERM RISK MANAGEMENT MEASURES

This section discusses long-term risk management measures necessary to maintain the surface cap and prevent exposure to residual site contamination. These long-term risk management measures require maintenance of the surface cap. The Deed Restriction for the Site indicates that no owners or occupants of the Site or any portion thereof shall conduct any excavation work on the Site, unless expressly permitted in writing by the ACEH. Sub-item (i) of Section 3.1 (Restrictions on Development and Use) of the Deed Restriction for the Site states:

"The Owner shall notify the County of each of the following: (1) The type, cause, location and date of any disturbance to any cap, any remedial measures taken or remedial equipment installed, or any groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the County, which could affect the ability of such cap or remedial measures, remedial equipment, or monitoring system to perform their respective functions and (2) the type and date of repair of such disturbance. Notification to the County shall be made by registered mail within ten (10) working days of both the discovery of such disturbance and the completion of repairs."

These long-term risk management measures apply both prior to and following any site development. Maintenance of the surface cap is discussed in section 5.1.

5.1. MAINTENANCE OF THE SURFACE CAP

As indicated in the Deed Restriction (**Appendix A**) for the former Nestlé property, all uses and development of the Site shall maintain a surface cap of the soil, exclusive of minor landscape areas, by buildings or paved surfaces. The Maintenance and Operations Facility Manager or their designated representative must annually conduct a visual inspection of the cover to ensure that the cover materials remain in adequate shape. Damage to the integrity of the cover materials, such as major cracks, must be promptly repaired.

Upon completion of the inspection and any necessary repairs, the Maintenance and Operations Facility Manager or their designated representative will prepare a report documenting the inspection and repairs. The report will contain, at a minimum, the following information:

- Date of inspection
- Personnel conducting the inspection
- Results of the inspection
- Repairs completed to maintain the integrity of the cover

Reports must be signed by the Maintenance and Operations Facility Manager or their designated representative. Reports must be saved in a file maintained by the site occupant at the Maintenance and Operations Facility or similar location at the Site. The reports will be available for review by the ACEH.

5.2. USE OF GROUNDWATER

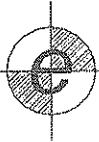
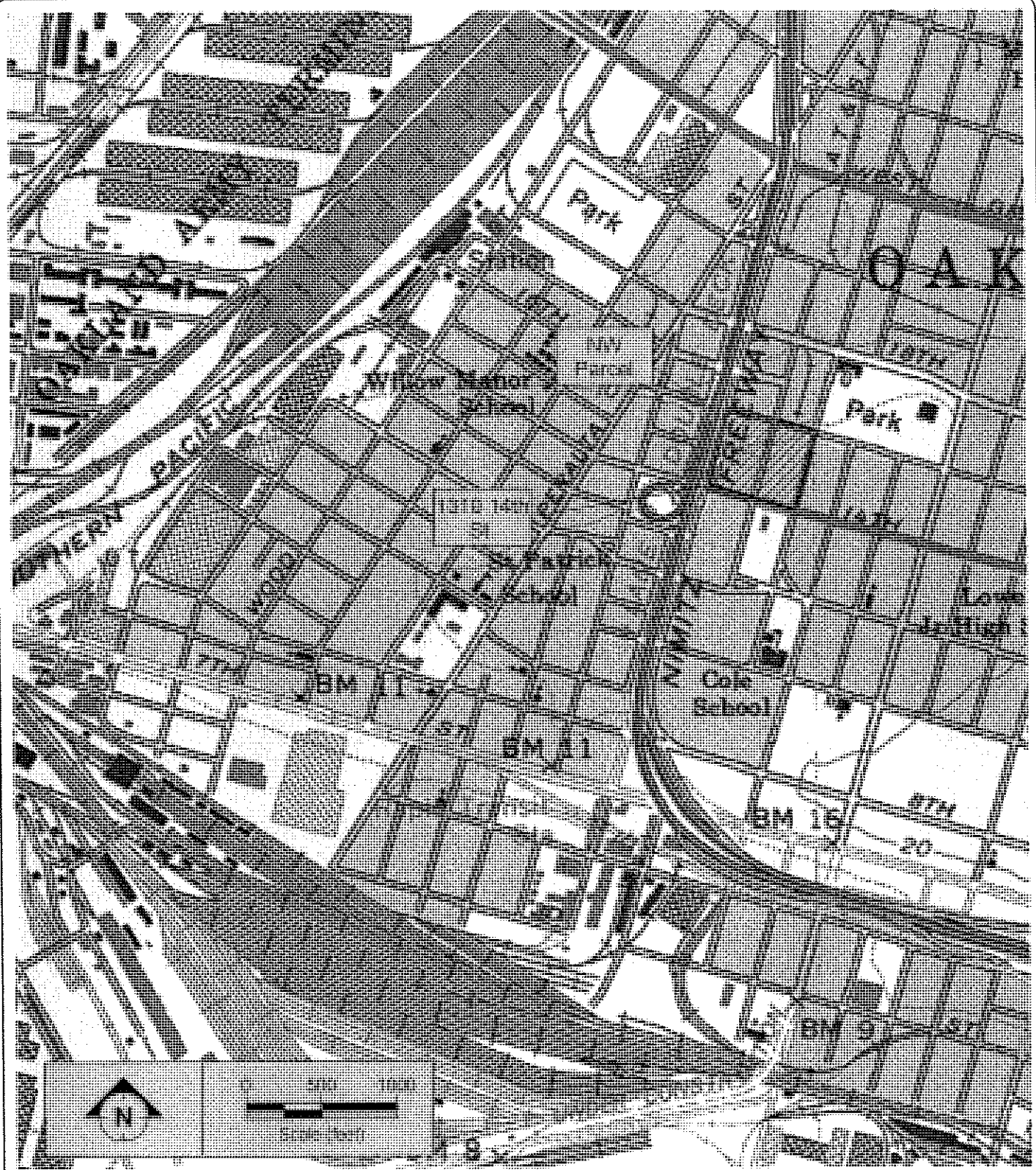
As indicated in the Deed Restriction (**Appendix A**) for the former Nestlé property, no owner or occupants of the Site shall drill, bore, otherwise construct, or use a well for the purpose of extracting groundwater for any use, including, but not limited to, domestic, potable, or industrial uses.

6. ENDNOTES

- ¹ Environmental Cost Management (ECM, Inc.). 2008 Corrective Action Plan (CAP) Report Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California. ECM, Costa Mesa, California. April.
- ² ETIC (ETIC Engineering, Inc.). 2001. Comprehensive Site Characterization Report, Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California. ETIC, Pleasant Hill, California. January.
- ³ ETIC (ETIC Engineering, Inc.). 2001. Comprehensive Site Characterization Report, Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California. ETIC, Pleasant Hill, California. January
- ⁴ United States Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part A). Interim Final. Office of Emergency and Remedial Response. December.
- ⁵ Environmental Cost Management (ECM, Inc.). 2008. Revised Site Conceptual Model Report, Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California. ECM, Costa Mesa, California. November.
- ⁶ Environmental Cost Management (ECM, Inc.). 2008. Revised Site Conceptual Model Report, Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California. ECM, Costa Mesa, California. November.
- ⁷ Environmental Cost Management (ECM, Inc.). 2008. Revised Site Conceptual Model Report, Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California. ECM, Costa Mesa, California. November.
- ⁸ Alameda County Health Care Services Agency. 2007. *September 28th letter directive from Jerry Wickham, P.G. to Mr. Mike Desso (Nestlé) and Mr. Mark Hall (Encinal), Fuel Leak Case No. ROO000018 and Geotracker Global ID T0600100262, Carnation Dairy, 1310 14th Street, Oakland, CA 94607, Alameda, California.*
- ⁹ Environmental Cost Management (ECM, Inc.). 2008. Revised Site Conceptual Model Report, Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California. ECM, Costa Mesa, California. November.
- ¹⁰ United States Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part A). Interim Final. Office of Emergency and Remedial Response. December.
- ¹¹ Environmental Cost Management (ECM, Inc.). 2008. Revised Site Conceptual Model Report, Former Nestlé USA, Inc. Facility, 1310 14th Street, Oakland, California. ECM, Costa Mesa, California. November.

FIGURES

- Figure 1: Site Location
- Figure 2: Deed Restricted Area



ENVIRONMENTAL COST MANAGEMENT, Inc.
Managing Cost and Liability
 3525 Hyland Avenue, Suite 200 • Costa Mesa, CA 92626
 Tel: (714) 662-2759 • Fax: (714) 662-2758

Site Location
Former Nestle Oakland Facility
 1310 14th Street, Oakland, CA-94607

Figure

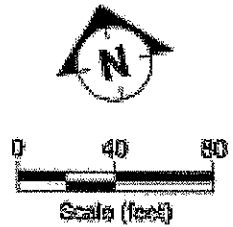
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AREA FOR WHICH ENVIRONMENTAL RESTRICTIONS APPLY

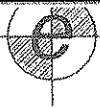
16TH STREET



(from ETIC, 2001)



File Path: B:\map\ 10/11/08



Managing Cost and Liability
 3525 Hyland Avenue, Suite 200 • Costa Mesa, CA 92626
 Tel: (714) 662-2759 • Fax: (714) 662-2758

Deed Restricted Area
 Risk Management Plan
 February 2011

Appendix A: Covenant and Environmental Restriction (Deed Restriction)

Recording Requested By:

Encinal 14th Street, LLC
c/o Hall Equities Group
1855 Olympic Boulevard, Suite 250
Walnut Creek, CA 94596

When Recorded, Mail To:

Ariu Levi, Director
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Alameda, California 94502

COVENANT AND ENVIRONMENTAL RESTRICTION
ON PROPERTY

(APN: 005-0482-2)

This Covenant and Environmental Restriction on Property (this "Covenant") is made as of the 9th day of February, 2011, by Encinal 14th Street, LLC, a California limited liability company ("Covenantor") who is the Owner of record of that certain property situated at 1385 16th Street, in the City of Oakland, County of Alameda, State of California, which is more particularly described as Parcel "B" on Exhibit A attached hereto and incorporated herein by this reference (such portion hereinafter referred to as the "Burdened Property"), for the benefit of the Alameda County Environmental Health Services (the "County"), with reference to the following facts:

A. The Burdened Property and groundwater underlying the property contains hazardous materials.

B. Contamination of the Burdened Property. Soil at the Burdened Property was contaminated by releases from petroleum underground storage tanks. These releases resulted in contamination of soil and groundwater with organic chemicals including benzene, toluene, ethylbenzene, xylenes, and 1,2 – dichloromethane, which are hazardous materials as that term is defined in Health & Safety Code Section 25260. Removal of underground storage tanks and remediation of the petroleum hydrocarbons was initiated in January 1988 and is summarized below:

Tank, Line and Dispenser Removal

Four (4) underground fuel storage tanks containing gasoline and diesel fuel and associated piping were removed in December 1988. One (1) 1,000 gallon used-oil tank was removed in January 1989.

Remedial Actions

Soil Excavation: Between January and March 1989, 1,200 cubic yards of soil

were removed in the area of the former underground storage tanks and associated piping. This soil was treated onsite and replaced back in the excavated area.

Liquid Petroleum Hydrocarbon Removal: Liquid petroleum hydrocarbons were removed using a product skimming system from the subsurface during January through March 1989. Approximately 1,800 gallons were removed during this time period.

Soil Vapor Extraction: A soil vapor extraction system operated from January 1994 to December 1995 and removed an estimated 5,200 gallons of hydrocarbon.

Multi-phase Extraction: A multi-phase extraction system has been operating at the site since August 1997. Approximately 10,500 pounds of hydrocarbons have been removed using this system. Thickness of petroleum hydrocarbons decreased since August 1997.

C. Exposure Pathways. The contaminants addressed in this Covenant are present in soil and groundwater on the Burdened Property. Without the mitigation measures which have been performed on the Burdened Property, exposure to these contaminants could take place via

- ingestion and dermal contact with surface soils and
- inhalation of volatile emissions from subsurface soils and groundwater.

The risk of public exposure to the contaminants has been substantially lessened by the remediation and controls described herein.

D. Adjacent Land Uses and Population Potentially Affected. The Burdened Property is currently an unused industrial facility and is adjacent to industrial, commercial, and residential land uses.

E. Full and voluntary disclosure to the County of the presence of hazardous materials on the Burdened Property has been made and extensive sampling of the Burdened Property has been conducted.

F. Covenantor desires and intends that in order to benefit the County, and to protect the present and future public health and safety, the Burdened Property shall be used in such a manner as to avoid potential harm to persons or property that may result from hazardous materials that may have been deposited on portions of the Burdened Property.

A R T I C L E I GENERAL PROVISIONS

1.1 Provisions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions") upon and subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. The restrictions set forth in Article III are reasonably necessary to protect present and future human health and safety or the environment as a result of the presence

on the land of hazardous materials. Each and all of the Restrictions shall run with the land, and pass with each and every portion of the Burdened Property, and shall apply to, inure to the benefit of, and bind the respective successors in interest thereof, for the benefit of the County and all Owners and Occupants. Each and all of the Restrictions are imposed upon the entire Burdened Property unless expressly stated as applicable to a specific portion of the Burdened Property. Each and all of the Restrictions run with the land pursuant to section 1471 of the Civil Code. Each and all of the Restrictions are enforceable by the County.

1.2 Concurrence of Owners and Lessees Presumed. All purchasers, lessees, or possessors of any portion of the Burdened Property shall be deemed by their purchase, leasing, or possession of such Burdened Property, to be in accord with the foregoing and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees of such owners, heirs, successors, and assignees, that the Restrictions as herein established must be adhered to for the benefit of the County and the Owners and Occupants of the Burdened Property and that the interest of the Owners and Occupants of the Burdened Property shall be subject to the Restrictions contained herein.

1.3 Incorporation into Deeds and Leases. Covenanter desires and covenants that the Restrictions set out herein shall be incorporated in and attached to each and all deeds and leases of any portion of the Burdened Property. Recordation of this Covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant and Agreement has been attached to or incorporated into any given deed or lease.

1.4 Purpose. It is the purpose of this instrument to convey to the County real property rights, which will run with the land, to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

A R T I C L E 11 D E F I N I T I O N S

2.1 County. "County" shall mean the Alameda County Environmental Health Services and shall include its successor agencies, if any.

2.2 Improvements. "Improvements" shall mean all buildings, roads, driveways, regradings, and paved parking areas, constructed or placed upon any portion of the Burdened Property.

2.3 Occupants. "Occupants" shall mean Owners and those persons entitled by ownership, leasehold, or other legal relationship to the exclusive right to use and/or occupy all or any portion of the Burdened Property.

2.4 Owner or Owners. "Owner" or "Owners" shall mean the Covenantor and/or its successors in interest, who hold title to all or any portion of the

Burdened Property.

A R T I C L E I I I
DEVELOPMENT, USE AND CONVEYANCE OF THE BURDENED
PROPERTY

3.1 Restrictions on Development and Use. Covenantor promises to restrict the use of the Burdened Property as follows:

- a. Development of the Burdened Property shall be restricted to industrial and commercial use;
- b. No residence for human habitation shall be permitted on the Burdened Property;
- c. No hospitals shall be permitted on the Burdened Property;
- d. No schools for persons under 21 years of age shall be permitted on the Burdened Property;
- e. No day care centers for children or day care centers for Senior Citizens shall be permitted on the Burdened Property;
- f. No Owners or Occupants of the Property or any portion thereof shall conduct any excavation work on the Property, unless expressly permitted in writing by the County. Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed by Covenantor or his agent in accordance with all applicable provisions of local, state and federal law;
- g. All uses and development of the Burdened Property shall be consistent with any applicable County Cleanup Order or Risk Management Plan (Exhibit B), each of which is hereby incorporated by reference including future amendments thereto. All uses and development shall preserve the integrity of any cap, any remedial measures taken or remedial equipment installed, and any groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the County, unless otherwise expressly permitted in writing by the County.
- h. No Owners or Occupants of the Property or any portion thereof shall drill, bore, otherwise construct, or use a well for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the County.
- i. The Owner shall notify the County of each of the following: (1) The type, cause, location and date of any disturbance to any cap, any remedial measures taken or remedial equipment installed, and of the groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the County, which could affect the ability of such cap or remedial measures, remedial equipment, or monitoring system to perform their respective functions and (2) the type and date of repair of such disturbance. Notification to the County shall be made by registered mail within ten (10) working days of both the discovery of such disturbance and the completion of repairs. The Covenantor agrees that the County, and/or any persons acting pursuant to County

cleanup orders, shall have reasonable access to the Burdened Property for the purposes of inspection, surveillance, maintenance, or monitoring, as provided for in Division 7 of the Water Code.

j. No Owner or Occupant of the Burdened Property shall act in any manner that will aggravate or contribute to the existing environmental conditions of the Burdened Property. All use and development of the Burdened Property shall preserve the integrity of any capped areas. In the event that the site is to be redeveloped for commercial or industrial land use, replacement of the existing building slab during site development may be acceptable provided that:

1. The new building slab provides a similar or greater level of protection from vapor intrusion as the existing building slab.
2. No subsurface structures are constructed other than utility trenches.
3. No unexpected conditions are encountered during removal of the existing slab.
4. The new perimeter building foundation will extend to a similar depth as the existing perimeter foundation to potentially provide a similar barrier to off-site contaminant migration.
5. Approved development/construction plans are to be submitted to the County for review and approval to assure that the above conditions are met and the integrity of the cap will be maintained.

3.2 Enforcement. Failure of an Owner or Occupant to comply with any of the restrictions, as set forth in paragraph 3.1, shall be grounds for the County, by reason of this Covenant, to have the authority to require that the Owner modify or remove any Improvements constructed in violation of that paragraph. Violation of the Covenant shall be grounds for the County to file civil actions against the Owner as provided by law.

3.3 Notice in Agreements. After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to the property. Any such instrument shall contain the following statement:

The land described herein contains hazardous materials in soils and in the ground water under the property, and is subject to a deed restriction dated as of _____, _____, 2011, and recorded on _____, 2011, in the Official Records of _____ County, California, as Document No. _____, which Covenant and Restriction imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

A R T I C L E I V
VARIANCE AND TERMINATION

4.1 Variance. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or any portion thereof may apply to the County for a written variance from the provisions of this Covenant.

4.2 Termination. Any Owner or, with the Owner's consent, any Occupant of the Burdened Property or a portion thereof may apply to the County for a termination of the Restrictions as they apply to all or any portion of the Burdened Property.

4.3 Term. Unless terminated in accordance with paragraph 4.2 above, by law or otherwise, this Covenant shall continue in effect in perpetuity.

A R T I C L E V
MISCELLANEOUS

5.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public.

5.2 Notices. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (1) when delivered, if personally delivered to the person being served or official of a government agency being served, or (2) three (3) business days after deposit in the mail if mailed by United States mail, postage paid certified, return receipt requested:

If To: "Covenantor"
Encinal 14th Street, LLC
c/o Hall Equities Group
1855 Olympic Boulevard, Suite 250
Walnut Creek, CA 94596

If To: "County"
Alameda County Environmental Health
Services Attention: Director
1131 Harbor Bay Parkway
Alameda, California 94502

5.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.4 Article Headings. Headings at the beginning of each numbered article of this Covenant are solely for the convenience of the parties and are not a part of the Covenant.

5.5 Recordation. This instrument shall be executed by the Covenantor and by the

Director of Environmental Health Services. This instrument shall be recorded by the Covenantor in the County of Alameda within ten (10) days of the date of execution.

5.6 References. All references to Code sections include successor provisions.

5.7 Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the Covenant to effect the purpose of this instrument and the policy and purpose of the Water Code. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

Covenantor: Encinal 14th Street, LLC,
a California limited liability company

By: Hall Encinal, Inc.,
a California corporation,
its Manager

By: _____
Mark D. Hall, President

Date: _____

Agency: Alameda County Environmental Health Services

By: _____

Title: Director

Date: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of _____

On _____ before me, _____
Date Here Insert Name and Title of the Officer

personally appeared _____
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Place Notary Seal and/or Stamp Above

Signature: _____
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____ Signer's Name: _____

Corporate Officer — Title(s): _____ Corporate Officer — Title(s): _____

Individual Individual

Partner — Limited General Partner — Limited General

Attorney in Fact Attorney in Fact

Trustee Trustee

Guardian or Conservator Guardian or Conservator

Other: _____ Other: _____

Signer Is Representing: _____ Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

EXHIBIT A
LEGAL DESCRIPTION OF PROPERTY

NOTES

- ① SUBJECT TO ANY RIGHTS RESERVED PER 431 M 521 AND SERIES 83-212906.
- ② RIGHTS OF INGRESS/EGRESS TO ANY PROPOSED STATE OF CALIFORNIA FREEWAY ARE RESERVED BY 7804 OR 225 AND 7749 OR 447.

PARCEL MAP 9733

ALL OF LOTS 7, 8, 9, 10, 11, 12, 13, AND 14 AND PORTIONS OF LOTS 5, 6, AND 15, BLOCK 583, FILED APRIL 25, 1891 (10 M 56); ALL OF LOTS 7, 8, 19, 30, 31, AND 32 AND A PORTION OF LOT 29, BLOCK 583, MAP NO. 1 OF A PORTION OF THE SCOTCHLER TRACT AND VICINITY FILED DECEMBER 10, 1874 (7 M 21); ALL OF LOTS 6, 9, 10, 11, 14, 16, 17, 18, 20 AND 21 AND PORTIONS OF LOTS 4, 5, 12, 13, 15, AND 22, BLOCK 583, MAP OF THE SCOTCHLER TRACT FILED NOVEMBER 3, 1870 (2 M 10); A PORTION OF 15TH STREET (2 M 10); A PORTION OF KIRKHAM STREET (2 M 10); ALL OF LOTS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 19, 20, 21, 22, 23 AND PORTIONS OF LOTS 13, 16, 17, 18, 24, AND 25, BLOCK 584, REDIVISION OF BLOCKS 584, 585, 601, 153, AND 580A FILED MAY 1, 1885 (4 M 25) ALL IN ALAMEDA COUNTY RECORDS.
CITY OF OAKLAND, ALAMEDA COUNTY, CALIFORNIA

AUGUST 2008 1"=50'



ALICQUOT
PLANNERS
CIVIL ENGINEERS
SURVEYORS

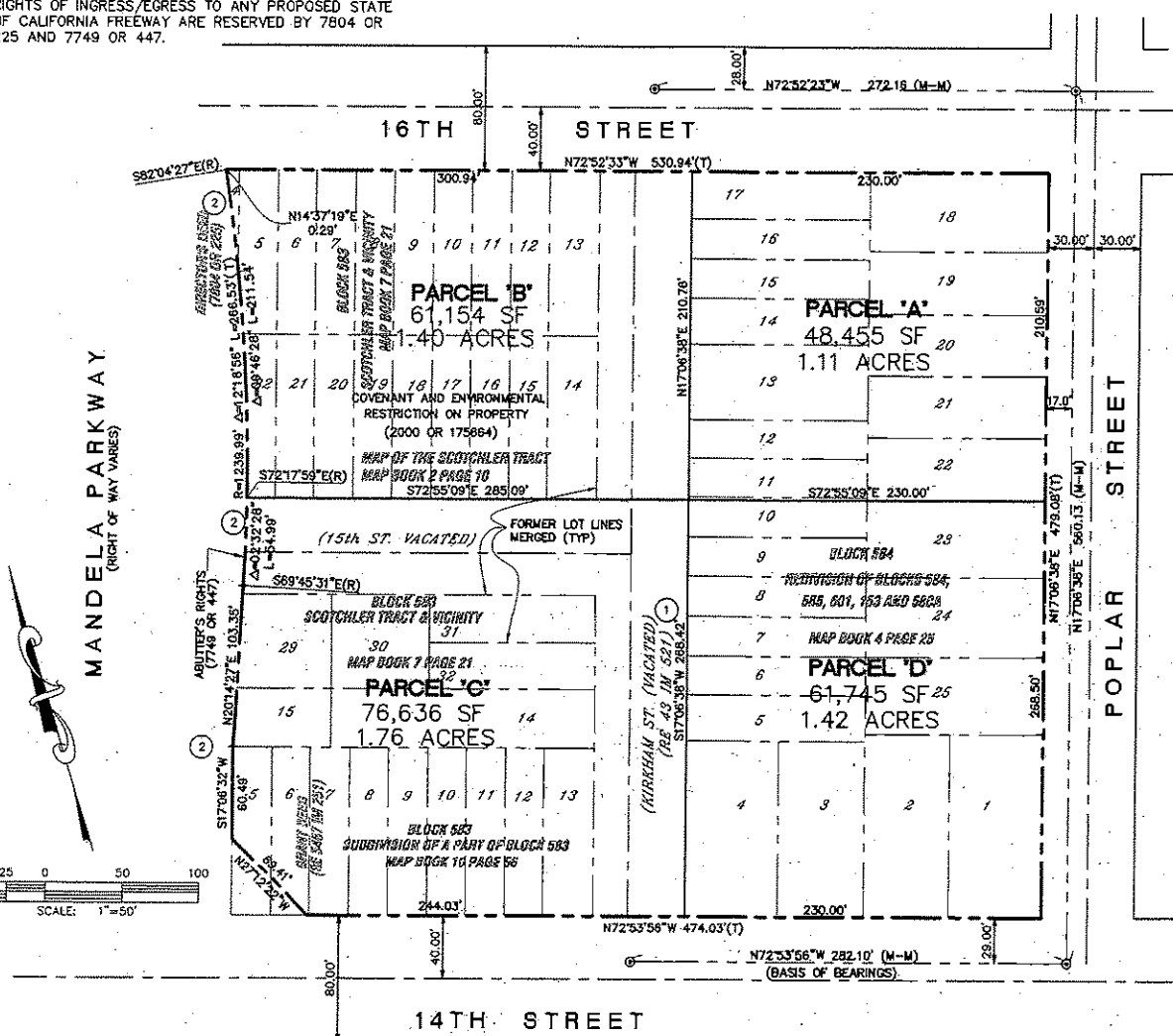
1390 SOUTH MAIN STREET, SUITE 310
WALNUT CREEK, CA. 94596

LEGEND

- ⊙ FOUND STANDARD STREET MONUMENT
- (M-M) MONUMENT TO MONUMENT
- BOUNDARY
- - - LOT LINE
- - - MONUMENT LINE
- - - CENTER LINE
- SF SQUARE FEET
- (T) TOTAL

REFERENCES

- R1: BLOCK 583, APRIL 25, 1891 (10 M 56)
- R2: BLOCK 583, MAP NUMBER 1 OF A PORTION OF THE SCOTCHLER TRACT AND VICINITY, DECEMBER 10, 1874 (7 M 21)
- R3: BLOCK 583, MAP OF THE SCOTCHLER TRACT NOVEMBER 3, 1870 (2 M 10)
- R4: BLOCK 584, REDIVISION OF BLOCKS 584, 585, 601, 153 AND 580A MAY 1, 1885 (4 M 25)



09/12