PORT OF OAKLAND

RECEIVED
By Alameda County Environmental Health at 3:35 pm, Feb 13, 2014

Mr. Keith Nowell, P.G., C.H.G.
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject:
Response to ACEH Information Request
Port of Oakland's Harbor Facility Complex
651 Maritime Street
Oakland, California
Alameda County Fuel Leak Case No. RO0000010

Dear Mr. Nowell:

Please find enclosed our response to comments sent to the Port of Oakland (Port) by Alameda County Environmental Health (ACEH) in your e-mail dated December 19, 2013 concerning potential data gaps at the above referenced site. The responses were prepared by ARCADIS, US, Inc (ARCADIS) whom the Port has retained for environmental consulting.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report prepared by ARCADIS are true and correct to the best of my knowledge. Please note that the report is stamped by a Professional Geologist in the state of California.

Sincerely,

Jeffrey R. Jones
Supervisor
Environmental Programs and Planning

Jeffrey L. Rubin, CPSS, REPA
Port Associate Environmental Scientist
Environmental Programs and Planning

530 Water Street ■ Jack London Square ■ P.O. Box 2064 ■ Oakland, California 94604-2064
Telephone: (510) 627-1100 ■ Facsimile: (510) 627-1826 ■ Web Page: www.portofoakland.com

ARCADIS
Infrastructure, environment, buildings

ARCADIS U.S., Inc.
100 Montgomery Street
Suite 300
San Francisco
California 94104
Tel 415.374.2744
Fax 415.374.2745

Mr. Keith Nowell
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

ENVIRONMENTAL

Subject:
Response to ACEH Information Request
Port of Oakland's Harbor Facility Complex
651 Maritime Street
Oakland, California
Alameda County Fuel Leak Case No. RO0000010

Date:
January 31, 2014

Contact:
Kathy Brandt

Phone:
510-596-9675

Email:
Katherine.Brandt@arcadis-us.com

Our ref:
04656020.HFC1

Dear Mr. Nowell:

On October 7, 2013 the Port of Oakland (Port) submitted a Request for Closure for the Harbor Facility Complex (HFC) site located at 651 Maritime Street, Oakland, California. Alameda County Environmental Health department (ACEH) requested a meeting with the Port and ARCADIS, Inc. (ARCADIS) to discuss the closure request. The meeting was held on December 19, 2013. During the meeting, ACEH indicated they thought there were data gaps that needed to be investigated prior to granting Site closure. This letter summarizes the data gaps described by the ACEH, provides responses based on available data on Geotracker and in historical hard copy files, and highlights any potential data gaps that could not be addressed with available information. ACEH data gaps are in bold with the subsequent findings listed below:

1. **Timeline addressing building demolition (including lead and asbestos survey findings), fill placement (fill source and analytical data), on-site building construction, and proposed off-site redevelopment;**

    - In March 1991, one 10,000-gallon diesel underground storage tank (UST) was removed from the site (NESCO, 1991);
    - In July 1992, a total of 8 USTs were removed from the site (RAMCON, 1992);
    - In September 1993, a total of 4 USTs were removed from the site (Uribe, 1994);
    - In January and September 1998 asbestos and lead-based paint surveys were conducted by ACC Environmental Consultants and Benchmark Environmental, respectively (SCA, 2002);

- In April 2002, an asbestos and lead-based paint survey was conducted on buildings C-401, C-406, and C-407. A total of 157 samples were collected (SCA, 2002);
- From October to December 2002, asbestos and lead-based paint abatement was conducted by Sterling Environmental in accordance with local and federal standards. Impacted materials were disposed of offsite (SCA, 2003);
- Buildings C-406 and C-407 were demolished in 2003 (SCA, 2003; Port of Oakland, 2002);
- Based on "Specification for Demolition of Buildings C401 and C412" (Port of Oakland, 2005) demo began in late 2005 and grading began in early 2006."
- Site re-grading activities were completed under the scope of the Construction of Phase 3B Container Terminal Yard Improvements, Maritime Support Center (Port of Oakland, 2006a). Engineered fill material consisted of crushed concrete and asphalt from the site and from elsewhere at the Port of Oakland. A recent phone conversation with Joseph Trapp, the resident engineer with the Port of Oakland who oversaw the re-grading activities, indicated that the fill material specifically came from Berth 30 at the Port of Oakland. Specifications for the Construction of Phase 3B Container Terminal Yard Improvements, Maritime Support Center, indicates that engineered fill must consist of a soil/rock mixture free of organic matter contamination and that rock fragments will not be larger than three inches in greatest dimension and that not more than 15 percent shall be large than 1-inch in greatest dimension;
- Refer to Attachment 1 for grade elevation changes. Based on the elevation changes provided and an assumption that fill was placed uniformly across the 2225 7th street portion of the site in accordance with the elevation changes shown in Attachment 1, ARCADIS estimates a total volume of approximately 90,000 cubic yards of fill was placed on the 2225 7th street portion of the site (Port of Oakland, 2006a);
- Based on the pre- and post-grading elevation contour lines provided in the grading plans for the 2277 7th street portion of the site in Attachment 1, ARCADIS developed a cross section for the placement of fill and assumed that fill was placed relatively uniformly across the site in order to estimate approximately 20,000 cubic yards of fill was placed on the 2277 7th street portion of the site (Port of Oakland, 2003); and,
- During the second half of 2006 site paving was completed (Port of Oakland, 2006b).
- Because the fill was ground pavement from Port property laboratory analytical testing for environmental parameters was not conducted on the material.

Potential Remaining Data Gaps

- Information pertaining to the exact volume of fill material placed on the site.

2. Documentation of the soil-gas vapor intrusion system including methane sensor installation and system performance (if applicable);

- Methane has been monitored on an annual basis since 2006 using a portable flame ionization detector (FID). From 2009 to present methane has not been detected inside the site buildings. Methane data from 2006 to 2008 could not be located.
- Refer to Attachment 2 which includes as-built drawings from the system installation (Treadwell and Rollo, 2005) and Attachment 3 which includes annual system monitoring results from 2009 to 2013.
- Due to the passive nature of the system, system performance is assessed by confirming air flow within the system. As shown in Attachment 3, this is conducted by checking the sample ports for the presence of air flow and by visually confirming the rotation of the system turbines installed on the roof. System performance is checked during methane monitoring and to date there have been no issues.

Potential Remaining Data Gaps

- Annual methane monitoring results from 2006 to 2008.

3. A list of monitoring and remediation wells and former wells at the Site. Include well construction details, well status, and a well screen evaluation;

- Refer to Attachment 4 for well construction details. The attachment also indicates the screen interval elevation above mean sea level (amsl).
- Refer to Attachment 5 for a compilation of all available boring logs
- In 2006, re-grading activities were completed onsite. Monitoring wells MW-1 through MW-5, and MW-8A and remediation wells RW-1 through RW-9 were brought to grade by adding approximately 0.5 to 3 feet of blank PVC casing.

Potential Remaining Data Gaps

- Top of casing (TOC) elevation data for RW-1 through RW-9 prior to site re-grading activities is not available; and,
- Boring log for monitoring well MW-6.

4. A narrative of well identification nomenclature as the duplicate well identification numbers from the adjoining Port of Oakland (RO0000010) and Port of Oakland/ Nation Ways Transport (RO0000187) were combined into one case file;

- As indicated in Attachment 4, duplicate wells MW-1, MW-2, and MW-3 originally located at 2225 7th street were installed in 1992 and destroyed in 2002. Duplicate wells MW-1, MW-2, MW-3 on 2277 7th Street were installed 1994 and are part of the current groundwater monitoring program. These are the only three existing wells with duplicate identities. Data presented in the semiannual groundwater monitoring reports from 1994 to 1996 include wells MW-1, MW-2, and MW-3 from 2225 7th street and wells MW-1, MW-2, and MW-3 from 2277 7th street. Data presented in the semiannual groundwater monitoring reports since May 1996 is only from wells MW-1, MW-2, and MW-3 associated with 2277 7th Street.

Potential Remaining Data Gaps

- No data gaps remain

5. A cumulative table presenting groundwater monitoring data, including depth-to-water, laboratory analysis, presence/absence of free product, and well screen submergence;

- Refer to Attachment 6 for historical free product thickness and well screen submergence data;
- Refer to Attachment 7 for historical groundwater analytical results. Limited analytical results are available for monitoring wells MW-1 and MW-3 (located at 2225 7th street) due to the persistent presence of free product (wells are not sampled if free product is observed); and,
- Refer to Attachment 8 for a copy of all free product thickness observations at the site from April 2004 to July 2013. Free product is typically observed in monitoring wells MW-1 and MW-3 (located at 2225 7th street) and remediation wells RW-3, RW-4, RW-6, RW-7, RW-8, and RW-9 at thicknesses typically ranging from 0.1 feet to 3 feet but also as thick as 5 feet.

Potential Remaining Data Gaps

- Without TOC elevation data for RW-1 through RW-9 prior to re-grading activities in 2006, ARCADIS cannot calculate the screen elevation in order to determine the frequency of screen interval submergence.

6. An analysis of the varying groundwater flow directions reported at the Site and a rose diagram;

- Refer to Attachment 9 which provides the site specific groundwater flow direction observed during the second and fourth quarter of each year from 1994 to 2013 with the following exceptions: second quarter 1995, second quarter 2000, and fourth quarter 2002. These data were omitted because the quarterly groundwater monitoring reports are not available.
- Predominant groundwater flow direction is to the north/northeast.

Potential Remaining Data Gaps

- Rose Diagram – Based on review of numerous groundwater monitoring reports it was determined there was a dominant flow direction and a rose diagram was not generated.

7. A summary of the history of free product removal at the Site, including cumulative product removal tables;

- Free product removal data is provided in Attachment 8. From April 29, 2004 to June 7, 2011 a free product removal system which consisted of 6 skimmer pumps in 9 recovery wells and 500-gallon above ground storage Convault, was operated onsite. From December 2004 to July 2007 approximately 178 gallons of product were removed. Between January 2007 and June 2011, free product was removed from MW-3 using a peristaltic pump and polyethylene tubing as part of the weekly system O&M activities. In July 2007 the system was upgraded to include a blower to apply a low vacuum in order to improve product recovery. From August 2007 to June 2011 approximately 1,298 gallons of product were removed. In total, approximately 1,746 gallons of product have been removed by the free product recovery system. The system was shutdown on June 7, 2011 in accordance with the site Feasibility Study/ Corrective Action Plan.

Potential Remaining Data Gaps

- No data gaps remain

8. An assessment of dissolved metals concentrations

- Analytical data for dissolved metals in groundwater could not be found, other than for organic lead.

Potential Remaining Data Gaps

- Dissolved metals concentrations in groundwater currently unknown (other than for organic lead).

9. Verification of the adequacy of Risk Assessment against current standards (including model version and inputs and outputs);

- Although the methods used to estimate excess lifetime cancer risks (ELCRs) due to potential onsite commercial worker inhalation of volatile COPCs have changed since IRIS Consultants conducted the Human Health Risk Assessment (HHRA) in 2003 for the Port of Oakland and estimated ELCRs are likely higher (but still within the acceptable 1E-6 to 1E-4 ELCR target range), there are several factors which would offset newly derived ELCRs. First, soil vapor data were collected

approximately eleven years ago. Since that time, soil vapor concentrations of volatile COPCs have very likely decreased given natural attenuation and the fact that there is not a continuing source. Second, when the site was graded and redeveloped, fill material was brought in; yielding an increased separation distance from residual subsurface impacts of approximately 2.5 feet (based on calculations described in Item 1). Thus, predicted indoor air concentrations of volatile COPCs are expected to be lower than those estimated without additional fill material. Third, the site is entirely paved with asphalt/concrete and a vapor barrier with an effective passive soil gas removal system (as described, above) was installed beneath the onsite building; resulting further decreased likelihood of vapor migration into the building.

Potential Remaining Data Gaps

- No data gaps remain

10. Sub-slab and vent soil gas data (if available);

- Refer to Attachment 10 for historical site-wide soil gas data. A total of 23 soil gas samples were collected during phase II site assessment activities in 2002 (prior to re-grading activities in 2006) and were analyzed for fix gases and gasoline (IRIS/Cambria, 2002). Additional sub-slab and vent soil gas sampling data could not be found.

Potential Remaining Data Gaps

- Sub-slab soil gas data.
- Vent soil gas data following site redevelopment activities

11. Figures using an aerial photograph base showing boring and well locations and an overlay with former building, current buildings, and former tank locations;

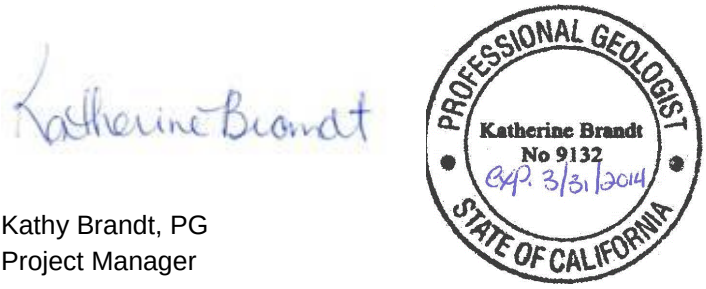
- Refer to Attachment 11 for an aerial figure showing current and historical site features.

Potential Remaining Data Gaps

- No data gaps remain

If you have any questions or concerns regarding the information presented in this letter, please contact Katherine Brandt at 510.596.9675 or Katherine.Brandt@arcadis-us.com.

Sincerely,
ARCADIS U.S., Inc.



Kathy Brandt, PG
Project Manager

Attachments:

Attachment 1	April 2006 site grading plans
Attachment 2	Soil gas mitigation system as-built drawings
Attachment 3	Soil gas mitigation system annual monitoring data
Attachment 4	Well construction details
Attachment 5	All available boring logs
Attachment 6	Free product thickness and screen submergence data
Attachment 7	Groundwater analytical results
Attachment 8	All available free product thickness data
Attachment 9	Historical groundwater flow direction figure
Attachment 10	Historical soil gas analytical results
Attachment 11	Aerial figure with current and historical site features

References:

IRIS/Cambria, 2002. Phase II Environmental Site Assessment, Future Port Field Support Services Complex, 2225 and 2277 7th street, Port of Oakland, Oakland, California, June.

NESCO, 1991. Tank Removal/Closure Report, ANR Freight System, 2225 Seventh Street. Oakland, California, May.

Port of Oakland, 2002. Conformed Project Manual for Demolition of Buildings C-401, C-406, and C-407, Vision 2000, Oakland, California, June.

Port of Oakland, 2003. Conformed Project Manual for Construction of Port Field Support Services Complex Building D-510, Maritime Area, Oakland, California, January.

Port of Oakland, 2005. Specifications for Demolition of Buildings C-401 and D-412 Maritime Support Center, September.

Port of Oakland, 2006a. Specifications for Construction of Phase 3B Container Terminal Yard Improvements, Maritime Support Center, Oakland, California, April.

Port of Oakland, 2006b. Contract Project Manual for Paving a 21-acre Container Yard Within the Maritime Support Center Area, Oakland, California, April.

RAMCON, 1992. Tank Removal Work Summary, Dongary Investment- Truck Maintenance Facility, 2225 Seventh Street, Oakland, California, September.

SCA Environmental Inc., 2002. Summary Report: Bulk Asbestos and Lead-Based Paint Survey Buildings C-401, C-406, and C-407, 2225 and 2277 7th street @ Middle Harbor Road, Oakland, California, April.

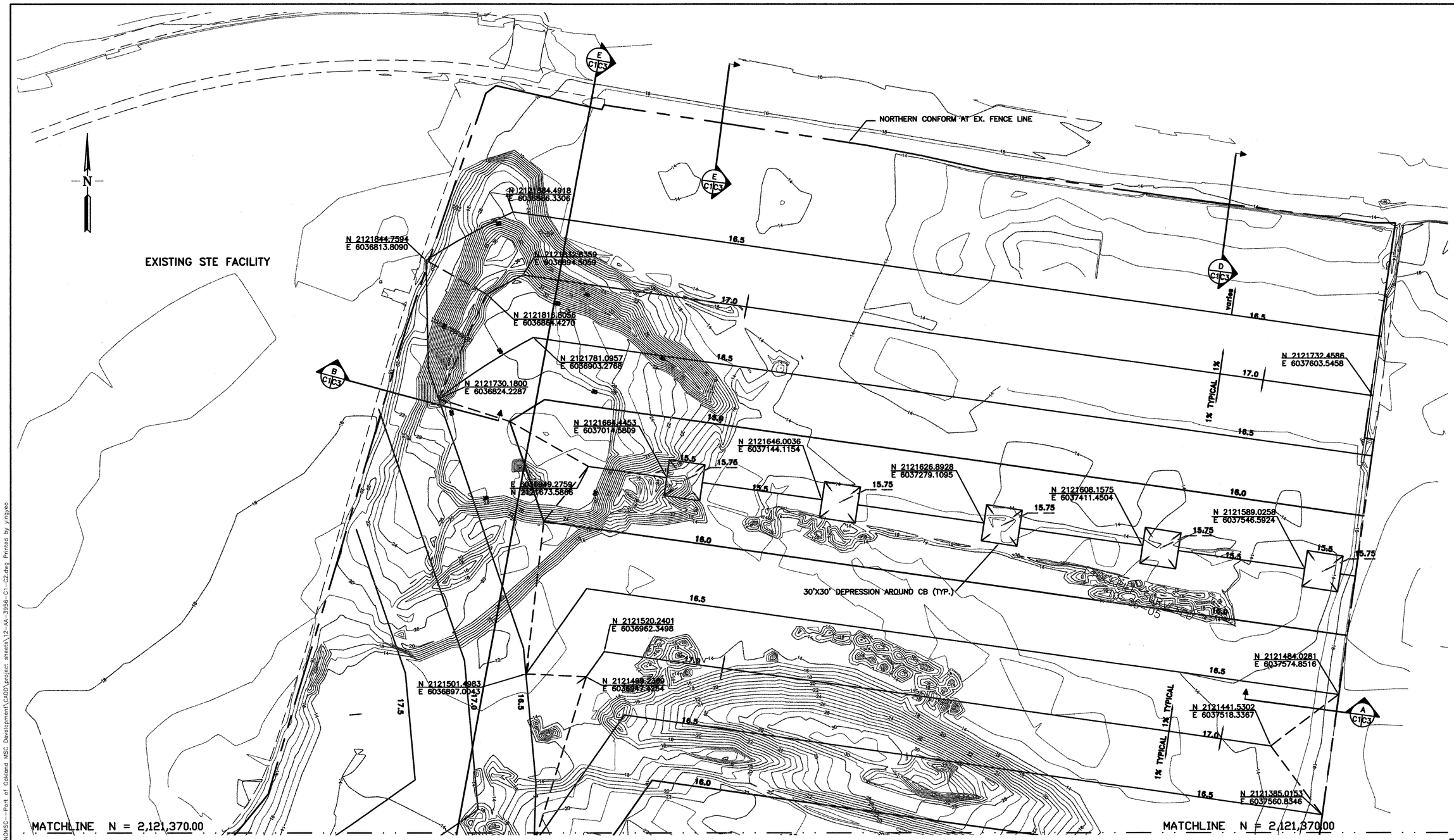
SCA Environmental Inc., 2003. Final Report: Asbestos and Lead Hazard Abatement Activities and Methane and VOC Monitoring, Port of Oakland Buildings C-401, C-406, and C-407, Oakland, California, February.

Treadwell & Rollo, 2005. Soil Gas Mitigation System Operation and Maintenance Manual, Harbor Facilities Center, Maritime and Seventh Streets, Port of Oakland, Oakland, California, July.

Uribe and Associates, 1994. Report of Underground Storage Tank Removals, Port of Oakland Building C-401, 2277 7th street, Oakland, February.

Attachment 1

April 2006 site grading plans



NOTES:

1. SITE SURVEY COMPLETED OCTOBER 26 AND 27, 2005.

W.O.# 104879

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE

HPA

REGISTERED PROFESSIONAL ENGINEER
ROBERT J. ANDREWS
NO. C45405
EXP. 9-30-2006
STATE OF CALIFORNIA

REFERENCES:	NO.	REVISIONS	DATE	REV'D	APP'D
PLANS					
FIELD BOOKS					
"PORT OF OAKLAND DATUM" IS 3.20' BELOW N.G.V.D. '29					
CAUTION: CHECK TRACING FOR LATEST REVISIONS					

DRAWN STAFF
DESIGNED REG. ENGINEER NO.
CHECKED REG. ENGINEER NO.

PORT OF OAKLAND

530 WATER ST. OAKLAND, CALIFORNIA

MARITIME SUPPORT CENTER

CONSTRUCTION OF PHASE 3B CONTAINER TERMINAL YARD IMPROVMENTS

GRADING PLAN SHEET 1 OF 2

DATE: 3-24-06
SCALE: 1" = 40'
SHEET: 12 OF 56 SHEETS
C1 | AA-3956

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MATCHLINE N = 2,121,370.00

MATCHLINE N = 2,121,370.00

EXISTING STE FACILITY

CONFORM TO EX. PAVEMENT

CONFORM TO EX. PAVEMENT

30'X30' DEPRESSION AROUND CB (TYP.)

CINDER BLOCK WALL

1% TYPICAL

1% TYPICAL

1% TYPICAL

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NOTES:

1. SITE SURVEY COMPLETED OCTOBER 26 AND 27, 2005.

W.O.# 104879

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE

REGISTERED PROFESSIONAL ENGINEER
ROBERT J. ANDREWS
NO. C45405
EXP. 9-30-2006
STATE OF CALIFORNIA

HPA

REFERENCES:	NO.	REVISIONS	DATE	REV'D	APP'D
PLANS					
FIELD BOOKS					
"PORT OF OAKLAND DATUM" IS 3.20' BELOW N.G.V.D. '29					
CAUTION: CHECK TRACING FOR LATEST REVISIONS					

DRAWN STAFF
DESIGNED
REG. ENGINEER NO.
CHECKED
REG. ENGINEER NO.

PORT OF OAKLAND

530 WATER ST. OAKLAND, CALIFORNIA

MARITIME SUPPORT FACILITIES

CONSTRUCTION OF PHASE 3B CONTAINER TERMINAL YARD IMPROVMENTS

GRADING PLAN SHEET 2 OF 2

DATE: 3-24-06
SCALE: 1" = 40'
SHEET: 13 OF 56 SHEETS
C2 AA-3956

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NOTES:

1. REMOVE SURFACE VEGETATION, DELETERIOUS MATERIALS AND ORGANIC-LADEN SOIL TO 6" MIN. BELOW EXISTING GRADE.

2. REMOVE EXISTING ASPHALT PAVEMENT AND PORTLAND CEMENT CONCRETE SLABS AND PAVEMENT. MOISTURE-CONDITION AND COMPACT TOP 6" OF SUBGRADE TO 95% RELATIVE COMPACTION PER ASTM D1557-78.

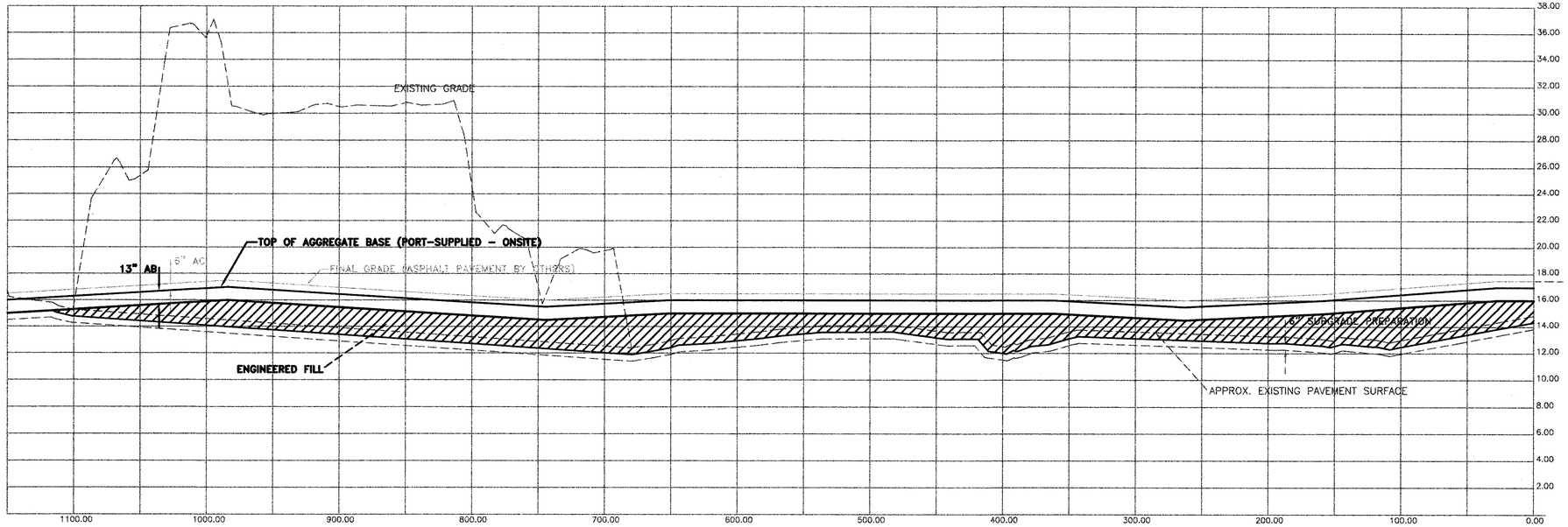
3. PLACE ENGINEERED FILL AS DESCRIBED IN THE SPECIFICATIONS.

4. PLACE 13" PORT-SUPPLIED AGGREGATE BASE FROM ON SITE STOCKPILE. COMPACT TO 98% RELATIVE COMPACTION PER ASTM D1557-78.

5. UTILIZE ON SITE SOIL FOR ENGINEERED FILL. APPROXIMATE LOCATION AS SHOWN ON SHEET D1.

6. ASPHALT PAVEMENT (BY OTHERS) TO BE PLACED UNDER SEPARATE CONTRACT (PHASE 3C) FOLLOWING GRADING WORK TO BE COMPLETED UNDER THIS CONTRACT.

7. CONTRACTOR TO COORDINATE WITH PHASE 3C PAVING CONTRACTOR.



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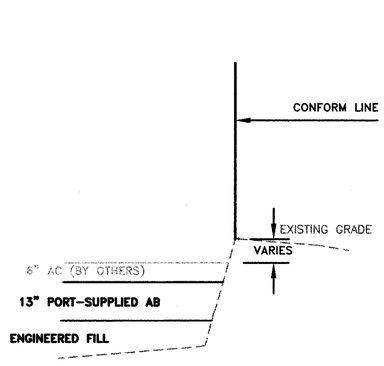
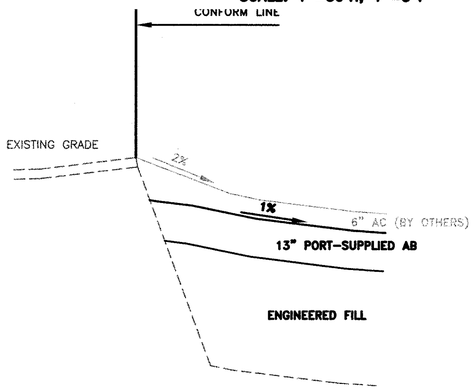
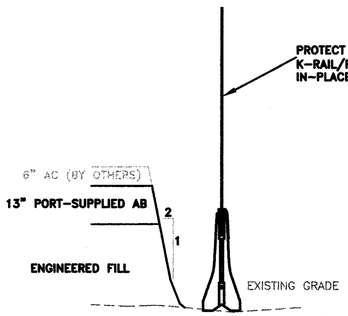
E / C1 C2 C3
SCALE: 1"=50'H; 1"=5'V



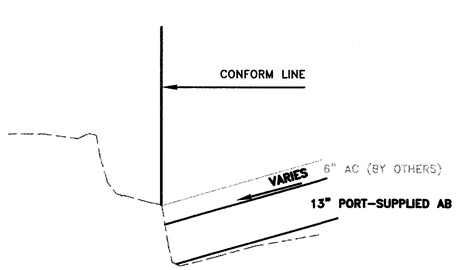
A TYPICAL EDGE SECTION
C1 C3
NTS



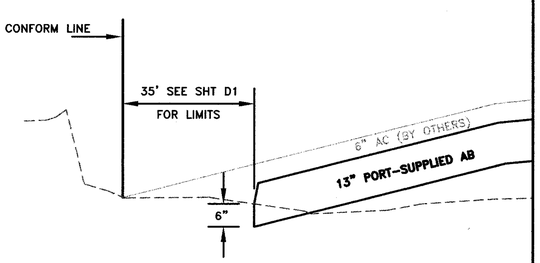
B TYPICAL EDGE SECTION
C1 C2 C3
NTS



C TYPICAL EAST-SOUTH EDGE SECTION
C2 C3
NTS



D TYPICAL NORTHEAST EDGE SECTION
C1 C3
NTS



E TYPICAL NORTHWEST EDGE SECTION
C1 C3
NTS

W.O.# 104879

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE

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REGISTERED PROFESSIONAL ENGINEER
ROBERT J. ANDREWS
NO. C45405
EXP. 9-30-2006
STATE OF CALIFORNIA

REFERENCES:
PLANS
FIELD BOOKS
"PORT OF OAKLAND DATUM" IS 3.20' BELOW N.G.V.D. '29
CAUTION: CHECK TRACING FOR LATEST REVISIONS

NO.	REVISIONS	DATE	REV'D	APP'D

DRAWN STAFF
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REG. ENGINEER NO.
CHECKED
REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

MARITIME SUPPORT CENTER
CONSTRUCTION OF PHASE 3B CONTAINER TERMINAL YARD IMPROVMENTS
GRADING AND PAVING TYPICAL DETAILS

DATE: 3-24-06
SCALE: AS SHOWN
SHEET: 14 OF 56 SHEETS
C3 | AA-3956

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ARCADIS

SUBJECT: Port of Oakland
HFL grading change 2003?

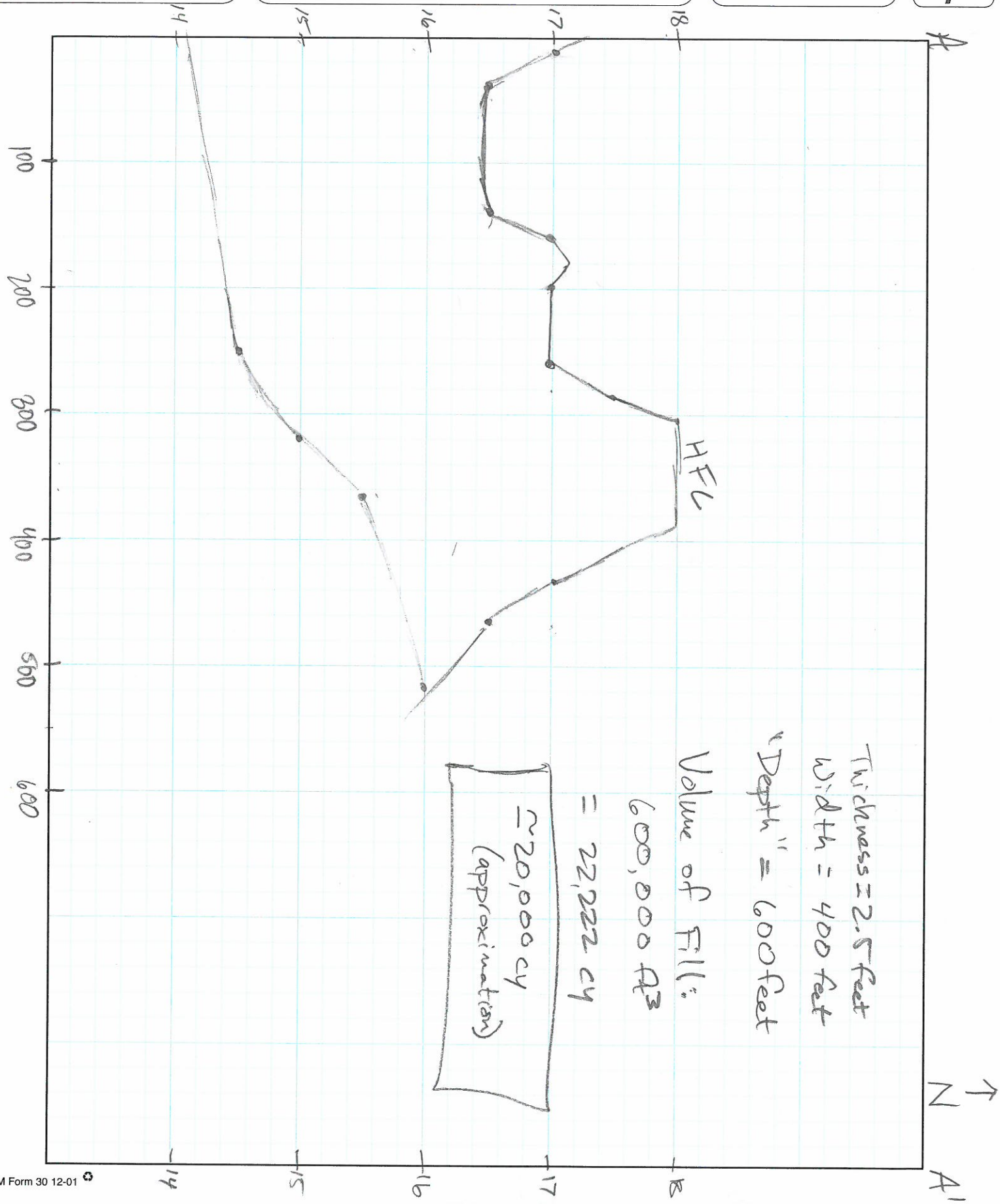
JOB NO:

BY: DATE:

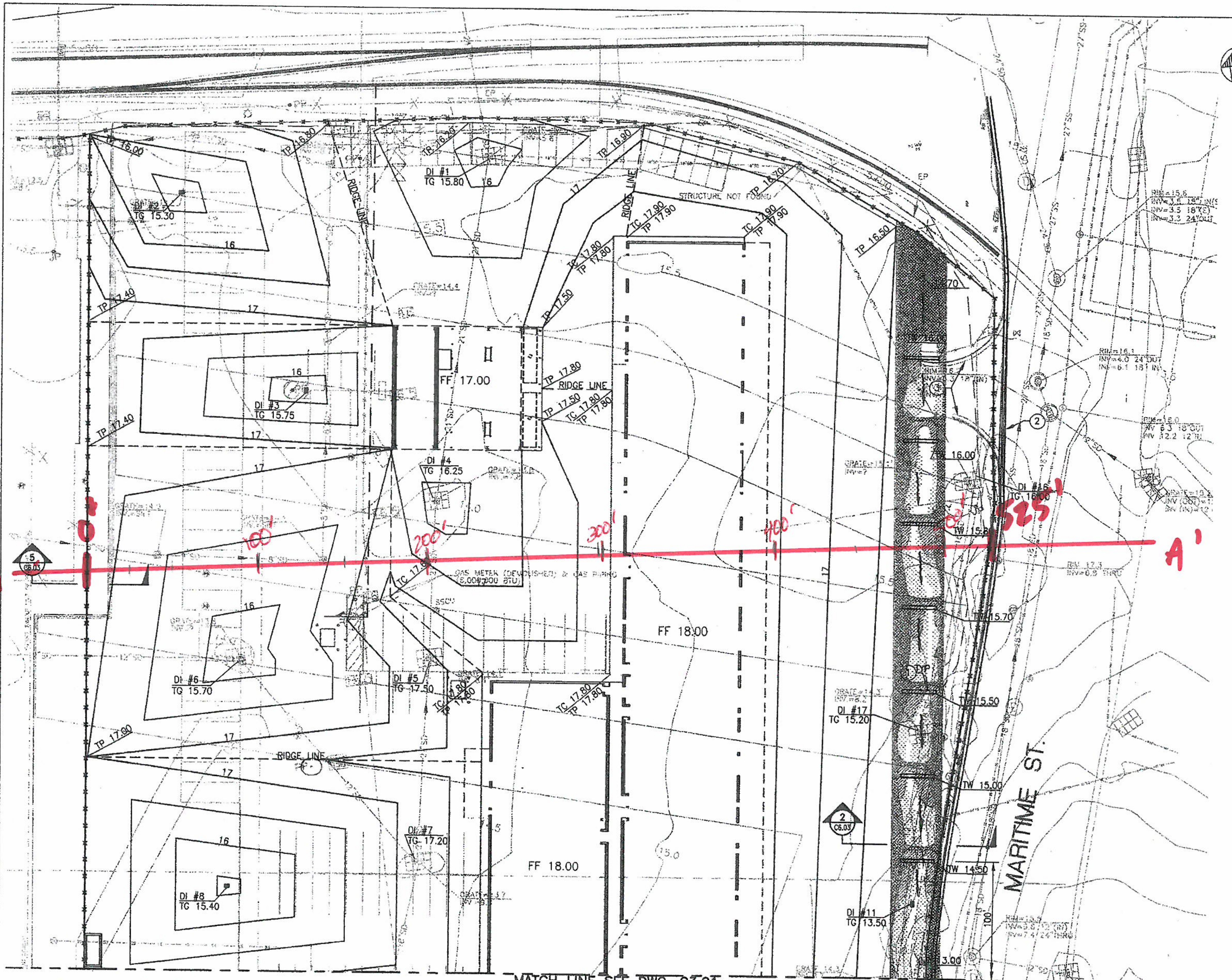
CHKD: DATE:

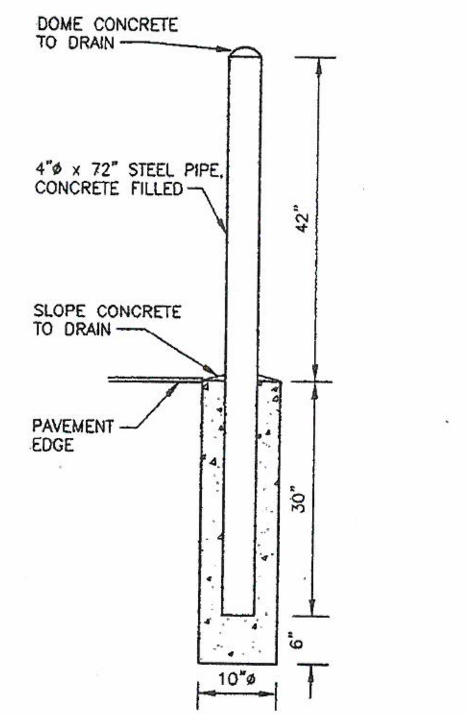
PAGE

SHEET 1



NOTE:
FOR NOTES SEE C3.01.





BIO-SWALE PROTECTION BOLLAR
NTS

30' 0'
GRAPHIC

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XREF: 3797-12.dwg
XREF: TBSMALL.dwg
XREF: MARINLOG.dwg
XREF: TB.dwg

REFERENCES:
PLANS AA ....
FIELD BOOKS
"PORT OF OAKLAND DATUM" IS 3.20' BELOW MEAN SEA LEVEL
CAUTION: CHECK TRACING FOR LATEST REVISIONS

REVISIONS			
NO.		DATE	APP'D

REVIEWED — FACILITIES DEPARTMENT
REVIEWED — CONSTRUCTION DEPARTMENT
REVIEWED — PROJECT PLANNING DEPARTMENT

DRAWN M. KYAW
DESIGNED E. SLINTAK C039925 REG. ENGINEER NO.
CHECKED R.T. WONG C020107 REG. ENGINEER NO.
REVIEWED M. Korsunsky C57384 REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER C 23297 REG. ENGINEER NO.
APPROVED C 33213 REG. ENGINEER NO.
RECOMMENDED Chris Chan C 43841 REG. ENGINEER NO.

Michael Willis Architects
471 Ninth Street
Oakland, CA 94607
tel: (510) 287-9710

AGS, Inc.
Consulting Engineers
364-14th Street, 5th FL.
Oakland, CA 94612
Tel: (510) 251-1180
Fax (510) 251-1190

MARITIME & 7TH STREET SITE
PORT FIELD SUPPORT SERVICES COMPLEX
GRADING PLAN
C3.

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE

MATCH LINE SEE DWG. C3.02

NOTES:

1. CONSTRUCT BIORETENTION WEIR, SEE DETAIL 1
2. CONSTRUCT 135'+/- (VERIFY IN FIELD) CURB SAWCUT EXIST PAVEMENT. GRADES TO MATCH E
3. DEMOLISH EXISTING DRIVE ENTRY PAVING AND GRADE AREA TO DRAIN.
4. WEIR TO ALIGN WITH COLUMN LINE A. SPACE WEI
5. INSTALL PIPE BOLLARD AT PAVEMENT EDGE ALO SWALE. PLACE BOLLARD AT CENTER OF EACH F AND AT 10' INTERVALS ALONG REMAINING PAVE EDGE. SEE DETAIL ON C3.02

30' 0'

GRAPI

FILE: J:\DRAWINGS\2K1008\C-GRADE.dwg DWG 01/31/03 at 11:29
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XREF: SECOND EASEMENT.dwg
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XREF: TOPO_12.dwg
XREF: TB.dwg

REFERENCES:
PLANS AA ....
FIELD BOOKS

"PORT OF OAKLAND DATUM" IS 3.20' BELOW MEAN SEA LEVEL.

CAUTION: CHECK TRACING FOR LATEST REVISIONS

REVISIONS			
NO.		DATE	APP'D

REVIEWED _____ FACILITIES DEPARTMENT

REVIEWED _____ CONSTRUCTION DEPARTMENT

REVIEWED _____ PROJECT PLANNING DEPARTMENT

DRAWN M. KYAW
DESIGNED E. SLINTAK C039925 REG. ENGINEER NO.
CHECKED R.T. WONG C020107 REG. ENGINEER NO.
REVIEWED M Korasusky C57384 REG. ENGINEER NO.

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE

PORT OF OAKLAND

530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER _____ C 23297 REG. ENGINEER NO.
APPROVED _____ C 33213 REG. ENGINEER NO.
RECOMMENDED _____ C 43841 REG. ENGINEER NO.

Michael Willis Architects
471 Ninth Street
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AGS, Inc.
Consulting Engineers
364-14th Street, 5th Fl.,
Oakland, CA 94612
Tel: (510) 251-1180
Fax (510) 251-1190

MARITIME & 7TH STREET SITE

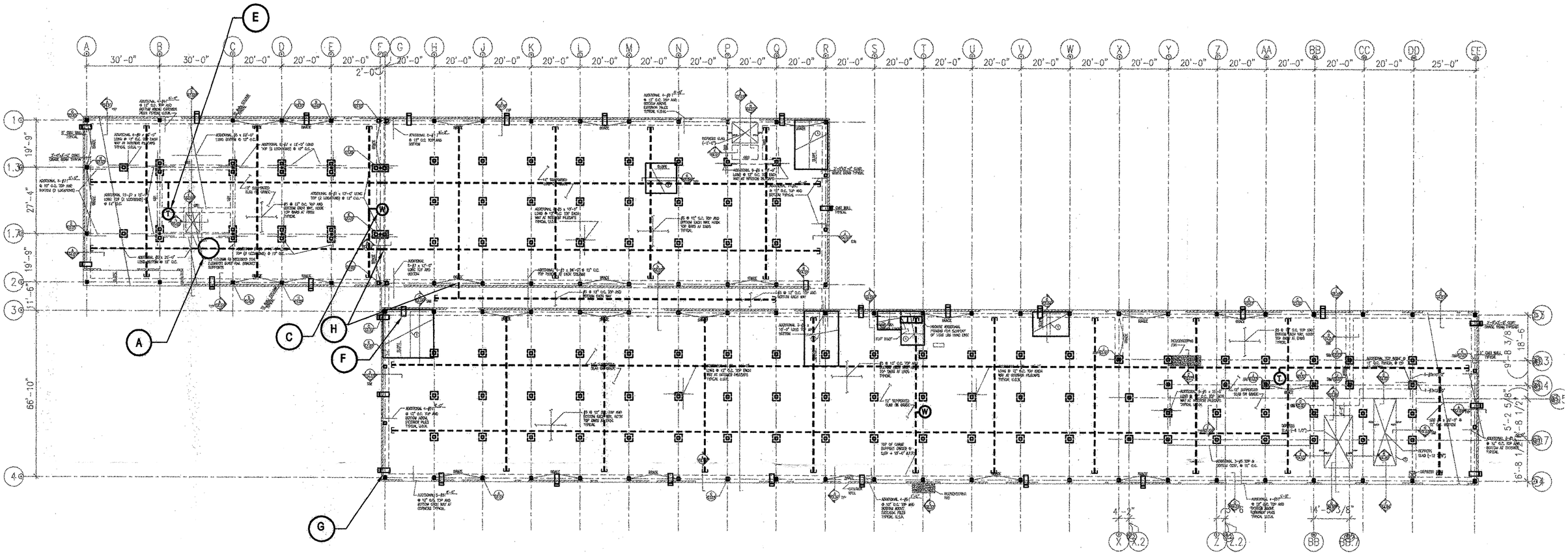
PORT FIELD SUPPORT SERVICES COMPLEX

GRADING PLAN

C3

Attachment 2

Soil gas mitigation system as-built drawings



1 SUBFLOOR SOIL GAS VENT PIPING SCHEMATIC
SCALE: 1" = 20'-0"

N

KEY PLAN

LEGEND

- 4" DIAMETER SCHEDULE 40 SOLID PVC PIPE
- 4" DIAMETER SCHEDULE 40 PERFORATED PVC PIPE
- END CAP
- PERIMETER GRADE BEAM VENT
- INTERIOR GRADE BEAM VENT
- (W) WIND ASSISTED RISER; INSTALL IN DESIGNATED WALL (SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION)
- (T) UNDERSLAB SOIL GAS TEST PORT (SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION)
- (A) SEE DETAIL A, SHEET MT2.01

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REFERENCES:
PLANS AA ....
FIELD BOOKS
"PORT OF OAKLAND DATUM" IS 3.20' BELOW MEAN SEA LEVEL
CAUTION: CHECK TRACING FOR LATEST REVISIONS

NO.	REVISIONS	DATE	APP'D
	AS BUILTS	07/05	

REVIEWED ____ FACILITIES DEPARTMENT
REVIEWED ____ CONSTRUCTION DEPARTMENT
REVIEWED ____ PROJECT PLANNING DEPARTMENT

DRAWN GEL
DESIGNED BKM
CHECKED BKM
REVIEWED BKM
SEE CONFORMED SET FOR SIGNATURES
REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

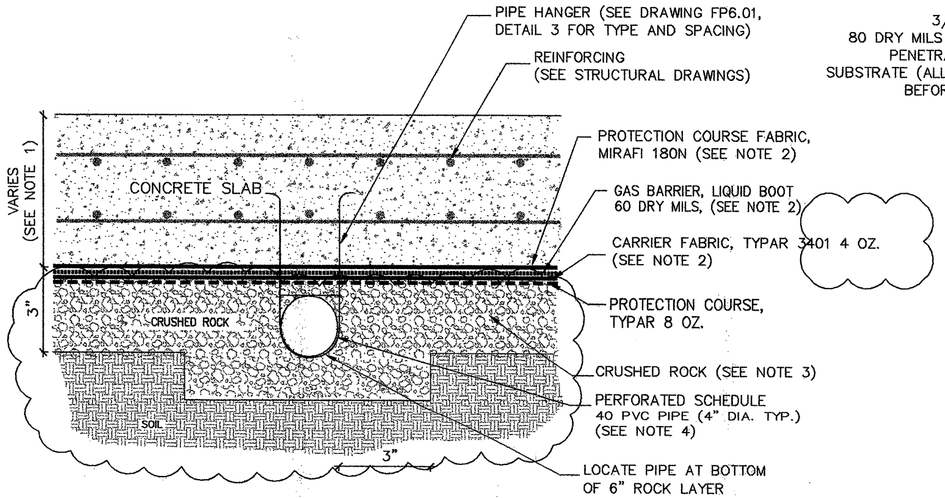
CHIEF ENGINEER
APPROVED ____ SEE CONFORMED SET FOR SIGNATURES
RECOMMENDED ____
REG. ENGINEER NO.

MARITIME & 7TH STREET SITE
HARBOR FACILITIES CENTER
SOIL GAS MITIGATION SYSTEM – PLAN

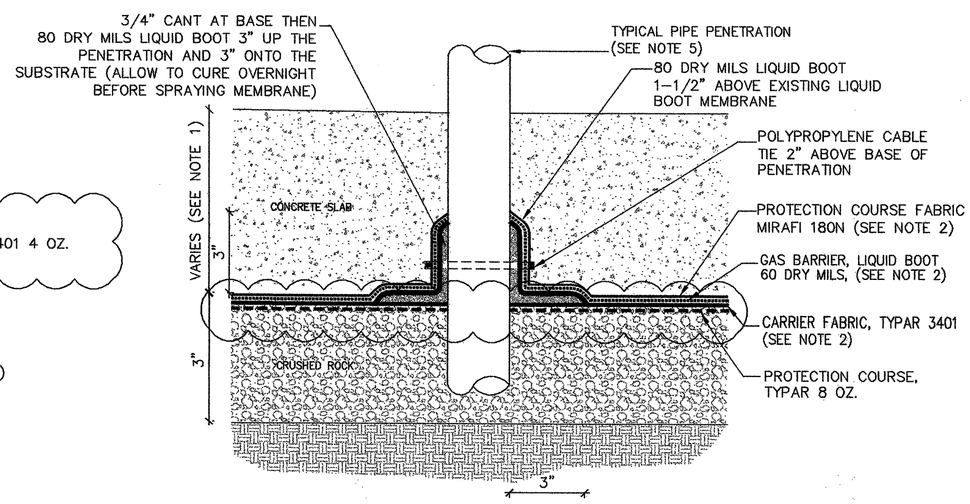
DATE: 07/13/05
SCALE:
SHEET: 19 OF 203 SHEETS
MT1.01 AA–3827

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE

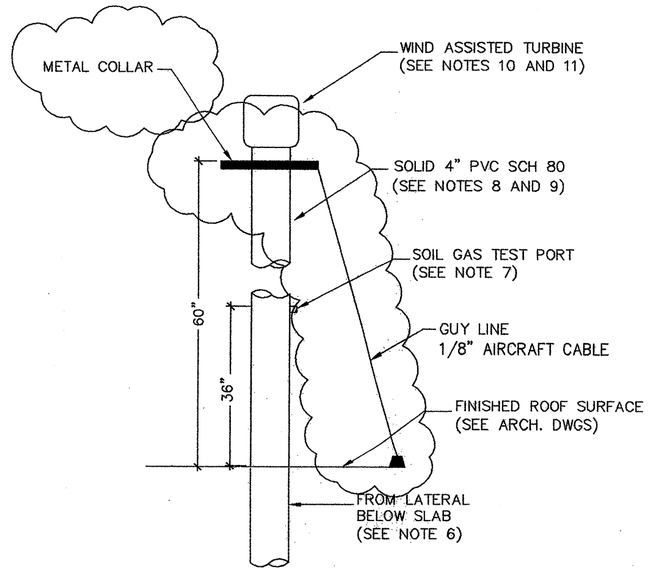
4000.01_Soil-Gas_MT_SYSTEM.dwg



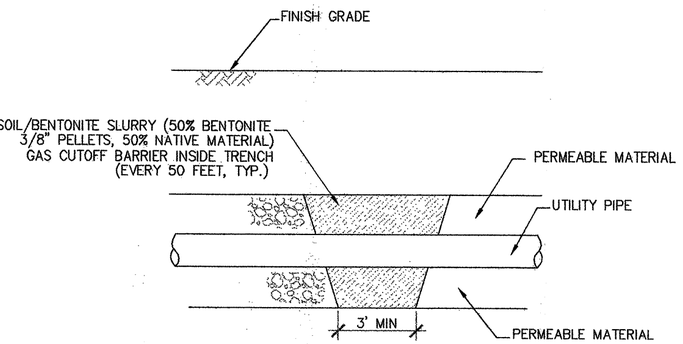
A SOIL GAS COLLECTION SYSTEM LATERAL
NOT TO SCALE



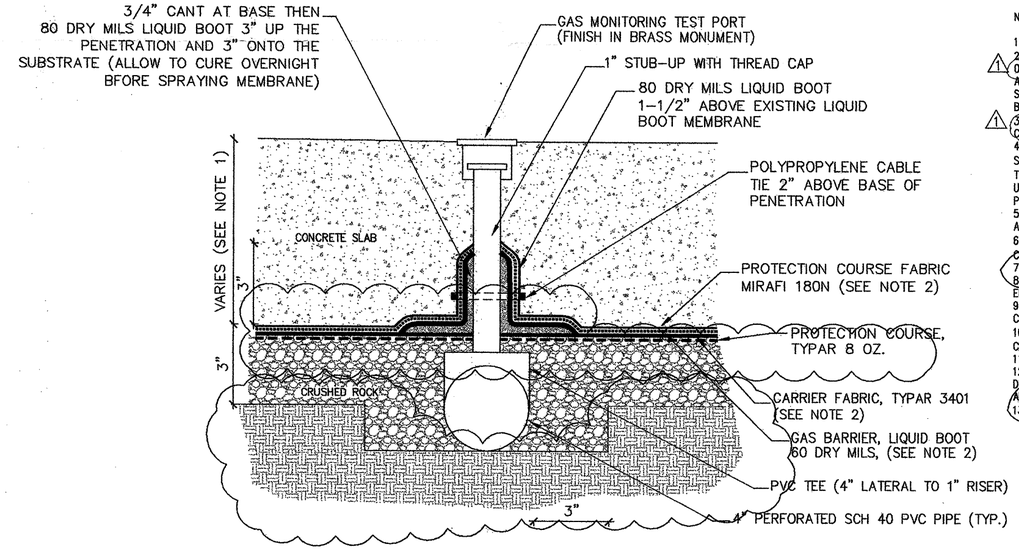
B TYPICAL SEALING OF ALL PENETRATIONS THROUGH CONCRETE SLAB
NOT TO SCALE



C RISER AND TURBINE AT ROOF
NOT TO SCALE



D UTILITY SOIL GAS CUT-OFF BARRIER IN UTILITY TRENCH
NOT TO SCALE



E SOIL GAS TEST PORT
NOT TO SCALE

NOTES:

1. ALL LOCATIONS AND DIMENSIONS OF BUILDING SLABS, FOOTINGS, AND GRADE BEAMS TO BE CONFIRMED WITH STRUCTURAL DETAILS.
1 2. THE LIQUID BOOT SHALL BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS AND QA/QC REQUIREMENTS, OUTLINED IN SECTION 07141 FLUID APPLIED BARRIER SYSTEM, BY A MANUFACTURER APPROVED APPLICATOR. SLAB PENETRATIONS SHALL NOT BE IN CONTACT WITH AN ADJACENT PENETRATION THAT WOULD PREVENT PROPER SEALING OF THE PENETRATION CIRCUMFERENCE. PROTECTION COURSE FABRIC SHALL BE MIRAFI 180N NON-WOVEN GEOTEXTILE. CARRIER FABRIC SHALL BE TYPAR 3401, WITH THE HEAT-TREATED SIDE FACING THE LIQUID BOOT.
1 3. CRUSHED ROCK SHALL BE 1/4" X 3/4" SURFACE OF CRUSHED ROCK LAYER SHALL BE SMOOTH-ROLLED PRIOR TO APPLICATION OF THE CARRIER FABRIC.
4. THE HORIZONTAL PIPE SHALL BE OF SCHEDULE 40 PVC, HANCOR SMOOTHWALL DRAIN PIPE, OR SIMILAR QUALITY PLASTIC PIPE. INDICATED SECTIONS OF HORIZONTAL PIPE SHALL BE PERFORATED WITH 5/8 INCH DIAMETER HOLES, THREE HOLES ACROSS THE UPPER ONE-THIRD OF THE PIPE, EVERY THREE INCHES ALONG THE PERFORATED SECTION; AN ADDITIONAL 5/8 INCH DIAMETER HOLE SHALL BE DRILLED ON THE UNDERSIDE OF THE PIPE AT LEAST EVERY 2 LINEAR FEET ALONG THE PERFORATED SECTION TO ALLOW WATER, IF ANY, TO DRAIN FROM THE PIPE.
5. SLAB PENETRATION SHALL NOT BE IN CONTACT WITH ADJACENT PENETRATIONS OR STEEL COLUMNS TO ALLOW TROWEL GRADE LIQUID BOOT APPLICATION AROUND ENTIRE PENETRATION CIRCUMFERENCE.
6. THE VERTICAL RISER PIPE TO THE WIND TURBINE SHALL BE SUPPORTED AT THE PIPE CHASE WALLS AND LABELED AS "CONTAINS COMBUSTIBLE GAS; DO NOT BREAK OR CUT".
7. A TEST PORT SHALL BE INSTALLED TO SAMPLE AIR FROM THE COLLECTION PIPE 36 INCHES ABOVE ROOF LEVEL.
8. THE VERTICAL RISER PIPE TO THE WIND-ASSISTED TURBINE VENT SHALL BE 4 INCH DIAMETER SCHEDULE 80 PVC AND EXTEND TO AN ELEVATION 15 FEET ABOVE THE ROOF LEVEL.
9. PROVIDE 1-INCH DIAMETER ELECTRICAL CONDUIT TO RISER FOR POSSIBLE FUTURE POWER NEEDS TO A MECHANICAL VACUUM BLOWER. COORDINATE WITH ELECTRICAL DRAWINGS.
10. THE WIND-ASSISTED TURBINE VENT ON TOP OF THE 4 INCH PVC RISER SHALL BE 24 INCH DIA. GALVANIZED STEEL (McMASTER-CARR CAT# 1992K24) AND SHALL BE INDEPENDENTLY SUPPORTED FROM PVC RISER.
11. TURBINE SHALL BE ADAPTED TO FIT A 4 INCH PIPE.
12. PIPE PENETRATIONS THROUGH THE PERIMETER GRADE-BEAM SHALL BE OF SCHEDULE 80 PVC. THE VENT PIPE CAP SHALL KEEP OUT DEBRIS BUT ALLOW AIR TO ENTER THE PIPE. CONTRACTOR SHALL COORDINATE PLACEMENT OF PIPING INSIDE EXTERIOR WALL WITH ARCHITECT AND SUBMIT SAMPLE CAP TO ARCHITECT FOR APPROVAL. VENTS SHALL BE LOCATED A MINIMUM OF 36 INCHES AWAY FROM DOOR JAMS.
13. FOUR 1/8" AIRCRAFT CABLES USED TO SECURE RISER TO PREVENT EXCESSIVE MOVEMENT.

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555 Montgomery Street, Suite 1300
San Francisco, California

REFERENCES:	NO.	REVISIONS	DATE	APP'D
PLANS AA		AS BUILTS	7/05	
FIELD BOOKS				
"PORT OF OAKLAND DATUM" IS 3.20' BELOW MEAN SEA LEVEL				
CAUTION: CHECK TRACING FOR LATEST REVISIONS	1	ADDITIONAL POST-BID REVISIONS		

REVIEWED ____ FACILITIES DEPARTMENT
REVIEWED ____ CONSTRUCTION DEPARTMENT
REVIEWED ____ PROJECT PLANNING DEPARTMENT

DRAWN GEL
DESIGNED BKM
CHECKED BKM
REVIEWED BKM
SEE CONFORMED SET FOR SIGNATURES
REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

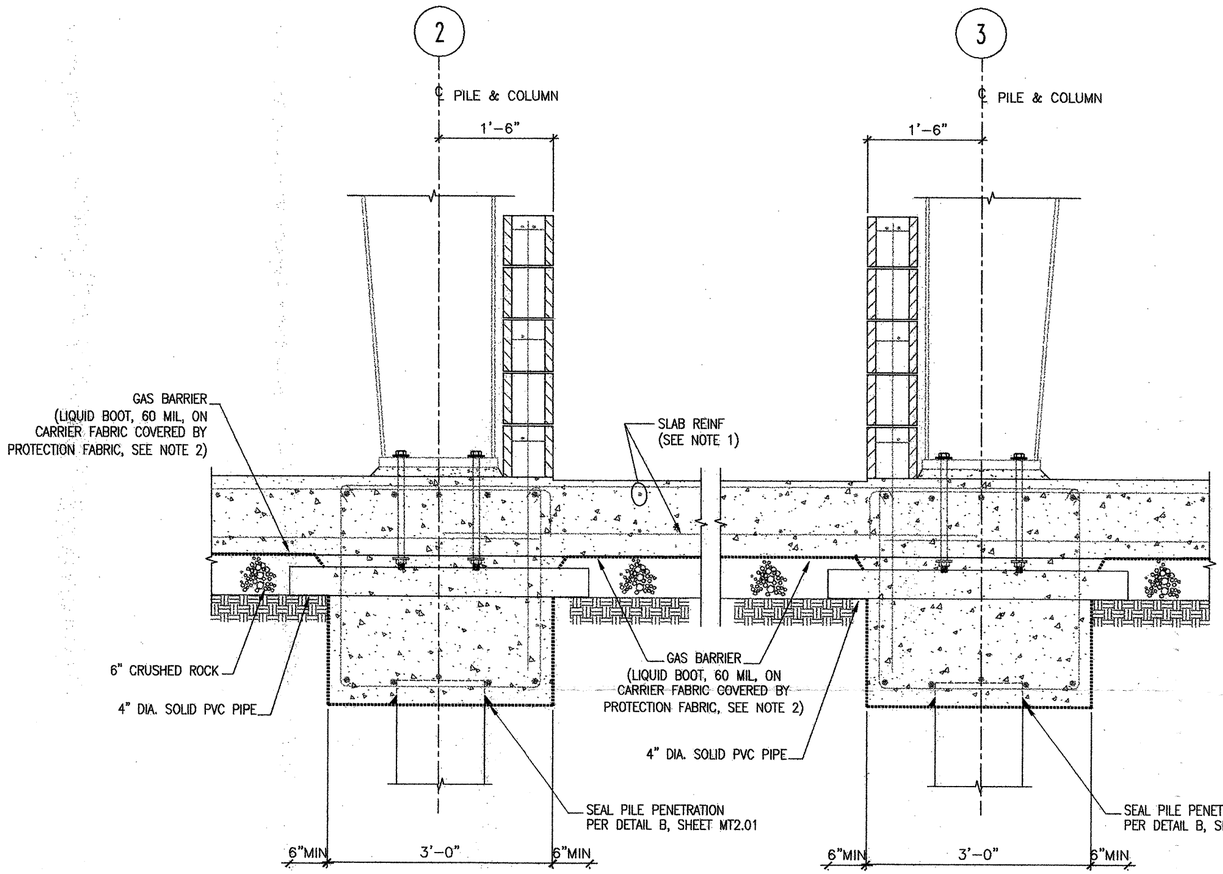
CHIEF ENGINEER
APPROVED ____ SEE CONFORMED SET FOR SIGNATURES
RECOMMENDED ____
REG. ENGINEER NO.

MARITIME & 7TH STREET SITE
HARBOR FACILITIES CENTER
SOIL GAS MITIGATION SYSTEM - DETAILS

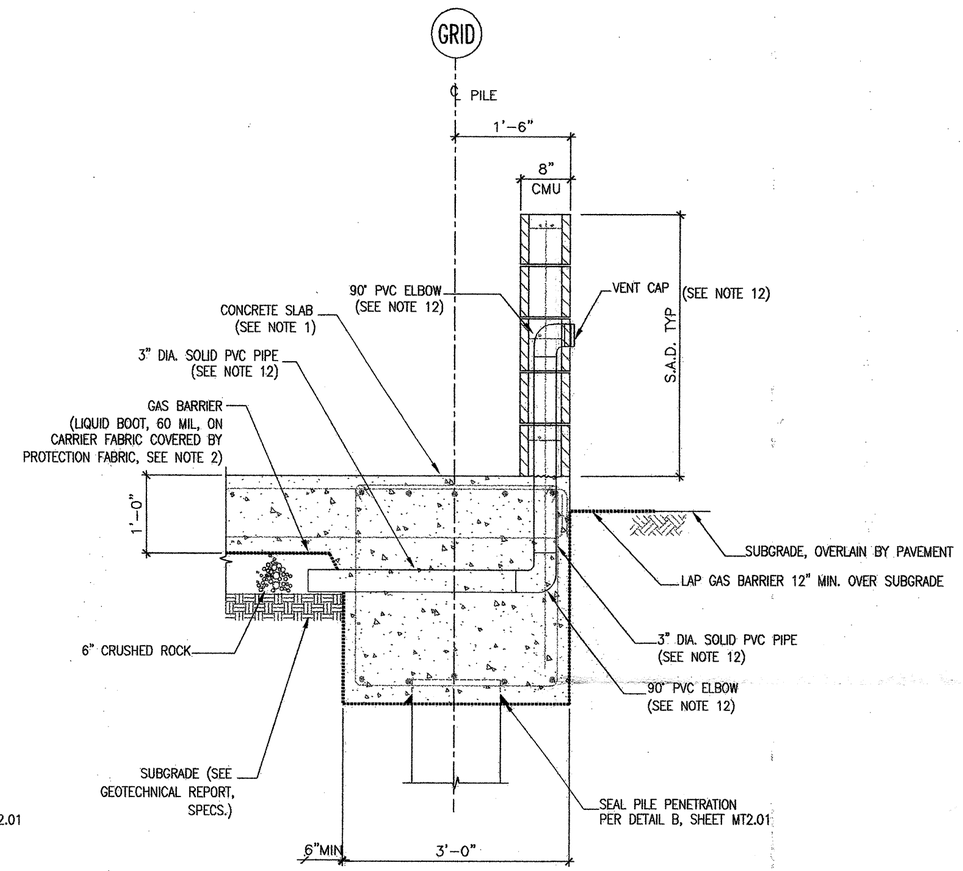
DATE: 07/13/05
SCALE:
SHEET: 20A OF 203 SHEETS
MT2.01 | AA-3827

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE

4000.01_Soil-Gas_MT_DETAILS_2.01 to 03.dwg



F INTERIOR VENT THROUGH INTERIOR GRADE BEAM
SCALE: 1" = 1'–0"



G EXTERIOR VENT THROUGH PERIMETER GRADE BEAM
SCALE: 1" = 1'–0"

4000.01_Soil-Gas_MT_DETAILS_2.01 to 03.dwg

REFERENCES:	NO.	REVISIONS	DATE	APP'D
PLANS AA		AS BUILTS	7/05	
FIELD BOOKS				
"PORT OF OAKLAND DATUM" IS 3.20' BELOW MEAN SEA LEVEL				
CAUTION: CHECK TRACING FOR LATEST REVISIONS				

REVIEWED _____ FACILITIES DEPARTMENT
REVIEWED _____ CONSTRUCTION DEPARTMENT
REVIEWED _____ PROJECT PLANNING DEPARTMENT

DRAWN GEL
DESIGNED BKM
CHECKED BKM
REVIEWED BKM
SEE CONFORMED SET FOR SIGNATURES
REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER
APPROVED
RECOMMENDED
SEE CONFORMED SET FOR SIGNATURES
REG. ENGINEER NO.

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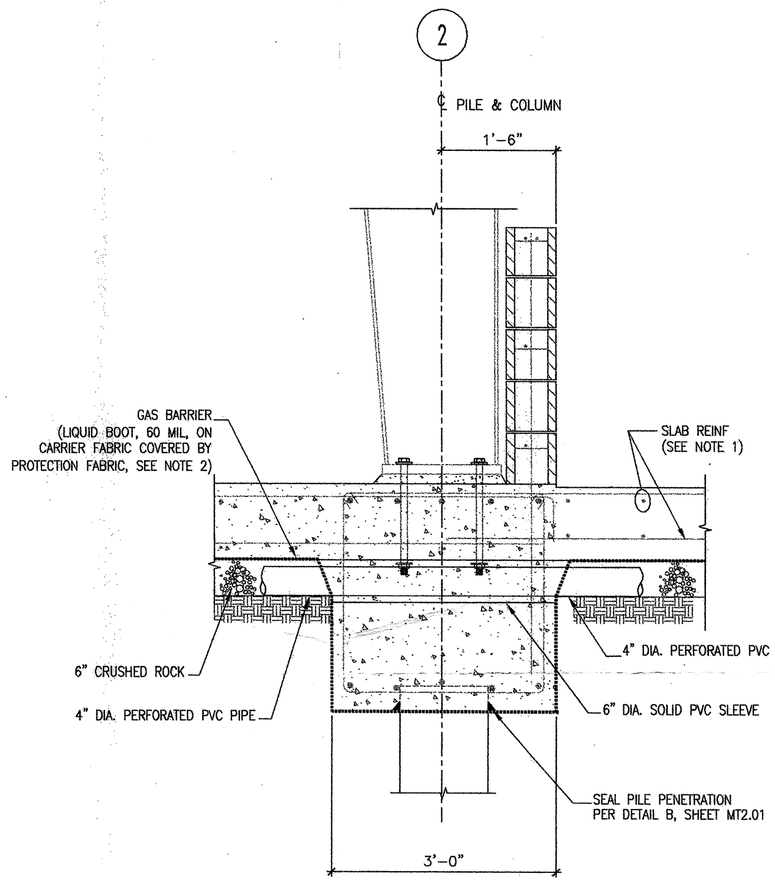
San Francisco, California

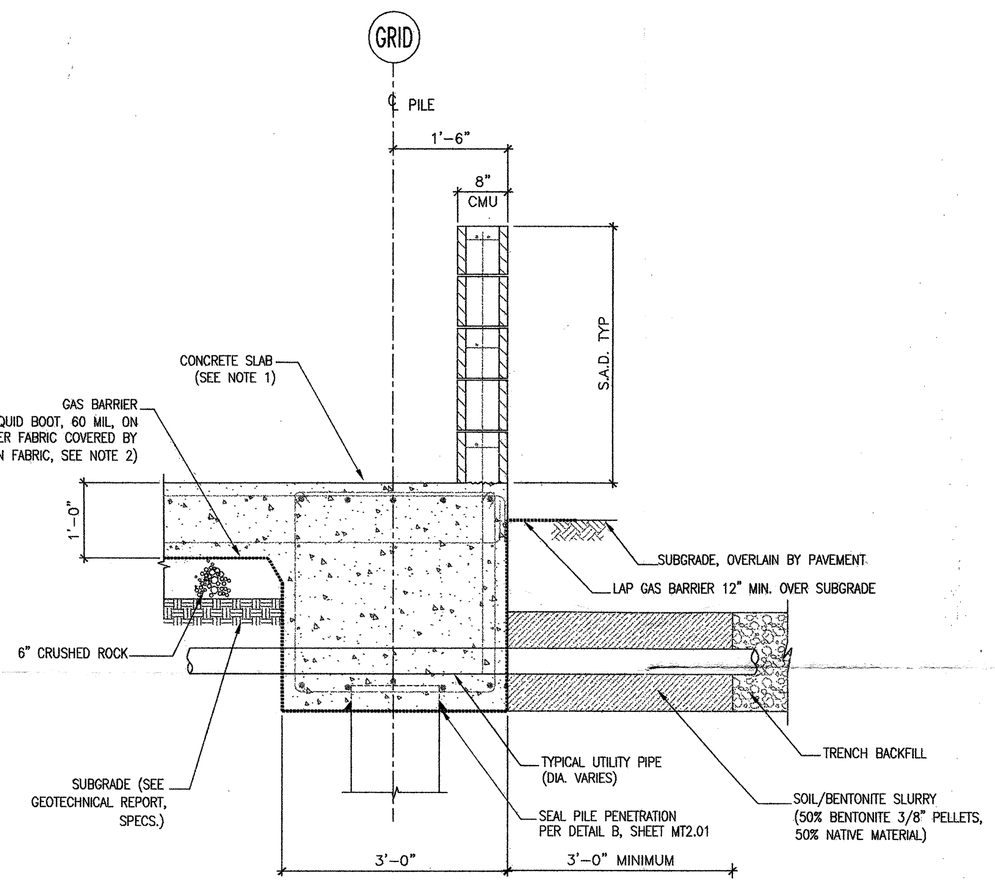
MARITIME & 7TH STREET SITE
HARBOR FACILITIES CENTER
SOIL GAS MITIGATION SYSTEM – DETAILS

DATE: 07/13/05
SCALE:
SHEET: 21 OF 203 SHEETS
MT2.02 AA–3827

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE



H PIPING PENETRATION THROUGH INTERIOR GRADE BEAM
SCALE: 1" = 1'–0"



I TYPICAL UTILITY TRENCH CUTOFF @ PERIMETER GRADE BEAM
SCALE: 1" = 1'–0"

4000.01_Soil-Gas_MT_DETAILS_2.01 to 03.dwg

REFERENCES:	NO.	REVISIONS	DATE	APP'D
PLANS AA		AS BUILTS	7/05	"
FIELD BOOKS				
"PORT OF OAKLAND DATUM" IS 3.20' BELOW MEAN SEA LEVEL				
CAUTION: CHECK TRACING FOR LATEST REVISIONS				

REVIEWED _____ FACILITIES DEPARTMENT
REVIEWED _____ CONSTRUCTION DEPARTMENT
REVIEWED _____ PROJECT PLANNING DEPARTMENT

DRAWN GEL
DESIGNED BKM
CHECKED BKM
REVIEWED BKM
SEE CONFORMED SET FOR SIGNATURES
REG. ENGINEER NO.

PORT OF OAKLAND
530 WATER ST. OAKLAND, CALIFORNIA

CHIEF ENGINEER
SEE CONFORMED SET FOR SIGNATURES
REG. ENGINEER NO.
APPROVED
REG. ENGINEER NO.
RECOMMENDED
REG. ENGINEER NO.

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San Francisco, California

MARITIME & 7TH STREET SITE
HARBOR FACILITIES CENTER
SOIL GAS MITIGATION SYSTEM – DETAILS

DATE: 07/13/05
SCALE:
SHEET: 22 OF 203 SHEETS
MT2.03 AA–3827

CAUTION: THIS PLAN MAY BE REDUCED 0 1" 2" ORIGINAL SCALE

Attachment 3

Soil gas mitigation system annual monitoring data

Harbor Facilities Complex Passive Methane Abatement System Check
651 Maritime Street, Oakland
Port of Oakland

Date: Wednesday, May 20, 2009

T-1
Auto Maintenance Shop
Sample port behind drill press underneath stairs.

Methane: 0.0 ppm

Air flow rate: 27 ft/min

Pressure: -0.03 in/H_2O

T-2
Under stairwell in office building.

Methane: 0.0 ppm

Air flow rate: 30 ft/min

Pressure: 0.0 in/H_2O

W-1
Welding Shop
Sample port is behind grey panel next to fuse box on north wall.

Methane: 0.0 ppm

Air flow rate: 250 ft/min

Pressure: 0.0 in/H_2O

W-2
Warehouse
Sample port on riser.

Methane: 0.0 ppm

Air flow rate: 200 ft/min

Pressure: 0.0 in/H_2O

Harbor Facilities Complex Passive Methane Abatement System Check
651 Maritime Street, Oakland
Port of Oakland

Date: 6/23/10 **Recorded by:** Caroline Orsi

Contact Lawrence Dirksen to arrange access:
510-627-1653 Cell: 510-773-9977
ldirksen@portoakland.com

Verified that wind turbines are turning

T-1
Auto Maintenance Shop
Sample port behind drill press underneath stairs

FID reading w/out carbon filter: 0.0 ppm

FID reading with carbon filter: 0.0 ppm

Air flow rate: 0.59 mps Direction: into port

T-2
Under stairwell in office building

FID reading w/out carbon filter: 0.0 ppm

FID reading with carbon filter: 0.0 ppm

Air flow rate: 0.0 mps inside (0.40 mps into port) Direction: into port

W-1
Welding shop
Sample port is behind grey panel next to fuse box on north wall

FID reading w/out carbon filter: 0.0 ppm

FID reading with carbon filter: 0.0 ppm

Air flow rate: 0.92 mps Direction: up

W-2
Warehouse
Sample port on riser

FID reading w/out carbon filter: 0.0 ppm

FID reading with carbon filter: 0.0 ppm

Air flow rate: 0.89 mps Direction: up

Harbor Facilities Complex Passive Methane Abatement System Check
651 Maritime Street, Oakland
Port of Oakland

Date: 6/24/11 **Recorded by:** Caroline Orsi

Contact Lawrence Dirksen to arrange access:
510-627-1653
ldirksen@portoakland.com

Are roof wind turbines turning? (Yes)/No

~~T-2~~
Auto Maintenance Shop
Sample port behind drill press underneath stairs

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 121 ft/min (inside port) | 242 ft/min (into pipe) Direction: into pipe

~~W-1~~
Under stairwell in office building

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 202 ft/min Direction: up

~~T-1~~
Welding shop
Sample port is behind grey panel next to fuse box on north wall

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 27 | 172 Direction: in

W-2
Warehouse
Sample port on riser

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 169 ft/min Direction: up

Harbor Facilities Complex Passive Methane Abatement System Check
651 Maritime Street, Oakland
Port of Oakland

Date: 6/19/12 **Recorded by:** Caroline Orsi

Contact Lawrence Dirksen to arrange access:
510-627-1653
ldirksen@portoakland.com

Are roof wind turbines turning? (Yes)/No

T-1
Auto Maintenance Shop
Sample port behind drill press underneath stairs

FID reading w/out carbon filter: 0.0 with carbon filter: 0.0

Air flow rate: NA Direction: in

T-2
Under stairwell in office building

FID reading w/out carbon filter: 0.0 with carbon filter: 0.0

Air flow rate: NA Direction: in

W-1
Welding shop
Sample port is behind grey panel next to fuse box on north wall

FID reading w/out carbon filter: 0.0 with carbon filter: 0.0

Air flow rate: NA Direction: up

W-2
Warehouse
Sample port on riser

FID reading w/out carbon filter: 0.0 with carbon filter: 0.0

Air flow rate: NA Direction: up

Harbor Facilities Complex Passive Methane Abatement System Check
651 Maritime Street, Oakland
Port of Oakland

Date: 6/20/13 **Recorded by:** C. Orsi

Contact Lawrence Dirksen to arrange access:
510-627-1653
ldirksen@portoakland.com

Are roof wind turbines turning? (Yes)/No

T-1
Auto Maintenance Shop
Sample port behind drill press underneath stairs

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 241 ft/min Direction: In

T-2
Under stairwell in office building

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 255 ft/min Direction: In

W-1
Welding shop
Sample port is behind grey panel next to fuse box on north wall

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 145 ft/min Direction: up

W-2
Warehouse
Sample port on riser

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 98 ft/min Direction: up

Harbor Facilities Complex Passive Methane Abatement System Check
651 Maritime Street, Oakland
Port of Oakland

Date: 01/13/14 **Recorded by:** Caroline Orsi

Contact Lawrence Dirksen to arrange access:
510-627-1653
ldirksen@portoakland.com

Are roof wind turbines turning? (Yes)/No

T-1
Auto Maintenance Shop
Sample port behind drill press underneath stairs

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 203 ft/min Direction: in

T-2
Under stairwell in office building

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 129 ft/min Direction: in

W-1
Welding shop
Sample port is behind grey panel next to fuse box on north wall

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 116 ft/min Direction: up

W-2
Warehouse
Sample port on riser

FID reading w/out carbon filter: 0.0 ppm with carbon filter: 0.0 ppm

Air flow rate: 42 ft/min Direction: up

Attachment 4

Well construction details

TABLE 1. Well Construction Details
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

								BEFORE RE-GRADE		AFTER RE-GRADE		
Well ID	Date Installed	Date Destroyed	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Sump	Diameter (inches)	Well Material	Top of Casing Elevation (ft amsl)	Date measured	Top of Casing Elevation (ft amsl)	Date measured	Top of Screen (ft amsl)
MW-1[1]	12/16/1992	2002 [2]	5	15	--	4	PVC	13.72	NA	--	--	8.72
MW-2[1]	12/16/1992	2002 [2]	5	15	--	4	PVC	13.8	NA	--	--	8.8
MW-3[1]	12/16/1992	2002 [2]	5	15	--	4	PVC	15.06	NA	--	--	10.06
MW-1	5/16/1994	--	5.5	15.5	--	2	PVC	13.65	1995	15.8	1/24/2009	8.15
MW-2	5/16/1994	--	5.5	15.5	--	2	PVC	13.87	1995	16.43	1/24/2009	8.37
MW-3	5/16/1994	--	5.5	15.5	--	2	PVC	13.73	1995	15.66	1/24/2009	8.23
MW-4	8/25/1995	--	8	18	--	2	PVC	12.66	1995	15.91	1/24/2009	4.66
MW-5	8/25/1995	--	8	18	--	2	PVC	13.00	1995	15.39	1/24/2009	5
MW-6	8/25/1995[3]	12/18/2002	8[3]	18[3]	--	2	PVC	13.51	1995	--	--	5.51
MW-7	8/25/1995	12/18/2002	8	18	--	2	PVC	13.86	1995	--	--	5.86
MW-8	8/25/1995	11/21/1998	8	18	--	2	PVC	12.45	1995	--	--	4.45
MW-8A	10/2/2001	--	5	1/20/1900	--	NA	NA	12.45	1995	14.99	1/24/2009	7.45
MW-9	12/1/2008	--	15	25	--	2	PVC	--	--	16.33	1/24/2009	1.33
MW-10	12/1/2008	--	15	25	--	2	PVC	--	--	15.65	1/24/2009	0.65
MW-11	12/1/2008	--	15	25	--	2	PVC	--	--	15.47	1/24/2009	0.47
MW-12	12/2/2008	--	15	25	--	2	PVC	--	--	16.79	1/24/2009	1.79
RW-1	4/28/2004	--	5	15	15-18	4	PVC	NA	--	12.95	1/24/2009	NA
RW-2	4/28/2004	--	8	18	18-21	4	PVC	NA	--	15.56	1/24/2009	NA
RW-3	4/26/2004	--	8	18	18-21	4	PVC	NA	--	15.56	1/24/2009	NA
RW-4	4/26/2004	--	8	18	18-21	4	PVC	NA	--	14.92	1/24/2009	NA
RW-5	4/27/2004	--	8	18	18-21	4	PVC	NA	--	14.79	1/24/2009	NA
RW-6	4/27/2004	--	8	18	18-21	4	PVC	NA	--	15.75	1/24/2009	NA
RW-7	4/26/2004	--	8	18	18-21	4	PVC	NA	--	15.02	1/24/2009	NA
RW-8	4/28/2004	--	9	19	19-22	4	PVC	NA	--	15.91	1/24/2009	NA
RW-9	4/27/2004	--	9	19	19-22	4	PVC	NA	--	16.57	1/24/2009	NA

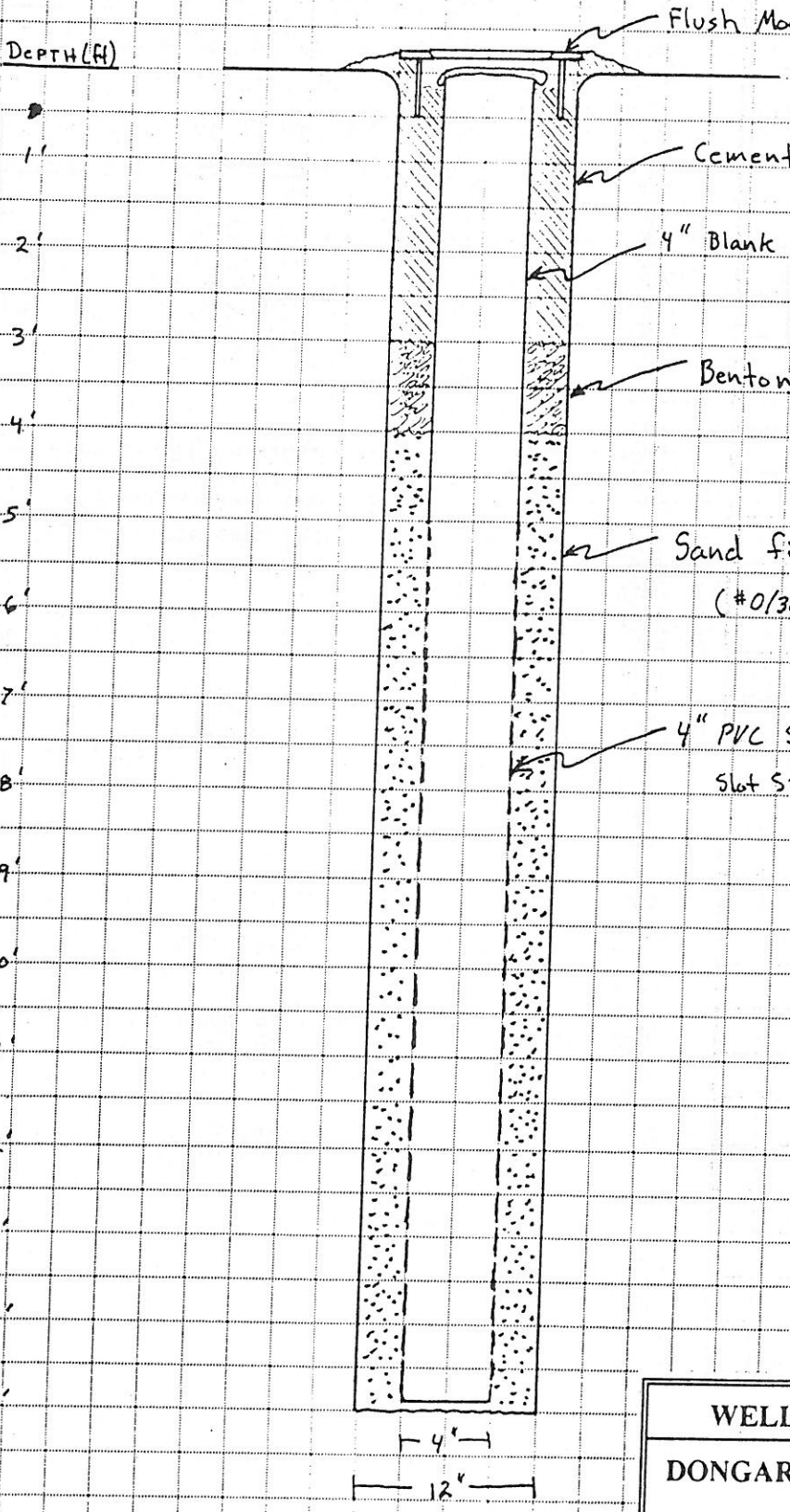
NOTES
ft bgs = feet below ground surface
ft amsl = feet above mean sea level
PVC = poly vinyl chloride
1 = offsite wells from 2255 7th Street (Ringsby Terminals Inc.)
2 = referenced in a March 2006 Reqquest for Reduction in Groundwater Monitoring Frequency
3 = assumed
NA = Not Available
-- = Not Applicable
-Site re-graded in 2006 (before 11/29/06)

Attachment 5

All available boring logs

From March 1993 Soil & GW Inv. @ 2225 7th St.

Groundwater Monitor Well



Three wells (MW-1, MW-2, MW-3) all completed to 15 feet.

WELL COMPLETION DIAGRAM	
DONGARY INVESTMENTS- OAKLAND 2225 7th Street Oakland, CA. 94607	
RAMCON Job #467004	Date: 03-18-93
Scale: 1" = 2 feet	Plate 1-2

DONGARY INVEST OAKLAND
RAMCON Job #476004
Logged by: J. Auchterlonie

BORE HOLE #: BH- 13. (MW-3)
LOCATION: 15' S & 137' E
DRILLED BY: TABER DRILLING

DATE STARTED: 12-16-92 DATE COMPLETED: 12-16-92
APPROXIMATE SURFACE ELEVATION: 10 feet above sea level.
Boring locations measured perpendicular from the N.E. corner of the Sea Land Car Wash.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE INTERVAL FROM & TO	USCS CLASS	LITH LOG	SOIL DESCRIPTIONS
0				GC		ASPHALT & GRAVEL BASE
				SC		CLAYEY SAND. Light Green. Loose. Moist. medium to coarse grained. poorly sorted. No Odor or Stain.
4	BH13-4'	CC	Core from 4 to 9 ft Recover 36"	CH		CLAY. Green. stiff. moist. No Diesel Odor or Stain.
	BH13-5'	CC		SW		SAND. Light Brown. dry to moist. loose. well sorted fine to medium grained. No Diesel Odor. Appears water saturated at 6 feet.
	BH13-7'	CC	LOST CORE 2 feet			
8						
						? SAND/CLAY contact estimated
				CL/SC		CLAY. Green & Black. soft. plactic. moist to wet. No Diesel Odor or Stain.
12						CLAY has minor amounts of interbedded SAND. and CLAYEY SAND.
						TOTAL DEPTH 15 feet.
16						
20						
24						

BORING CONVERTED TO 4" GROUNDWATER MONITOR WELL.
SCREEN from 5 to 15 feet
BLANK from 0 to 5 feet
BENTONITE from 3 to 4 feet
CEMENT from 0 to 3 feet

Attempt to recover hydropunch water from 12 to 14 failed.

DONGARY INVEST OAKLAND
RAMCON Job #476004
Logged by: J. Auchterlonie

BORE HOLE #: BH- 15. (MW-1)
LOCATION: 115' S & 10' W
DRILLED BY: TABER DRILLING

DATE STARTED: 12-16-92 DATE COMPLETED: 12-16-92
APPROXIMATE SURFACE ELEVATION: 10 feet above sea level.
Boring locations measured perpendicular from the N.E. corner of the Sea Land Car Wash.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE INTERVAL FROM & TO	USCS CLASS	LITH LOG	SOIL DESCRIPTIONS
0				GC		ASPHALT & GRAVEL BASE
				SC		CLAYEY SAND & GRAVEL. Rusty Brown. Loose, moist. medium to coarse grained. Poorly sorted. No Odor or Stain.
4	BH15-5'	CC	Core from 4 to 9 ft Recover 24"	SW		SAND. Light Brown. dry to moist. loose. well sorted fine to medium grained. No Diesel Odor. Dry @ 4 ft. Appears water saturated at 5. ft.
8			LOST CORE 3 feet			
12				CL/SC		? SAND/CLAY contact estimated CLAY. Green & Black. soft. plactic. moist to wet. No Diesel Odor or Stain. CLAY has minor amounts of interbedded SAND. and CLAYEY SAND.
16						TOTAL DEPTH 15 feet.
20						
24						

BORING CONVERTED TO 4" GROUNDWATER MONITOR WELL.
SCREEN from 5 to 15 feet
BLANK from 0 to 5 feet

BENTONITE from 3 to 4 feet
SAND filter pack from 4 to 15 feet
CEMENT from 0 to 3 feet

DONGARY INVEST OAKLAND
RAMCON Job #476004
Logged by: J. Auchterlonie

BORE HOLE #: BH- 16. (MW-2)
LOCATION: 55' N & 180' W
DRILLED BY: TABER DRILLING

DATE STARTED: 12-16-92 DATE COMPLETED: 12-16-92
APPROXIMATE SURFACE ELEVATION: 10 feet above sea level.
Boring locations measured perpendicular from the N.E. corner of the Sea Land Car Wash.

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE INTERVAL FROM & TO	USCS CLASS	LITH LOG	SOIL DESCRIPTIONS
0						
				GC		ASPHALT & GRAVEL BASE
				SC		CLAYEY SAND. Dark Greenish Gray. Soft. moist. medium to coarse grained. Poorly sorted. No Odor or Stain.
4			NO SAMPLES TAKEN			
			See BH9 for core & samples.	SW		SAND. Greenish Gray. loose. well sorted. <5% Clay. fine to medium grained. No Diesel Odor. Dry @ 4 ft. Appears water saturated at 5 ft.
8						
						? SAND/CLAY contact estimated
				CL/SC		CLAY. Green & Black. soft. plastic. moist to wet. No Diesel Odor or Stain.
12						CLAY has minor amounts of interbedded SAND. and CLAYEY SAND.
						TOTAL DEPTH 15 feet.
16						

BORING CONVERTED TO 4" GROUNDWATER MONITOR WELL.
SCREEN from 5 to 15 feet
BLANK from 0 to 5 feet

BENTONITE from 3 to 4 feet
SAND filter pack from 4 to 15 feet
CEMENT from 0 to 3 feet

20

BH16 is located 10 feet West of BH9.

Since BH9 was cored and sampled: no samples were collected from BH16.

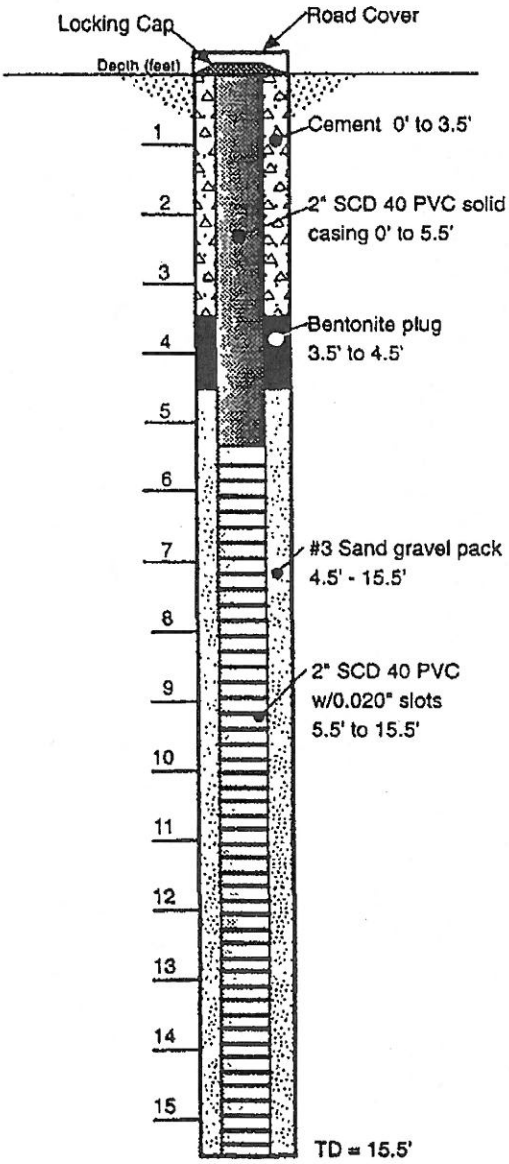
24

Port of Oakland-2277 Seventh St.

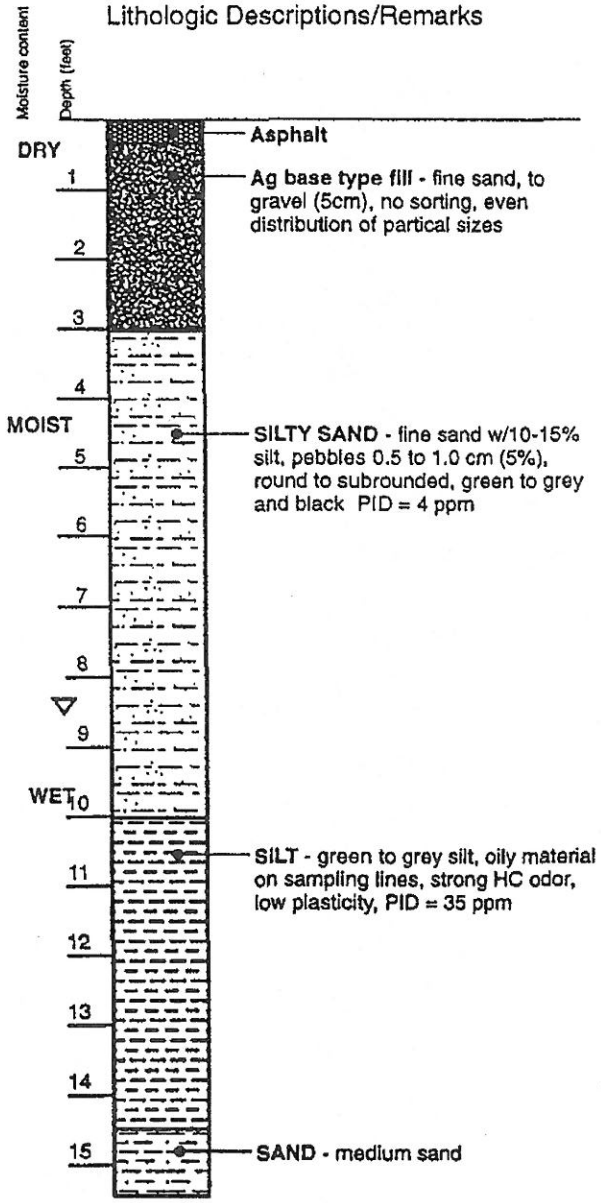
Bore Hole MW-1

Date 5/16/94
Drilling Method HS Auger
Sampling Method 18" Split spoon
Surface Elevation 14.38
Recorded By JC Borrego
Registered Geologist

Well As-Built



Lithologic Descriptions/Remarks



REGISTERED GEOLOGIST
GERARD L. SLATTERY
No. 5028
STATE OF CALIFORNIA

96-209 MW-1 11/10/94 DY
FH

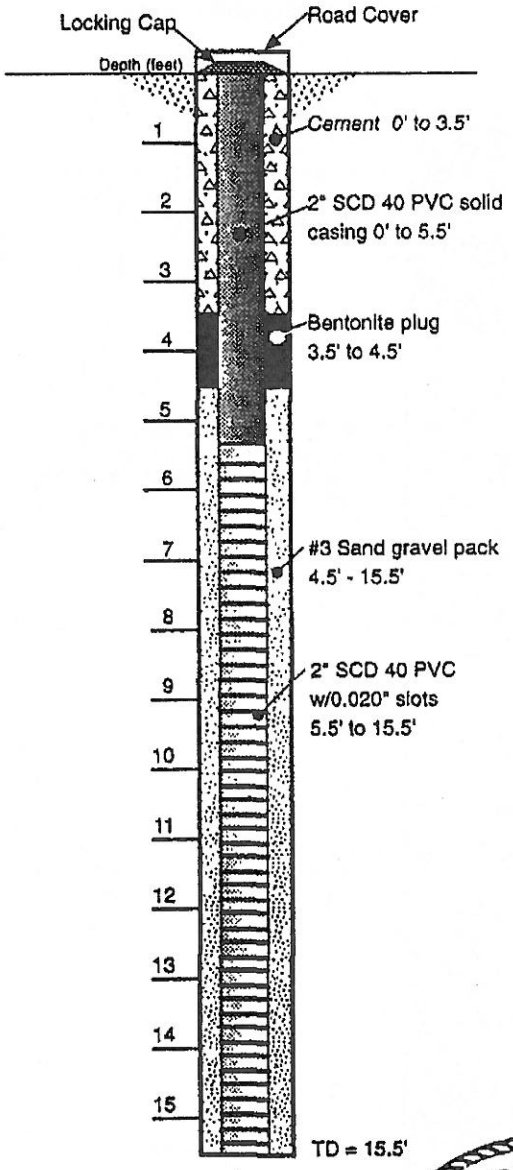
Uribe & Associates

Port of Oakland-2277 Seventh St.

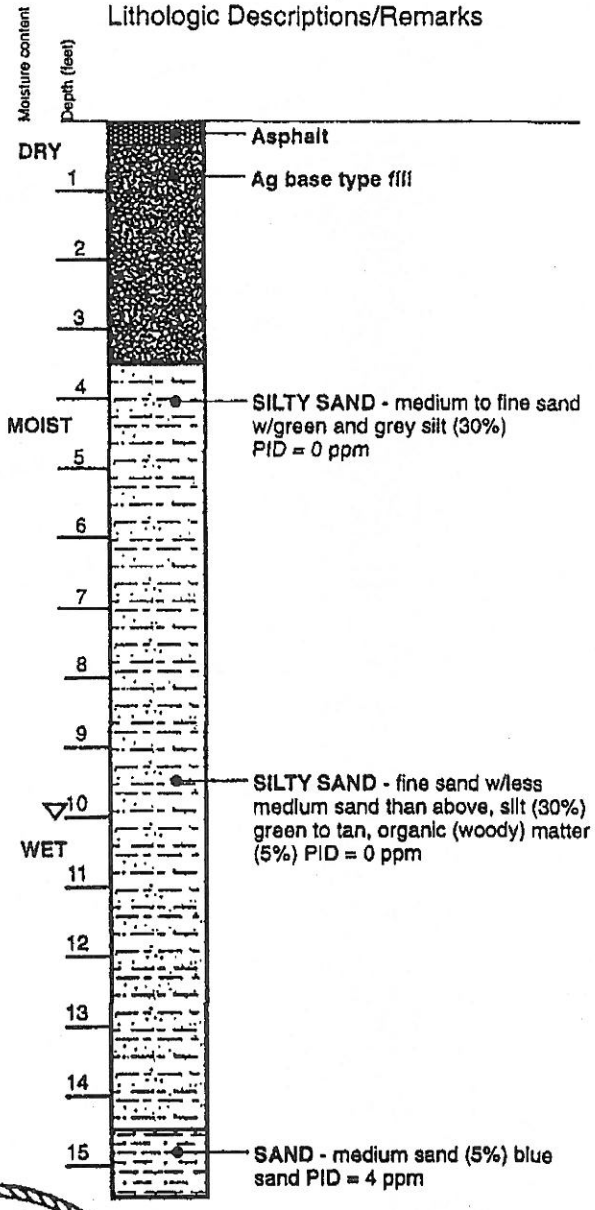
Bore Hole MW-2

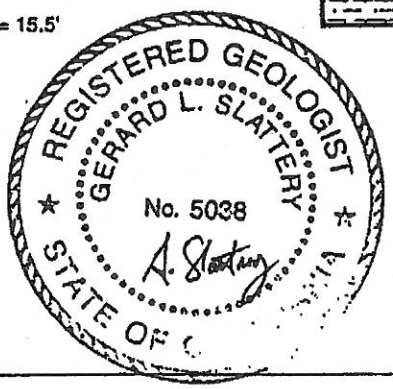
Date 5/16/94
Drilling Method HS Auger
Sampling Method 18" Split spoon
Surface Elevation 14.38
Recorded By JC Borrego
Registered Geologist

Well As-Built



Lithologic Descriptions/Remarks





96-209 MW-2 3/27/94 DY FH

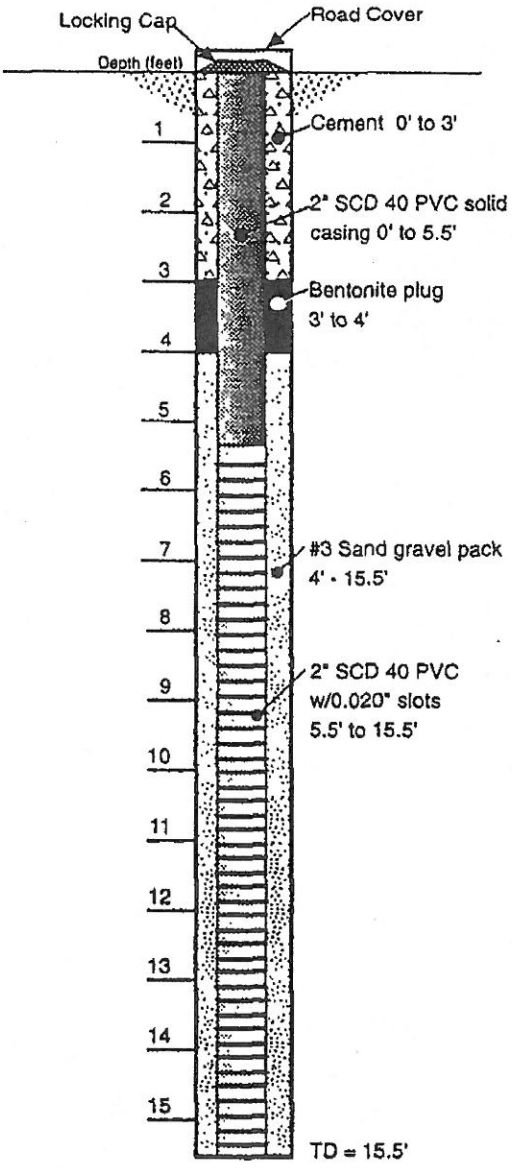
Uribe & Associates

Port of Oakland-2277 Seventh St.

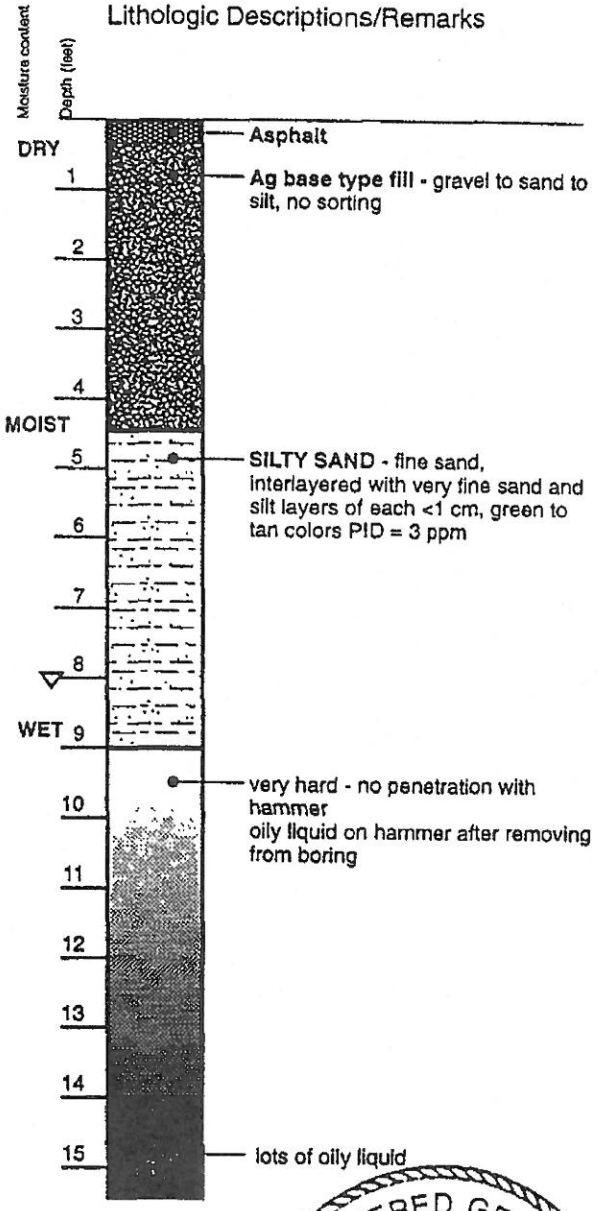
Bore Hole MW-3

Date 5/16/94
Drilling Method HS Auger
Sampling Method 18" Split spoon
Surface Elevation 14.24
Recorded By JC Borrego
Registered Geologist

Well As-Built



Lithologic Descriptions/Remarks



REGISTERED GEOLOGIST
GERARD L. SLATTERY
No. 5028
STATE OF CALIFORNIA

Uribe & Associates

96-209 MW-3 9/27/94 DY FH

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

LOG OF BORING MW-4

SEE SITE PLAN

ALISTO PROJECT NO: 10-270-01 DATE DRILLED: 08/25/95

CLIENT: Port of Oakland

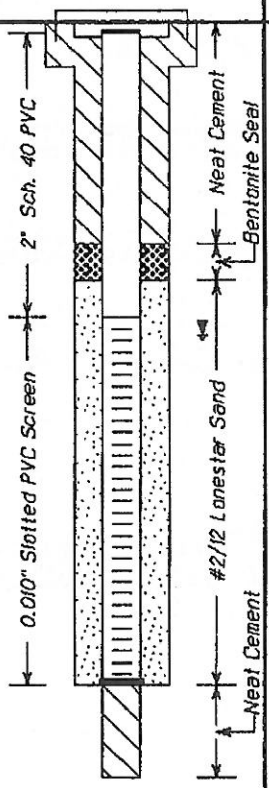
LOCATION: 2277 E. 7th Street, Oakland, CA.

DRILLING METHOD: Hollow-stem auger (7 3/4"); 2" split-spoon sampler

DRILLING COMPANY: Mitchell Drilling Envtl. CASING ELEVATION: 13.15 'MSL

LOGGED BY: Chris Reinhelmer APPROVED BY: Al Sevilla

BLOWS/6 IN	PID VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							3" asphalt; 2.2' roadbase
7,7,7	0		5			SC	clayey SAND: mottled dark brown and medium tan; damp, medium dense; clayey blebs to approximately 10%; organics to approximately 5%.
8,8,11	0		10			SM	silty SAND: dark gray green, moist to wet, medium dense; silty clayey shell fragments to approximately 2%.
4,8,11	NM		15			CL	CLAY: dark gray black, moist to wet, very stiff; organics to approximately 20%; medium-grained sand to approximately 2%.
8,8,11	NM		20				Same: at 18 feet.
			25				Stabilized water level measured on September 8, 1995.
			30				



ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

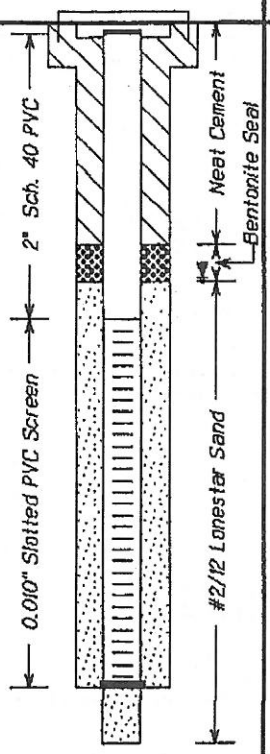
LOG OF BORING MW-5

SEE SITE PLAN

ALISTO PROJECT NO: 10-270-01 DATE DRILLED: 08/25/95
CLIENT: Port of Oakland
LOCATION: 2277 E. 7th Street, Oakland, CA.
DRILLING METHOD: Hollow-stem auger (7 3/4"); 2" split-spoon sampler
DRILLING COMPANY: Mitchell Drilling Envtl. CASING ELEVATION: 13.49 'MSL
LOGGED BY: Chris Reinhelmer APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	DEPTH feet	SOIL CLASS	GEOLOGIC DESCRIPTION
				3" asphalt; 2.2' roadbase
6,8,12	3	5	SM	SAND: medium brown, damp, medium dense; clayey blebs to approximately 2%; shell fragments to approximately 2%.
11,11,18	1	10	SC	clayey SAND: dark gray black, wet, very stiff; organics to approximately 10%.
6,8,12	0	15		Same: at 15 feet.
8,8,4	0	20	SM	silty SAND: gray green mottled with Fe oxide stain, wet to saturated, medium dense; shells to approximately 5%; sand moderately well graded.
		25		Stabilized water level measured on September 6, 1995.
		30		

WELL DIAGRAM



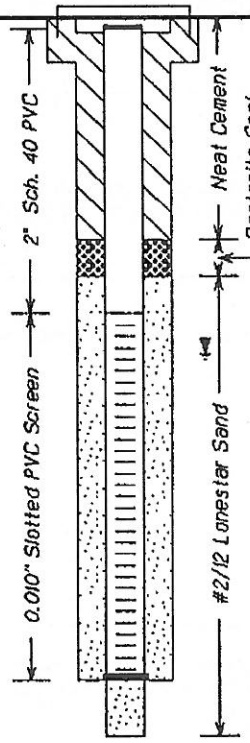
ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

LOG OF BORING MW-7

SEE SITE PLAN

ALISTO PROJECT NO: 10-270-01 DATE DRILLED: 08/25/95
CLIENT: Port of Oakland
LOCATION: 2277 E. 7th Street, Oakland, CA.
DRILLING METHOD: Hollow-stem auger (7 3/4"); 2" split-spoon sampler
DRILLING COMPANY: Mitchell Drilling Envtl. CASING ELEVATION: 14.35 'MSL
LOGGED BY: C. Ladd APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							4" asphalt
10,12,15	0		5			SM	SAND: gray, damp, medium dense; fine- to medium-grained sand; clayey blebs to 5%.
12,12,17	0		10			SC	sandy CLAY: brown to black gray, moist, very stiff; organics as blebs to appproximately 2%.
11,11,17	0		15			SP	SAND: black gray, wet, medium dense; fine- to medium-grained sand; shell fragments present to 3%.
12,14,20							Same: olive brown, wet, dense; fine- to medium-grained sand.
			20				Stabilized water level measured on September 6, 1995.
			25				
			30				



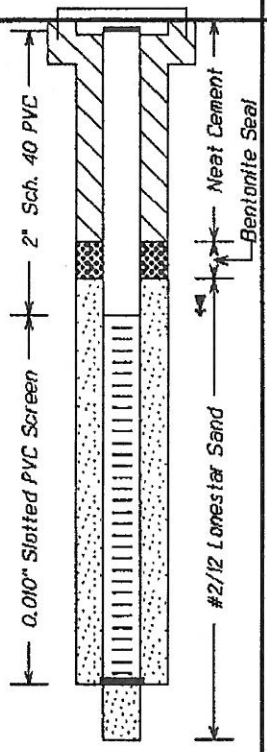
ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

LOG OF BORING MW-8

SEE SITE PLAN

ALISTO PROJECT NO: 10-270-01 DATE DRILLED: 08/25/95
CLIENT: Port of Oakland
LOCATION: 2277 E. 7th Street, Oakland, CA.
DRILLING METHOD: Hollow-stem auger (7 3/4"); 2" split-spoon sampler
DRILLING COMPANY: Mitchell Drilling Envtl. CASING ELEVATION: 12.94 'MSL
LOGGED BY: C. Ladd APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	WELL DIAGRAN	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							4" asphalt
8,8,11	6		5			CL	gravelly CLAY: mottled greenish gray and olive brown, damp, very stiff; subrounded to angular gravel to 1"-diameter.
14,28,36	4		10			GW	sandy GRAVEL: grayish brown, wet, very dense; angular to subrounded gravels to 2"-diameter.
19,21,30	0		15			SW	gravelly SAND: gray, wet, very dense; subrounded gravel to 2"-diameter.
12,15,17	0					SP	SAND: blue gray, saturated, dense; medium-grained sand; well sorted; 1/4"-diameter subrounded gravel to approximately 1%.
			20				Stabilized water level measured on September 6, 1995.
			25				
			30				



LOCATION 2277 7th Street Oakland **BORING DEPTH** 20.75' **BORING NO.** MW-8A

SURFACE ELEVATION Not Available **DATE BEGAN** 2 Oct 2001 **SHEET** 1 **OF** 2

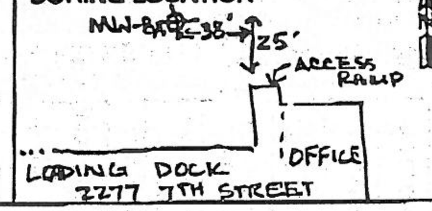
DRILLING METHOD 6½" Hollow Stem Auger **DATE FINISHED** 2 Oct 2001

SAMPLING METHOD CA. Modified Split Spoon **LOGGED BY** J. Anderson

EDITED BY ______

CHECKED BY ______

BORING LOCATION



Well construction (annotations): Box; Cement; Blank PVC 0 to 5; Grout; Bentonite; Filter pack 4' to 20.75'; 0.010 screen 5 to 20; gwr

DEPTH (FEET)	PID (PPM) B-zone/stem/sample	BLOW COUNTS (BLOWS/FOOT)	SAMPLE TYPE	U.S.C.S.	DESCRIPTION
0.0	0/0.7/0.0			AC	ASPHALT
			GRAB	SW	OLIVE BROWN, WELL GRADED SAND WITH GRAVEL, (SW), (2.5Y4/4), MOIST, LOOSE, 45-55% FINE TO COARSE SAND, 35-45% FINE TO COARSE GRAVEL TO 1.5, SAND AND GRAVEL ANGULAR, 0-5% FINES.
	/0.0		GRAB	GW	@1' VERY DARK GRAY, WELL GRADED GRAVEL WITH SAND, (GW), (5Y3/1), 60-70% GRAVEL, 25-35% FINE TO COARSE SAND, 0-5% FINES, GRAVEL TO 2.5" CONSISTING OF CHERT AND GRANITIC ROCK.
	/1.2		GRAB	SW	@2' BLACK, WELL GRADED SAND WITH GRAVEL, (SW), (5Y2.5/1), 50-60% FINE TO COARSE SAND, 20-30% FINE TO COARSE GRAVEL, 5-10% FINES, 5-10% WOOD FRAGMENTS, GRAVEL TO 2.5", CREOSOTE ODOR
					HARD MATERIAL AT 2.5' (DRILLER STATES CONCRETE)
	4.5/4.5/15.1		GRAB	SC	@3' VERY DARK GRAY, CLAYEY SAND WITH GRAVEL, (SC), (2.5Y3/1), 40-50% FINE TO MEDIUM SAND, 25-35% CLAY, 10-20% GRAVEL TO 1", 10-20% WOOD FRAGMENTS, STRONG CREOSOTE ODOR.
	/11.4		GRAB		@4' OLIVE GRAY, CLAYEY SAND, (SC), (5Y4/1), 40-50% FINE TO MEDIUM SAND, 35-45% FAT CLAY, 5-10% SILT, SAND ANGULAR, CLAY MEDIUM TO HIGH PLASTICITY.
	/8.1		GRAB	CH	@4.5' MOTTLED DARK OLIVE GRAY, OLIVE & PALE YELLOW, SANDY FAT CLAY, (CH), (5Y3/2, 5Y4/4 & 5Y7/3), SOFT TO FIRM, 60-70% FAT CLAY, 20-30% FINE SAND, 5-15% SILT, HIGH PLASTICITY, STRONG ODOR.
5.0	0.0/				
	/1.5	2/4/4	SPLIT SPOON		@6' SAME AS ABOVE (S.A.A.)
	/1.8			SC	@7' OLIVE, CLAYEY SAND, (SC), (5Y4/3), FIRM, WET, 45-55% FINE TO MEDIUM SAND, 40-50% FAT CLAY, 5-10% SILT.
		4/6/8	SPLIT SPOON	CH	@8' MOTTLED OLIVE, LIGHT OLIVE GRAY, GRAYISH GREEN & BLACK, SANDY FAT CLAY, (CH), (5Y4/4, 5Y6/2, 5G5/2 & 5Y2.5/1), SOFT, MOIST, 50-60% FAT CLAY, 40-50% FINE SAND
					@8.5' DARK GRAY, FAT CLAY, (CH), (5Y4/1), MOIST, FIRM, MEDIUM PLASTICITY, 95-100% CLAY, 0-5% SAND.
					: FROM THIS POINT ON CUTTINGS WERE AUGER MIXED.
10.0	/1.0		GRAB	CH	@10' DARK GREENISH GRAY, FAT CLAY, (CH), (10Y3/1), HIGH PLASTICITY.
			GRAB	CH	@12' BLACK (5Y2.5/1).
15.0					

Innovative Technical Solutions, Inc.

PROJECT Port of Oakland

PROJECT NO. 00-152.01

LOCATION 2277 7TH STREET OAKLAND | BORING DEPTH 20.75' | **BORING NO.** MW-8A

SURFACE ELEVATION NOT AVAILABLE | DATE BEGAN 2 OCT 2001 | SHEET 2 OF 2

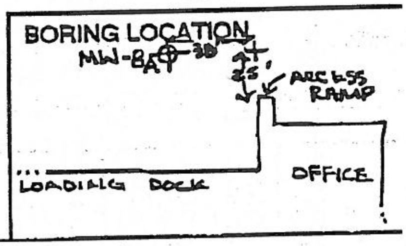
DRILLING METHOD 6 1/2" HOLLOW STEM AUGER | DATE FINISHED 2 OCT 2001

SAMPLING METHOD GRAB | LOGGED BY J. ANDERSON

EDITED BY

CHECKED BY

BORING LOCATION



DEPTH (FEET)	WELL CONSTRUCTION	WATER LEVEL	PID (PPM) B-zone/stem/sample	BLOW COUNTS (BLOWS/FOOT)	SAMPLE TYPE	U.S.C.S.	LITHOLOGY	DESCRIPTION
15.0						CH		FROM ABOVE: BLACK, FAT CLAY, (CH), (5Y2.5/1), SOFT TO FIRM, MOIST, 95-100% FAT CLAY, 0-5% FINE SAND, HIGH PLASTICITY. SAND INCREASING/CLAY DECREASING.
	#2/12 FILTER PACK; 0.010" SCREEN 5' TO 20'		//N.D.		GRAB	SC		@17' DARK GREENISH GRAY, CLAYEY SAND, (SC), ( ), SOFT, SATURATED, 50-60% FINE TO MEDIUM SAND, 30-40% CLAY, 5-10% SILT.
			//N.D.		GRAB	SP		@19' OLIVE BROWN, POORLY GRADED SAND, (SP), (2.5Y4/4), FIRM, SATURATED, 95-100% FINE TO MEDIUM SAND, 0-5% FINES.
20.0	SILT TRAP							
								BOTTOM OF BORING AT 20.75'
25.0								
30.0								

Innovative Technical Solutions, Inc. (ITSI)

PROJECT PORT OF OAKLAND

PROJECT NO. 00-152.01

PROJECT: **Port of Oakland**

Log of Well No. MW-9

BORING LOCATION: **651 and 555 Maritime Street, Oakland, CA**

GROUND SURFACE ELEVATION AND DATUM: **not surveyed**

DRILLING CONTRACTOR: **Gregg Drilling and Testing**

DATE STARTED: **12/1/08** | DATE FINISHED: **12/1/08**

DRILLING METHOD: **Hollow stem auger**

TOTAL DEPTH (ft.): **25 ft.** | SCREEN INTERVAL (ft.) 10 ft.

DRILLING EQUIPMENT: **Marl M5T**

DEPTH TO WATER: FIRST **17.0** | COMPL. **---** | CASING: **Schedule 40 PVC**

SAMPLING METHOD: **California split spoon**

LOGGED BY: **A. Letcher**

HAMMER WEIGHT: **---** | DROP:

REVIEWED BY: **A. Atkinson** | REG. NO. 3515

DEPTH (feet)	SAMPLES: SAMPLE NO.	SAMPLES: SAMPLE	SAMPLES: BLOWS/FOOT	OVM READING	DESCRIPTION NAME (USCS): color, moist, % by weight, plast. density, structure, cementation, react., w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Hand augered to 5 ft Traffic-rated EMCO Wheaton flush-mounted well box
6	MW-9@6			0	SILTY GRAVEL with SAND (GM), reddish black (2.5YR 2.5/1), moist, 50% fine gravel, 25% fine to coarse sand, 25% medium plasticity fines	Basalite type II/V neat cement grout 2" diameter Schedule 40 PVC blank casing
11	MW-9@11			511		3/8" chip Bentonite hole-plug Lapis Lustre #2/16 filter pack sand

LOG OF BORING 2007 PORT OF OAKLAND GINT.GPJ ENV AMERICA 2007.GDT 12/4/08

LOG OF BORING 2007

PROJECT: **Port of Oakland**
651 and 555 Maritime Street, Oakland, CA

Log of Well No. MW-9

DEPTH (feet)	SAMPLES: SAMPLE NO.	SAMPLES: SAMPLE	SAMPLES: BLOWS/ FOOT	OVM READING	DESCRIPTION NAME (USCS): color, moist, % by weight, plast. density, structure, cementation, react., w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16	MW-9@16			0	LEAN CLAY with SAND (CL) (Cont.)	
17						First water at 17"
18						2" diameter Schedule 40 PVC 0.010" machine slotted screen
19						
20						Lapis Lustre #2/16 filter pack sand
21						
22						
23						
24					POORLY GRADED SAND with SILT (SP-SM), dark greenish gray (GLEY 1 4/10Y), moist, 90% fine to medium sand, 10% non-plastic fines	
25				0		

Bottom of boring at 25 ft

LOG OF BORING 2007

PROJECT: **Port of Oakland**

Log of Well No. MW-10

BORING LOCATION: **651 and 555 Maritime Street, Oakland, CA**

GROUND SURFACE ELEVATION AND DATUM: **not measured**

DRILLING CONTRACTOR: **Gregg Drilling and Testing**

DATE STARTED: **12/1/08** | DATE FINISHED: **12/1/08**

DRILLING METHOD: **Hollow stem auger**

TOTAL DEPTH (ft.): **25 ft.** | SCREEN INTERVAL (ft.) **10 ft.**

DRILLING EQUIPMENT: **Marl M5T**

DEPTH TO WATER: FIRST **17.5** | COMPL. **---** | CASING: **Schedule 40 PVC**

SAMPLING METHOD: **California split spoon**

LOGGED BY: **A. Letcher**

HAMMER WEIGHT: **---** | DROP:

REVIEWED BY: **A. Atkinson** | REG. NO. **3515**

DEPTH (feet)	SAMPLES: SAMPLE NO.	SAMPLES: SAMPLE	SAMPLES: BLOWS/FOOT	OVM READING	DESCRIPTION NAME (USCS): color, moist, % by weight, plast. density, structure, cementation, react., w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Hand augered to 5 ft. Traffic-rated EMCO Wheaton flush-mounted well box
6	MW-10@6			0	POORLY GRADED SAND with SILT and GRAVEL (SP-SM), brown (10YR4/3), moist, 60% fine to coarse sand, 30% fine gravel, 10% non-plastic fines	Basalite type II/V neat cement grout 2" diameter Schedule 40 PVC blank casing
11	MW-10@11			0		3/8" chip Bentonite hole-plug #2/16 Lapis Lustre filter pack sand

LOG OF BORING 2007

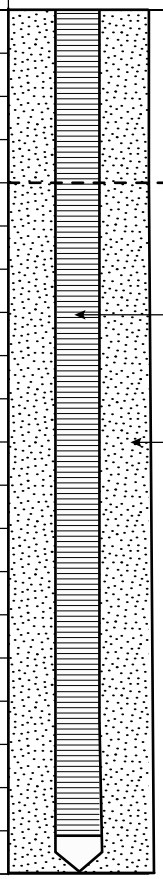
LOG OF BORING 2007 PORT OF OAKLAND GINT.GPJ ENV AMERICA 2007.GDT 12/4/08

PROJECT: **Port of Oakland**
651 and 555 Maritime Street, Oakland, CA

Log of Well No. MW-10

DEPTH (feet)	SAMPLES: SAMPLE NO.	SAMPLES: SAMPLE	SAMPLES: BLOWS/ FOOT	OVM READING	DESCRIPTION NAME (USCS): color, moist, % by weight, plast. density, structure, cementation, react., w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16	MW-10@16				(CL) LEAN CLAY with SAND (CL), black (10YR2/1), moist, 90% clay, 10% fine sand, high plasticity	
17						First water at 17.5 ft
18						2" diameter Schedule 40 PVC 0.010" machine slotted screen
19						
20						Lapis Lustre #2/16 filter pack sand
21	MW-10@21				POORLY GRADED SAND with SILT (SP-SM), black (10YR2/1), wet, 90% fine to medium sand, 10% non-plastic fines	
22						
23						
24						
25	MW-10@25					

Bottom of boring at 25 ft



LOG OF BORING 2007

PROJECT: **Port of Oakland**

Log of Well No. MW-11

BORING LOCATION: **651 and 555 Maritime Street, Oakland, CA**

GROUND SURFACE ELEVATION AND DATUM: **not measured**

DRILLING CONTRACTOR: **Gregg Drilling and Testing**

DATE STARTED: **12/1/08** | DATE FINISHED: **12/1/08**

DRILLING METHOD: **Hollow stem auger**

TOTAL DEPTH (ft.): **25 ft.** | SCREEN INTERVAL (ft.) **10 ft**

DRILLING EQUIPMENT: **Marl M5T**

DEPTH TO WATER: FIRST **17.0** | COMPL. **---** | CASING: **Schedule 40 PVC**

SAMPLING METHOD: **California split spoon**

LOGGED BY: **A. Letcher**

HAMMER WEIGHT: **---** | DROP:

REVIEWED BY: **A. Atkinson** | REG. NO. **3515**

DEPTH (feet)	SAMPLES: SAMPLE NO.	SAMPLES: SAMPLE	SAMPLES: BLOWS/FOOT	OVM READING	DESCRIPTION: NAME (USCS): color, moist, % by weight, plast. density, structure, cementation, react., w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Hand augered to 5 ft.
1–5					SILTY SAND (SM), dark greyish brown (10YR4/2), moist, 80% fine to medium sand, 20% non-plastic fines	Traffic-rated EMCO Wheaton flush-mounted well box; Basalite type II/V neat cement grout; 2" diameter Schedule 40 PVC blank casing
6	MW-10@6			1.9		
7–10						
11	MW-10@11			0		3/8" chip Bentonite hole-plug
12						
13–15					SANDY LEAN CLAY (CL), dark greenish gray (GLEY1 4/10Y), moist, 90% fine to medium sand, 10% non-plastic fines	#2/16 Lapis Lustre filter pack sand

LOG OF BORING 2007

LOG OF BORING 2007 PORT OF OAKLAND GINT.GPJ ENV AMERICA 2007.GDT 12/4/08

ENV AMERICA

PROJECT: **Port of Oakland**
651 and 555 Maritime Street, Oakland, CA

Log of Well No. MW-11

DEPTH (feet)	SAMPLES: SAMPLE NO.	SAMPLES: SAMPLE	SAMPLES: BLOWS/ FOOT	OVM READING	DESCRIPTION NAME (USCS): color, moist, % by weight, plast. density, structure, cementation, react., w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16	MW-10@16			0	LEAN CLAY (CL), black (10YR2/1), moist, 85% clay, 15% fine to medium sand, high plasticity HYRDOCARBON ODOR	
17					SILTY SAND (SM), black (10YR2/1), moist, 70% fine to medium sand, 30% non-plastic fines	First water at 17.5 ft
18						2" diameter Schedule 40 PVC 0.010" machine slotted screen
19						
20						Lapis Lustre #2/16 filter pack sand
21	MW-10@21			0		
22						
23					▼ (SW)(Cont.) wet	
24						
25	MW-10@25			0		

Bottom of boring at 25 ft

PROJECT: **Port of Oakland**

Log of Well No. MW-12

BORING LOCATION: **651 and 555 Maritime Street, Oakland, CA**

GROUND SURFACE ELEVATION AND DATUM: **not measured**

DRILLING CONTRACTOR: **Gregg Drilling and Testing**

DATE STARTED: **12/2/08** | DATE FINISHED: **12/2/08**

DRILLING METHOD: **Hollow stem auger**

TOTAL DEPTH (ft.): **25 ft.** | SCREEN INTERVAL (ft.) **10 ft**

DRILLING EQUIPMENT: **Marl M5T**

DEPTH TO WATER: FIRST **17.0** | COMPL. **---** | CASING: **Schedule 40 PVC**

SAMPLING METHOD: **California split spoon**

LOGGED BY: **A. Letcher**

HAMMER WEIGHT: **---** | DROP:

REVIEWED BY: **A. Atkinson** | REG. NO. **3515**

DEPTH (feet)	SAMPLES: SAMPLE NO.	SAMPLES: SAMPLE	SAMPLES: BLOWS/FOOT	OVM READING	DESCRIPTION NAME (USCS): color, moist, % by weight, plast. density, structure, cementation, react., w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					Asphalt	Hand augered to 5 ft. Traffic-rated EMCO Wheaton flush-mounted well box
1–5						Basalite type II/V neat cement grout
5						2" diameter Schedule 40 PVC blank casing
6	MW-10@6			0.8	(SW-SM) WELL GRADED SAND with SILT and GRAVEL (SW-SM), (7.5YR3/2), 70% fine to coarse sand, 20% rounded gravel, 10% non-plastic fines	
10	MW-10@11			45		
11–12						3/8" chip Bentonite hole-plug
14					WELL GRADED GRAVEL with CLAY, (GLEY 2 2.5/10BG), wet, 70% coarse gravel, 10% fine sand, 20% low plasticity fines	#2/16 Lapis Lustre filter pack sand

LOG OF BORING 2007 PORT OF OAKLAND GINT.GPJ ENV AMERICA 2007.GDT 12/4/08

LOG OF BORING 2007

ENV AMERICA

Project No. MSE-08-02

PROJECT: **Port of Oakland**
651 and 555 Maritime Street, Oakland, CA

Log of Well No. MW-12

DEPTH (feet)	SAMPLES: SAMPLE NO.	SAMPLES: SAMPLE	SAMPLES: BLOWS/ FOOT	OVM READING	DESCRIPTION NAME (USCS): color, moist, % by weight, plast. density, structure, cementation, react., w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
					(GC)(Cont.)	
16	MW-10@16			10	SILT with GRAVEL (GLEY 2 2.5/10BG), wet, 80% fines, 15% fine gravel, 5% fine sand, non-plastic **FREE PRODUCT IN SAMPLE**	
17						First water at 17.5 ft
18						2" diameter Schedule 40 PVC 0.010" machine slotted screen
19						
20				2		
21	MW-10@21			5	(SW-SM) WELL GRADED SAND with SILT and GRAVEL (SW-SM), (2.5YR2.5/2), wet, 75% fine to medium sand, 15% fine gravel, 10% non-plastic fines **FREE PRODUCT IN SAMPLE**	
22						Lapis Lustre #2/16 filter pack sand
23						
24						
25	MW-10@25			0.5	(SP) POORLY GRADED SAND (SP), (GLEY 14/104), moist, 95% fine to medium sand, 5% non-plastic fines	

Bottom of boring at 25 ft

LOG OF BORING 2007

PROJECT:	HARBOR FACILITY CENTER PORT OF OAKLAND Oakland, California	**Log of Recovery Well RW-1** PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: G. Johnson
Drilled By: Gregg

Date started: 4/28/04 | Date finished: 4/28/04

Drilling method: 11-inch Hollow-stem auger

Hammer weight/drop: --- | Hammer type: ---

Sampler: split spoon

DEPTH (feet)	SAMPLES: Sample Number	Sample	Blow Count	Recovery (feet)	OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
1–4						SM	SILTY SAND (SM) dark brown, dry, sub-rounded, moderately graded, no odor, fill
5–6	RW-1-5.0						
6–14						CL	CLAY (CL) moist, plastic, stiff, strong odor, 100 percent fines ▽ with sand
15–16	RW-1-15.0					ML	SILT with SAND (ML) blue-green, wet, moderately graded, strong odor, 15 percent sand, 85 percent fines
17–30							

FILL

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WELL COMPLETION INFORMATION

- Flush mounted completion
- Sch 40 4" PVC, blank from 0 to 5 feet
- Grout From 2 To 3 Feet
- Bentonite From 3 To 4 Feet
- Sch 40 4" PVC 0.050" Vee wire screened casing from 5 to 15 feet
- Pea gravel from 4 to 18 feet
- Sch 40 4" PVC, blank from 15 to 18 feet

Boring terminated at 18 feet.

Treadwell&Rollo

Project No.: 4000.01 | Figure: A-1

TEST ENVIRONMENTAL WELL REV1 400001.GPJ T&R.GDT 7/13/05

PROJECT: **HARBOR FACILITY CENTER**
PORT OF OAKLAND
Oakland, California

Log of Recovery Well RW-2

Boring location: See Site Plan, Figure 2
Logged by: G. Johnson
Drilled By: Gregg
Date started: 4/28/04
Date finished: 4/28/04
Drilling method: 11-inch Hollow-stem auger
Hammer weight/drop: —
Hammer type: ---
Sampler: split spoon

DEPTH (feet)	SAMPLES: Sample Number	SAMPLES: Sample	SAMPLES: Blow Count	SAMPLES: Recovery (feet)	OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
1–4						SM	SILTY SAND/GRAVEL (SM) dark brown, moist, subrounded, moderately graded, no odor
5–9	RW-2-5.0					SP	SAND (SP) light brown, moist, subrounded, poorly graded, no odor
10–14	RW-2-10.0					GP	GRAVEL (GP) gray, black and white, wet, angular, weak odor
15–16	RW-2-15.0					ML	SILT with SAND (ML) wet, moderately graded, strong odor, 15 percent sand, 85 percent fines
17–21						CL	CLAY (CL) black, soft, moist, strong odor
22–30							

FILL

WELL COMPLETION INFORMATION

- Flush mounted completion
- Sch 40 4" PVC, blank from 0 to 8 feet
- Grout From 3 To 5 Feet
- Bentonite From 5 To 7 Feet
- Sch 40 4" PVC 0.050" Vee wire screened casing from 8 to 18 feet
- Pea gravel from 7 to 21 feet
- Sch 40 4" PVC, blank from 18 to 21 feet

Boring terminated at 21.5 feet.

Treadwell&Rollo

Project No.: 4000.01
Figure: A-2

TEST ENVIRONMENTAL WELL REV1 400001.GPJ T&R.GDT 7/13/05

PROJECT: **HARBOR FACILITY CENTER**
PORT OF OAKLAND
Oakland, California

Log of Recovery Well RW-3

Boring location: See Site Plan, Figure 2
Logged by: G. Johnson
Drilled By: Gregg
Date started: 4/26/04
Date finished: 4/28/04
Drilling method: 11-inch Hollow-stem auger
Hammer weight/drop: ---
Hammer type: ---
Sampler: split spoon

DEPTH (feet)	SAMPLES: Sample Number	SAMPLES: Sample	SAMPLES: Blow Count	SAMPLES: Recovery (feet)	OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
1–5						GM	GRAVELLY SAND (SP) brown, dry, rounded, moderately graded, no odor, 25 percent gravel, 65 percent sand, 10 percent fines
5–6	RW-3-5.0	●					
6–10						SP	SAND (SP) gray-brown, dry, rounded, no odor
10–11	RW-3-10.0					GM	SILTY GRAVEL (GM) blue-gray, wet, moderate odor, organic matter, mostly silt with some large gravel obstruction at about 10 feet, very dense area, possible concrete debris
15–16	RW-3-15.0					ML	SILT with SAND (ML) black to blue-green, wet, moderately graded, strong odor, 15 percent sand, 85 percent fines, black sand at 15 feet staining to 16 feet
18–21						ML	SILT (ML) blue-green, wet, moderately graded, strong odor, 5 percent gravel, 85 percent sand, 10 percent fines; shells at 20.5 feet
20–21	RW-3-20.0	●					

FILL

WELL COMPLETION INFORMATION

- Flush mounted completion
- Sch 40 4" PVC, blank from 0 to 8 feet
- Grout From 3 To 5 Feet
- Bentonite From 5 To 7 Feet
- Sch 40 4" PVC 0.050" Vee wire screened casing from 8 to 18 feet
- Pea gravel from 7 to 21 feet
- Sch 40 4" PVC, blank from 18 to 21 feet

Boring terminated at 21.5 feet.

Treadwell&Rollo

Project No.: 4000.01
Figure: A-3

TEST ENVIRONMENTAL WELL REV1 400001.GPJ T&R.GDT 7/13/05

PROJECT:	HARBOR FACILITY CENTER PORT OF OAKLAND Oakland, California	**Log of Recovery Well RW-4** PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: G. Johnson
Drilled By: Gregg

Date started: 4/26/04 | Date finished: 4/28/04

Drilling method: 11-inch Hollow-stem auger

Hammer weight/drop: --- | Hammer type: ---

Sampler: split spoon

DEPTH (feet)	SAMPLES: Sample Number	SAMPLES: Sample	SAMPLES: Blow Count	SAMPLES: Recovery (feet)	OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
1–10						SP	SAND (SP) brown, dry, rounded, poorly graded, no odor
10–13						SM	SAND (SM) blue-gray, moist, rounded, moderately graded, moderate odor
13–19	RW-4-13.5					GM	SILTY SAND with GRAVEL (GM) wet, well graded, strong odor increase, material is oily, gravel is at 13.5 feet
19–22	RW-4-18.5					SP	SAND (SP) gray, moist, rounded, poorly graded, moderate odor

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WELL COMPLETION INFORMATION

- Flush mounted completion
- Sch 40 4" PVC, blank from 0 to 8 feet
- Grout From 3 To 5 Feet
- Bentonite From 5 To 7 Feet
- Sch 40 4" PVC 0.050" Vee wire screened casing from 8 to 18 feet
- Pea gravel from 7 to 21 feet
- Sch 40 4" PVC, blank from 18 to 21 feet

Boring terminated at 22 feet.

Treadwell&Rollo

Project No.: 4000.01 | Figure: A-4

TEST ENVIRONMENTAL WELL REV1 400001.GPJ T&R.GDT 7/13/05

PROJECT: **HARBOR FACILITY CENTER**
PORT OF OAKLAND
Oakland, California

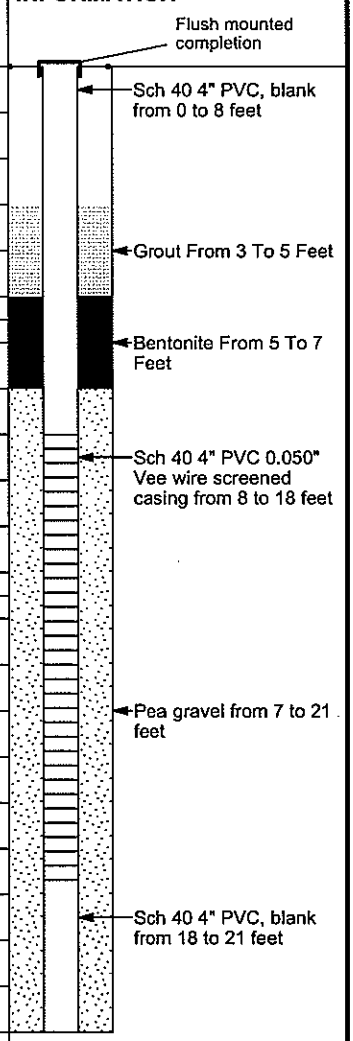
Log of Recovery Well RW-5

Boring location: See Site Plan, Figure 2
Logged by: G. Johnson
Drilled By: Gregg
Date started: 4/27/04
Date finished: 4/27/04
Drilling method: 11-inch Hollow-stem auger
Hammer weight/drop: —
Hammer type: —
Sampler: split spoon

DEPTH (feet)	SAMPLES: Sample Number	SAMPLES: Sample	SAMPLES: Blow Count	SAMPLES: Recovery (feet)	OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
1–5	RW-5-5.0					SM	SILTY SAND with GRAVEL (SM) dark brown, moist, subrounded, moderately graded, weak odor, 5 percent gravel
5							weak odor at 5 feet
6–11	RW-5-10.0					SP	SAND (SP) light brown, moist, subrounded, poorly graded, weak odor ▽
11–16	RW-5-16.0					ML	SILT (ML) dark brown, wet, weak odor, sand is black, but no odor at 11.5 feet
16–20						CL	CLAY (CL) black, soft, moist, slightly plastic, weak odor
20–21	RW-5-20.0					SP	SAND/SILT (SP) moist, subrounded, poorly graded, no odor
22–30							

FILL

WELL COMPLETION INFORMATION



Boring terminated at 22 feet.

Treadwell&Rollo

Project No.: 4000.01
Figure: A-5

TEST ENVIRONMENTAL WELL REV1 400001.GPJ T&R.GDT 7/13/05

PROJECT: **HARBOR FACILITY CENTER**
PORT OF OAKLAND
Oakland, California

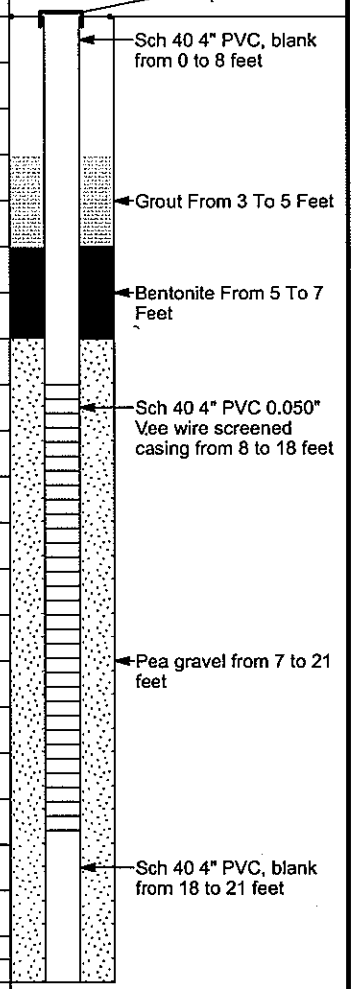
Log of Recovery Well RW-6

Boring location: See Site Plan, Figure 2
Logged by: G. Johnson
Drilled By: Gregg
Date started: 4/27/04 Date finished: 4/27/04
Drilling method: 11-inch Hollow-stem auger
Hammer weight/drop: --- Hammer type: ---
Sampler: split spoon

DEPTH (feet)	SAMPLES: Sample Number	SAMPLES: Sample	SAMPLES: Blow Count	SAMPLES: Recovery (feet)	OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
1–5						ML	SANDY SILT with GRAVEL (ML) dark brown, dry, subrounded, moderately graded, 5 percent gravel, 15 percent sand, and 70 percent fines
5–6	RW-6-5.0						
6–10						SP	SAND (SP) light brown, moist, subrounded, very strong odor ▽
10–11	RW-6-10.0						
11–16						SP	SAND (SP) blue-green, moist, subrounded, poorly graded, moderate odor
15–16	RW-6-15.0						
16–20						CL	CLAY (CL) dark gray, soft, moist, moderate odor
20–21	RW-6-20.0						
21–22						SP	SAND (SP) blue-green, moist, subrounded, poorly graded, no odor black at 21 feet
22–30							

FILL

WELL COMPLETION INFORMATION



Boring terminated at 22 feet.

Treadwell&Rollo

Project No.: 4000.01 Figure: A-6

TEST ENVIRONMENTAL WELL REV1 400001.GPJ T&R.GDT 7/13/05

PROJECT:	HARBOR FACILITY CENTER PORT OF OAKLAND Oakland, California	**Log of Recovery Well RW-7** PAGE 1 OF 1

Boring location: See Site Plan, Figure 2 | Logged by: J. Ludlow
Date started: 4/26/04 | Date finished: 4/26/04 | Drilled By: Gregg
Drilling method: 11-inch Hollow-stem auger
Hammer weight/drop: --- | Hammer type: ---
Sampler: split spoon

DEPTH (feet)	SAMPLES: Sample Number	SAMPLES: Sample	SAMPLES: Blow Count	SAMPLES: Recovery (feet)	OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
1–5						SM	SILTY SAND with GRAVEL (SM) dark brown, moist, subrounded, moderately graded, no odor, 5 percent gravel, 65 percent sand, 30 percent fines
5–6	RW-7-5.0						
6–10						SP	SAND (SP) light brown, moist, subrounded, poorly graded, no odor
10–11	RW-7-10.0						▽ black oil staining in sample
11–12						SP	SAND (SP) blue-green, wet, subrounded, poorly graded, weak odor
12–15						ML	SILT with SAND (ML) blue-green, wet, moderately graded, moderate odor, 15 percent sand, 85 percent fines
15–16	RW-7-15.0						
16–21						CL	CLAY (CL) black, soft, moist, weak odor, 100 percent fines
21–22	RW-7-20.0					SM	SAND with SILT (SM) green-black, moist to wet, subrounded, moderate odor, 15 percent sand, 85 percent fines.
22–30							

FILL

WELL COMPLETION INFORMATION

- Flush mounted completion
- Sch 40 4" PVC, blank from 0 to 8 feet
- Grout From 3 To 5 Feet
- Bentonite From 5 To 7 Feet
- Sch 40 4" PVC 0.050" Vee wire screened casing from 8 to 18 feet
- Pea gravel from 7 to 21 feet
- Sch 40 4" PVC, blank from 18 to 21 feet

Boring terminated at 22 feet.

Treadwell&Rollo

Project No.: 4000.01 | Figure: A-7

TEST ENVIRONMENTAL WELL REV1 400001.GPJ T&R.GDT 7/13/05

PROJECT: **HARBOR FACILITY CENTER**
PORT OF OAKLAND
Oakland, California

Log of Recovery Well RW-8

Boring location: See Site Plan, Figure 2
Logged by: G. Johnson/J. Ludlow
Drilled By: —
Date started: Date finished:
Drilling method:
Hammer weight/drop: Hammer type:
Sampler:

DEPTH (feet)	SAMPLES: Sample Number	SAMPLES: Sample	SAMPLES: Blow Count	SAMPLES: Recovery (feet)	OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
1–3						SW	GRAVELLY SAND (SW) brown, dry, no odor, 25 percent gravel, 65 percent sand, 10 percent fines
6–8						SP	SAND (SP) dry, rounded, poorly graded, no odor
10–12	RW-8-10.0	⊡				SP	SAND (SP) gray, moist, moderate odor start of gravel at 11.5 feet
15–17	RW-8-15.0	⊡				SM	SILTY SAND (SM) wet, moderately graded, moderate odor
20						CL	CLAY (CL) black to dark gray, plastic, weak odor
21	RW-8-20.0	⊡				ML	SANDY SILT with SHELLS (ML) black to dark gary, moist, 75 percent sand, 20 percent fines
22						SP	SAND with SILT (SP) blue-green, moist, rounded, poorly graded, no odor, 80 percent sand, 20 percent fines, 5 percent shells

WELL COMPLETION INFORMATION

- Flush mounted completion
- Sch 40 4" PVC, blank from 0 to 9 feet
- Grout From 3 To 6 Feet
- Bentonite From 6 To 8 Feet
- Sch 40 4" PVC 0.050" Vee wire screened casing from 9 to 19 feet
- Pea gravel from 8 to 22 feet
- Sch 40 4" PVC, blank from 19 to 22 feet

Boring terminated at 22 feet.

Treadwell&Rollo

Project No.: 4000.01
Figure: A-8

TEST ENVIRONMENTAL WELL REV1 400001.GPJ T&R.GDT 7/13/05

PROJECT: **HARBOR FACILITY CENTER**
PORT OF OAKLAND
Oakland, California

Log of Recovery Well RW-9

Boring location: See Site Plan, Figure 2
Logged by: G. Johnson
Drilled By: Gregg
Date started: 4/27/04
Date finished: 4/27/04
Drilling method: 11-inch Hollow-stem auger
Hammer weight/drop: —
Hammer type: —
Sampler: split spoon

DEPTH (feet)	SAMPLES: Sample Number	SAMPLES: Sample	SAMPLES: Blow Count	SAMPLES: Recovery (feet)	OVM (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
1–5						SM	SILTY SAND with GRAVEL (SM) dark brown, moist, subrounded, moderately graded, no odor, 5 percent gravel, 65 percent sand, 30 percent fines
5–6	RW-9-5.0					SM	SILTY SAND with GRAVEL (SM) dark brown and black, most, subrounded, moderately graded, weak odor
6–10						SP	SAND (SP) light brown, moist, subrounded, poorly graded, no odor, greater than 95 percent sand
10–11	RW-9-10.0					ML	SANDY SILT (ML) ▽ blue-green, wet, moderately graded, moderate odor, 15 percent sand, 85 percent fines
11–16						ML	
16–19	RW-9-15.0					CL	CLAY (CL) dark gray, soft, moist, moderate odor
19–21						CL	
20–21	RW-9-21.0					CL	some shell at 21.0 feet
22–30							

FILL

WELL COMPLETION INFORMATION

- Flush mounted completion
- Sch 40 4" PVC, blank from 0 to 9 feet
- Grout From 3 To 6 Feet
- Bentonite From 6 To 8 Feet
- Sch 40 4" PVC 0.050" Vee wire screened casing from 9 to 19 feet
- Pea gravel from 8 to 22 feet
- Sch 40 4" PVC, blank from 19 to 22 feet

Boring terminated at 22 feet.

Treadwell&Rollo

Project No.: 4000.01
Figure: A-9

TEST ENVIRONMENTAL WELL REV1 400001.GPJ T&R.GDT 7/13/05

Attachment 6

Free product thickness and screen submergence data

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
MW-1										**5%**
	04/18/00	13.65	NM	8.21	0.0	5.44	5.5	8.15	0	
	05/22/00	13.65	NM	8.51	0.0	5.14	5.5	8.15	0	
	07/10/01	13.65	8.8	10.00	1.20	3.65	5.5	8.15	0	
	12/12/01	13.65	NM	NA	NA	NA	5.5	8.15	1	
	03/08/02	13.65	NM	NA	NA	NA	5.5	8.15	1	
	06/13/02	13.65	8.70	10.00	1.30	3.65	5.5	8.15	0	
	09/26/02	13.65	8.60	9.50	0.90	4.15	5.5	8.15	0	
	03/17/03	13.65	7.61	8.88	1.27	4.77	5.5	8.15	0	
	06/18/03	13.65	8.20	9.44	1.24	4.21	5.5	8.15	0	
	09/03/03	13.65	8.50	9.40	0.90	4.25	5.5	8.15	0	
	11/26/03	13.65	8.85	9.25	0.40	4.40	5.5	8.15	0	
	03/05/04	13.65	6.76	7.07	0.31	6.58	5.5	8.15	0	
	06/02/04	13.65	8.26	8.71	0.45	4.94	5.5	8.15	0	
	09/03/04	13.65	8.70	9.11	0.41	4.54	5.5	8.15	0	
	12/16/04	13.65	7.75	7.92	0.17	5.73	5.5	8.15	0	
	03/29/05	13.65	6.21	6.38	0.17	7.27	5.5	8.15	0	
	06/14/05	13.65	7.41	7.61	0.20	6.04	5.5	8.15	0	
	08/10/05	13.65	8.05	8.55	0.50	5.10	5.5	8.15	0	
	09/29/05	13.65	8.28	8.95	0.67	4.70	5.5	8.15	0	
	12/21/05	13.65	5.70	5.90	0.20	7.75	5.5	8.15	0	
	03/24/06	13.65	5.98	6.27	0.29	7.38	5.5	8.15	0	
	07/28/06	13.65	7.88	8.35	0.47	5.30	5.5	8.15	0	
	11/29/06	15.80	10.58	10.81	0.23	4.99	7.65	8.15	0	
	06/01/07	15.80	11.11	11.45	0.34	4.35	7.65	8.15	0	
	11/14/07	15.80	10.87	10.93	0.06	4.87	7.65	8.15	0	
	06/05/08	15.80	11.36	11.46	0.10	4.34	7.65	8.15	0	
	12/18/08	15.80	10.82	10.89	0.07	4.91	7.65	8.15	0	
	03/04/09	15.80	9.38	9.52	0.14	6.28	7.65	8.15	0	
	04/01/09	15.80	10.65	10.67	0.02	5.13	7.65	8.15	0	
	06/17/09	15.80	11.21	11.28	0.07	4.52	7.65	8.15	0	
	12/08/09	15.80	NP	10.79	0.00	5.01	7.65	8.15	0	
	06/17/10	15.80	10.79 [4]	10.79	0.00	5.01	7.65	8.15	0	
	12/14/10	15.80	9.42 [4]	9.42	0.00	6.38	7.65	8.15	0	
	06/07/11	15.80	NP	10.77	0.00	5.03	7.65	8.15	0	
	06/21/11	15.80	NP	10.37	0.00	5.43	7.65	8.15	0	
	09/26/11	15.80	11.23 [4]	11.23	0.00	4.57	7.65	8.15	0	
	12/05/11	15.80	11.15 [4]	11.15	0.00	4.65	7.65	8.15	0	
	02/06/12	15.80	10.89 [4]	10.89	0.00	4.91	7.65	8.15	0	
	06/19/12	15.80	11.01 [4]	11.01	0.00	4.79	7.65	8.15	0	
	09/19/12	15.80	11.40	11.41	0.01	4.39	7.65	8.15	0	
	12/04/12	15.80	NP	9.05	0.00	6.75	7.65	8.15	0	
	06/19/13	15.80	NP	11.34	0.00	4.46	7.65	8.15	0	
MW-2										**0%**
	12/31/97	13.87	NP	8.73	0.0	5.14	5.5	8.37	0	
	04/13/98	13.87	NP	7.72	0.0	6.15	5.5	8.37	0	
	11/06/98	13.87	NP	9.43	0.0	4.44	5.5	8.37	0	
	03/19/99	13.87	NP	8.21	0.0	5.66	5.5	8.37	0	
	06/24/99	13.87	NP	8.91	0.0	4.96	5.5	8.37	0	
	09/28/99	13.87	NP	9.42	0.0	4.45	5.5	8.37	0	
	11/12/99	13.87	NP	9.63	0.0	4.24	5.5	8.37	0	
	02/11/00	13.87	NP	8.54	0.0	5.33	5.5	8.37	0	
	05/22/00	13.87	NP	8.10	0.0	5.77	5.5	8.37	0	
	09/06/00	13.87	NP	8.79	0.0	5.08	5.5	8.37	0	
	12/19/00	13.87	NP	9.19	0.0	4.68	5.5	8.37	0	
	02/21/01	13.87	NP	7.99	0.0	5.88	5.5	8.37	0	
	04/03/01	13.87	NP	8.23	0.0	5.64	5.5	8.37	0	
	07/10/01	13.87	NP	8.70	0.0	5.17	5.5	8.37	0	
	12/12/01	13.87	NP	8.16	0.0	5.71	5.5	8.37	0	
	01/22/02	13.87	NP	7.64	0.0	6.23	5.5	8.37	0	
	03/08/02	13.87	NP	8.31	0.0	5.56	5.5	8.37	0	
	06/13/02	13.87	NP	8.64	0.0	5.23	5.5	8.37	0	
MW-2 (cont)	09/26/02	13.87	NP	8.95	0.0	4.92	5.5	8.37	0	

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
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Monitoring Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
	12/12/02	13.87	NP	9.17	0.0	4.70	5.5	8.37	0	
	03/17/03	13.87	NP	7.77	0.0	6.10	5.5	8.37	0	
	06/18/03	13.87	NP	8.44	0.0	5.43	5.5	8.37	0	
	09/03/03	13.87	NP	8.98	0.0	4.89	5.5	8.37	0	
	11/26/03	13.87	NP	12.01	0.0	1.86	5.5	8.37	0	
	03/05/04	13.87	NP	9.75	0.0	4.12	5.5	8.37	0	
	06/02/04	13.87	NP	11.22	0.0	2.65	5.5	8.37	0	
	09/03/04	13.87	NP	11.62	0.0	2.25	5.5	8.37	0	
	12/16/04	13.87	NP	10.80	0.0	3.07	5.5	8.37	0	
	03/29/05	13.87	NP	9.67	0.0	4.20	5.5	8.37	0	
	06/14/05	13.87	NP	10.68	0.0	3.19	5.5	8.37	0	
	08/10/05	13.87	NP	11.05	0.0	2.82	5.5	8.37	0	
	09/29/05	13.87	NP	11.32	0.0	2.55	5.5	8.37	0	
	12/21/05	13.87	NP	9.57	0.0	4.30	5.5	8.37	0	
	03/24/06	13.87	NP	9.55	0.0	4.32	5.5	8.37	0	
	07/28/06	13.87	NP	10.85	0.0	3.02	5.5	8.37	0	
	11/29/06	16.43	NP	11.69	0.0	4.74	8.06	8.37	0	
	06/01/07	16.43	NP	11.72	0.0	4.71	8.06	8.37	0	
	11/14/07	16.43	NP	12.28	0.0	4.15	8.06	8.37	0	
	06/05/08	16.43	NP	12.01	0.0	4.42	8.06	8.37	0	
	12/18/08	16.43	NP	12.20	0.0	4.23	8.06	8.37	0	
	03/04/09	16.43	NP	10.19	0.0	6.24	8.06	8.37	0	
	04/01/09	16.43	NP	11.34	0.0	5.09	8.06	8.37	0	
	06/17/09	16.43	NP	11.90	0.0	4.53	8.06	8.37	0	
	12/09/09	16.43	NP	12.13	0.0	4.30	8.06	8.37	0	
	06/16/10	16.43	NP	11.57	0.0	4.86	8.06	8.37	0	
	12/14/10	16.43	NP	11.04	0.0	5.39	8.06	8.37	0	
	06/07/11	16.43	NP	10.70	0.0	5.73	8.06	8.37	0	
	06/21/11	16.43	NP	11.18	0.0	5.25	8.06	8.37	0	
	09/26/11	16.43	NP	11.87	0.0	4.56	8.06	8.37	0	
	12/05/11	16.43	NP	11.95	0.0	4.48	8.06	8.37	0	
	02/06/12	16.43	NP	11.50	0.0	4.93	8.06	8.37	0	
	06/19/12	16.43	NP	11.65	0.0	4.78	8.06	8.37	0	
	09/19/12	16.43	NP	12.03	0.0	4.40	8.06	8.37	0	
	12/04/12	16.43	NP	9.82	0.0	6.61	8.06	8.37	0	
	06/19/13	16.43	NP	12.03	0.0	4.40	8.06	8.37	0	
MW-3										**0%**
	11/06/98	13.73	8.84	9.94	1.10	3.79	5.5	8.23	0	
	03/19/99	13.73	7.52	8.05	0.53	5.68	5.5	8.23	0	
	06/24/99	13.73	8.38	8.56	0.18	5.17	5.5	8.23	0	
	11/12/99	13.73	9.14	9.23	0.09	4.50	5.5	8.23	0	
	02/11/00	13.73	7.97	8.37	0.40	5.36	5.5	8.23	0	
	03/01/00	13.73	6.59	7.24	0.65	6.49	5.5	8.23	0	
	03/21/00	13.73	6.50	6.56	0.06	7.17	5.5	8.23	0	
	05/22/00	13.73	7.51	8.05	0.54	5.68	5.5	8.23	0	
	06/26/00	13.73	7.82	8.20	0.38	5.53	5.5	8.23	0	
	07/25/00	13.73	7.90	8.92	1.02	4.81	5.5	8.23	0	
	08/31/00	13.73	8.15	9.50	1.35	4.23	5.5	8.23	0	
	09/06/00	13.73	8.21	9.42	1.21	4.31	5.5	8.23	0	
	09/21/00	13.73	8.30	8.88	0.58	4.85	5.5	8.23	0	
	12/19/00	13.73	8.60	9.65	1.05	4.08	5.5	8.23	0	
	02/22/01	13.73	6.36	8.15	1.79	5.58	5.5	8.23	0	
	04/03/01	13.73	7.48	8.88	1.40	4.85	5.5	8.23	0	
	04/23/01	13.73	7.85	9.10	1.25	4.63	5.5	8.23	0	
	05/30/01	13.73	7.75	9.10	1.35	4.63	5.5	8.23	0	
	07/10/01	13.73	8.10	9.60	1.50	4.13	5.5	8.23	0	
	03/08/02	13.73	7.80	8.00	0.20	5.73	5.5	8.23	0	
	04/03/02	13.73	7.60	7.70	0.10	6.03	5.5	8.23	0	
	04/23/02	13.73	7.90	8.40	0.50	5.33	5.5	8.23	0	
	04/25/02	13.73	7.90	8.80	0.90	4.93	5.5	8.23	0	
	05/10/02	13.73	8.10	8.20	0.10	5.53	5.5	8.23	0	
MW-3 (cont)	05/24/02	13.73	8.05	8.10	0.05	5.63	5.5	8.23	0	

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	06/13/02	13.73	8.10	8.70	0.60	5.03	5.5	8.23	0	
	07/05/02	13.73	8.10	8.95	0.85	4.78	5.5	8.23	0	
	07/19/02	13.73	8.10	8.90	0.80	4.83	5.5	8.23	0	
	07/30/02	13.73	8.10	8.90	0.80	4.83	5.5	8.23	0	
	08/14/02	13.73	8.10	8.90	0.80	4.83	5.5	8.23	0	
	09/13/02	13.73	8.30	9.30	1.00	4.43	5.5	8.23	0	
	09/26/02	13.73	8.30	9.00	0.70	4.73	5.5	8.23	0	
	10/14/02	13.73	8.60	9.50	0.90	4.23	5.5	8.23	0	
	11/04/02	13.73	8.75	9.99	1.24	3.74	5.5	8.23	0	
	11/21/02	13.73	8.59	11.29	2.70	2.44	5.5	8.23	0	
	12/06/02	13.73	8.56	9.30	0.74	4.43	5.5	8.23	0	
	12/18/02	13.73	7.35	8.43	1.08	5.30	5.5	8.23	0	
	12/30/02	13.73	6.50	7.15	0.65	6.58	5.5	8.23	0	
	01/02/03	13.73	6.20	6.20	0.00	7.53	5.5	8.23	0	
	01/03/03	13.73	6.21	6.21	0.00	7.52	5.5	8.23	0	
	01/14/03	13.73	6.20	6.21	0.01	7.52	5.5	8.23	0	
	01/30/03	13.73	6.81	6.85	0.04	6.88	5.5	8.23	0	
	02/18/02	13.73	7.09	7.15	0.06	6.58	5.5	8.23	0	
	02/26/03	13.73	7.04	7.11	0.07	6.62	5.5	8.23	0	
	03/13/03	13.73	7.22	8.11	0.89	5.62	5.5	8.23	0	
	03/17/03	13.73	7.15	7.50	0.35	6.23	5.5	8.23	0	
	04/16/03	13.73	7.27	8.25	0.98	5.48	5.5	8.23	0	
	06/18/03	13.73	7.78	9.00	1.22	4.73	5.5	8.23	0	
	09/03/03	13.73	8.31	9.96	1.65	3.77	5.5	8.23	0	
	11/26/03	13.73	10.79	12.85	2.06	0.88	5.5	8.23	0	
	03/05/04	13.73	8.39	9.85	1.46	3.88	5.5	8.23	0	
	06/02/04	13.73	10.03	11.35	1.32	2.38	5.5	8.23	0	
	09/03/04	13.73	10.46	12.06	1.60	1.67	5.5	8.23	0	
	12/16/04	13.73	9.41	10.38	0.97	3.35	5.5	8.23	0	
	03/29/05	13.73	8.17	9.01	0.84	4.72	5.5	8.23	0	
	06/14/05	13.73	9.59	10.55	0.96	3.18	5.5	8.23	0	
	08/10/05	13.73	9.91	11.15	1.24	2.58	5.5	8.23	0	
	09/29/05	13.73	10.21	11.61	1.40	2.12	5.5	8.23	0	
	12/21/05	13.73	8.21	8.28	0.07	5.45	5.5	8.23	0	
	03/24/06	13.73	8.20	8.82	0.62	4.91	5.5	8.23	0	
	07/28/06	13.73	9.81	9.83	0.02	3.90	5.5	8.23	0	
	11/29/06	15.66	10.72	11.70	0.98	3.96	7.43	8.23	0	
	06/01/07	15.66	10.77	11.46	0.69	4.20	7.43	8.23	0	
	11/14/07	15.66	10.98	12.19	1.21	3.47	7.43	8.23	0	
	06/05/08	15.66	10.51	11.96	1.45	3.70	7.43	8.23	0	
	12/18/08	15.66	10.78	12.00	1.22	4.51	7.43	8.23	0	
	03/04/09	15.66	9.31	9.93	0.62	6.16	7.43	8.23	0	
	04/01/09	15.66	10.38	11.10	0.72	5.06	7.43	8.23	0	
	06/17/09	15.66	10.79	12.30	1.51	4.42	7.43	8.23	0	
	12/08/09	15.66	11.05	12.81	1.76	4.08	7.43	8.23	0	
	06/17/10	15.66	10.39	12.29	1.90	4.70	7.43	8.23	0	
	12/15/10	15.66	10.13	10.74	0.61	5.35	7.43	8.23	0	
	06/07/11	15.66	9.91	10.95	1.04	5.44	7.43	8.23	0	
	06/21/11	15.66	10.74	11.20	0.46	4.78	7.43	8.23	0	
	09/26/11	15.66	10.71	12.55	1.84	4.40	7.43	8.23	0	
	12/05/11	15.66	10.83	12.20	1.37	4.42	7.43	8.23	0	
	02/06/12	15.66	10.60	11.42	0.82	4.81	7.43	8.23	0	
	06/19/12	15.66	10.52	12.04	1.52	4.68	7.43	8.23	0	
	09/19/12	15.66	10.90	13.01	2.11	4.13	7.43	8.23	0	
	12/04/12	15.66	9.64	10.65	1.01	5.72	7.43	8.23	0	
	06/19/13	15.66	10.92	12.45	1.53	4.28	7.43	8.23	0	
MW-4										**38%**
	12/31/97	12.66	NP	7.09	0.0	5.57	8	4.66	1	
	04/13/98	12.66	NP	7.71	0.0	4.95	8	4.66	1	
	11/06/98	12.66	NP	8.69	0.0	3.97	8	4.66	0	
	03/19/99	12.66	NP	8.00	0.0	4.66	8	4.66	1	
MW-4 (cont)	06/24/99	12.66	NP	8.45	0.0	4.21	8	4.66	0	

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	09/28/99	12.66	NP	8.73	0.0	3.93	8	4.66	0	
	11/12/99	12.66	NP	8.83	0.0	3.83	8	4.66	0	
	02/11/00	12.66	NP	7.71	0.0	4.95	8	4.66	1	
	05/22/00	12.66	NP	8.09	0.0	4.57	8	4.66	0	
	09/06/00	12.66	NP	8.32	0.0	4.34	8	4.66	0	
	12/19/00	12.66	NP	8.47	0.0	4.19	8	4.66	0	
	02/21/01	12.66	NP	7.51	0.0	5.15	8	4.66	1	
	04/03/01	12.66	NP	8.13	0.0	4.53	8	4.66	0	
	07/10/01	12.66	NP	8.12	0.0	4.54	8	4.66	0	
	12/12/01	12.66	NP	7.65	0.0	5.01	8	4.66	1	
	01/22/02	12.66	NP	7.60	0.0	5.06	8	4.66	1	
	03/08/02	12.66	NP	7.96	0.0	4.70	8	4.66	1	
	06/13/02	12.66	NP	8.20	0.0	4.46	8	4.66	0	
	09/26/02	12.66	NP	8.21	0.0	4.45	8	4.66	0	
	12/12/02	12.66	NP	8.38	0.0	4.28	8	4.66	0	
	03/17/03	12.66	NP	7.72	0.0	4.94	8	4.66	1	
	06/18/03	12.66	NP	8.02	0.0	4.64	8	4.66	0	
	09/03/03	12.66	NP	8.29	0.0	4.37	8	4.66	0	
	11/26/03	12.66	NP	8.69	0.0	3.97	8	4.66	0	
	03/05/04	12.66	NP	7.45	0.0	5.21	8	4.66	1	
	06/02/04	12.66	NP	8.25	0.0	4.41	8	4.66	0	
	09/03/04	12.66	NP	8.31	0.0	4.35	8	4.66	0	
	12/16/04	12.66	NP	7.96	0.0	4.70	8	4.66	1	
	03/29/05	12.66	NP	7.11	0.0	5.55	8	4.66	1	
	06/14/05	12.66	NP	7.90	0.0	4.76	8	4.66	1	
	08/10/05	12.66	NP	7.86	0.0	4.80	8	4.66	1	
	09/29/05	12.66	NP	8.00	0.0	4.66	8	4.66	1	
	12/21/05	12.66	NP	7.30	0.0	5.36	8	4.66	1	
	03/24/06	12.66	NP	7.05	0.0	5.61	8	4.66	1	
	07/28/06	12.66	NP	7.92	0.0	4.74	8	4.66	1	
	11/29/06	15.91	NP	11.63	0.0	4.28	11.25	4.66	0	
	06/01/07	15.91	NP	11.82	0.0	4.09	11.25	4.66	0	
	11/14/07	15.91	NP	11.88	0.0	4.03	11.25	4.66	0	
	06/05/08	15.91	NP	11.67	0.0	4.24	11.25	4.66	0	
	12/18/08	15.91	NP	11.20	0.0	4.71	11.25	4.66	1	
	03/04/09	15.91	NP	10.93	0.0	4.98	11.25	4.66	1	
	04/01/09	15.91	NP	11.63	0.0	4.28	11.25	4.66	0	
	06/17/09	15.91	NP	11.88	0.0	4.03	11.25	4.66	0	
	12/08/09	15.91	NP	12.03	0.0	3.88	11.25	4.66	0	
	06/16/10	15.91	NP	11.75	0.0	4.16	11.25	4.66	0	
	12/14/10	15.91	NP	11.62	0.0	4.29	11.25	4.66	0	
	06/07/11	15.91	NP	11.80	0.0	4.11	11.25	4.66	0	
	06/21/11	15.91	NP	11.42	0.0	4.49	11.25	4.66	0	
	09/26/11	15.91	NP	11.83	0.0	4.08	11.25	4.66	0	
	12/05/11	15.91	NP	12.03	0.0	3.88	11.25	4.66	0	
	02/06/12	15.91	NP	11.71	0.0	4.20	11.25	4.66	0	
	06/19/12	15.91	NP	11.73	0.0	4.18	11.25	4.66	0	
	09/19/12	15.91	NP	11.90	0.0	4.01	11.25	4.66	0	
	12/04/12	15.91	NP	10.95	0.0	4.96	11.25	4.66	1	
	06/19/13	15.91	NP	12.04	0.0	3.87	11.25	4.66	0	
MW-5										**98%**
	12/31/97	13.00	NP	6.38	0.0	6.62	8	5	1	
	04/13/98	13.00	NP	5.56	0.0	7.44	8	5	1	
	11/06/98	13.00	NP	6.59	0.0	6.41	8	5	1	
	03/19/99	13.00	NP	6.20	0.0	6.80	8	5	1	
	06/24/99	13.00	NP	6.73	0.0	6.27	8	5	1	
	09/28/99	13.00	NP	6.91	0.0	6.09	8	5	1	
	11/12/99	13.00	NP	7.06	0.0	5.94	8	5	1	
	02/11/00	13.00	NP	7.00	0.0	6.00	8	5	1	
	05/22/00	13.00	NP	6.21	0.0	6.79	8	5	1	
	09/06/00	13.00	NP	6.56	0.0	6.44	8	5	1	
MW-5 (cont)	12/19/00	13.00	NP	6.68	0.0	6.32	8	5	1	

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
	02/21/01	13.00	NP	6.08	0.0	6.92	8	5	1	
	04/03/01	13.00	NP	6.38	0.0	6.62	8	5	1	
	07/10/01	13.00	NP	6.58	0.0	6.42	8	5	1	
	12/12/01	13.00	NP	6.40	0.0	6.60	8	5	1	
	01/22/02	13.00	NP	6.10	0.0	6.90	8	5	1	
	03/08/02	13.00	NP	6.10	0.0	6.90	8	5	1	
	06/13/02	13.00	NP	6.31	0.0	6.69	8	5	1	
	09/26/02	13.00	NP	6.60	0.0	6.40	8	5	1	
	12/12/02	13.00	NP	6.75	0.0	6.25	8	5	1	
	03/17/03	13.00	NP	5.73	0.0	7.27	8	5	1	
	06/18/03	13.00	NP	6.10	0.0	6.90	8	5	1	
	09/03/03	13.00	NP	6.50	0.0	6.50	8	5	1	
	11/26/03	13.00	NP	6.70	0.0	6.30	8	5	1	
	03/05/04	13.00	NP	5.70	0.0	7.30	8	5	1	
	06/02/04	13.00	NP	6.27	0.0	6.73	8	5	1	
	09/03/04	13.00	NP	6.61	0.0	6.39	8	5	1	
	12/16/04	13.00	NP	6.02	0.0	6.98	8	5	1	
	03/29/05	13.00	NP	5.25	0.0	7.75	8	5	1	
	06/14/05	13.00	NP	5.82	0.0	7.18	8	5	1	
	08/10/05	13.00	NP	6.00	0.0	7.00	8	5	1	
	09/29/05	13.00	NP	6.26	0.0	6.74	8	5	1	
	12/21/05	13.00	NP	5.91	0.0	7.09	8	5	1	
	03/24/06	13.00	NP	NA[2]	NA[2]	NA	8	5	1	
	07/28/06	13.00	NP	6.08	0.0	6.92	8	5	1	
	11/29/06	15.39	NP	9.39	0.0	6.00	10.39	5	1	
	06/01/07	15.39	NP	10.60	0.0	4.79	10.39	5	0	
	11/14/07	15.39	NP	9.77	0.0	5.62	10.39	5	1	
	06/05/08	15.39	NP	9.74	0.0	5.65	10.39	5	1	
	12/18/08	15.39	NP	9.80	0.0	5.59	10.39	5	1	
	03/04/09	15.39	NP	8.78	0.0	6.61	10.39	5	1	
	04/01/09	15.39	NP	9.16	0.0	6.23	10.39	5	1	
	06/17/09	15.39	NP	9.51	0.0	5.88	10.39	5	1	
	12/08/09	15.39	NP	9.52	0.0	5.87	10.39	5	1	
	06/16/10	15.39	NP	9.31	0.0	6.08	10.39	5	1	
	12/14/10	15.39	NP	9.31	0.0	6.08	10.39	5	1	
	06/07/11	15.39	NP	9.06	0.0	6.33	10.39	5	1	
	06/21/11	15.39	NP	9.06	0.0	6.33	10.39	5	1	
	09/26/11	15.39	NP	9.30	0.0	6.09	10.39	5	1	
	12/05/11	15.39	NP	9.31	0.0	6.08	10.39	5	1	
	02/06/12	15.39	NP	9.32	0.0	6.07	10.39	5	1	
	06/19/12	15.39	NP	9.16	0.0	6.23	10.39	5	1	
	09/19/12	15.39	NP	9.39	0.0	6.00	10.39	5	1	
	12/04/12	15.39	NP	9.17	0.0	6.22	10.39	5	1	
	06/19/13	15.39	NP	9.32	0.0	6.07	10.39	5	1	
MW-6										**75%**
	06/24/99	13.51	NP	8.61	0.0	4.90	8	5.51	0	
	09/28/99	13.51	NP	9.26	0.0	4.25	8	5.51	0	
	11/12/99	13.51	NP	8.01	0.0	5.50	8	5.51	0	
	02/11/00	13.51	NP	7.20	0.0	6.31	8	5.51	1	
	05/22/00	13.51	NP	7.13	0.0	6.38	8	5.51	1	
	09/06/00	13.51	NP	7.12	0.0	6.39	8	5.51	1	
	12/19/00	13.51	NP	7.57	0.0	5.94	8	5.51	1	
	02/21/01	13.51	NP	7.50	0.0	6.01	8	5.51	1	
	04/03/01	13.51	NP	6.88	0.0	6.63	8	5.51	1	
	07/10/01	13.51	NP	7.15	0.0	6.36	8	5.51	1	
	12/12/01	13.51	NP	9.50	0.0	4.01	8	5.51	0	
	01/22/02	13.51	NP	6.69	0.0	6.82	8	5.51	1	
	03/08/02	13.51	NP	6.98	0.0	6.53	8	5.51	1	
	06/13/02	13.51	NP	7.45	0.0	6.06	8	5.51	1	
	09/26/02	13.51	NP	7.95	0.0	5.56	8	5.51	1	
	12/12/02	13.51	NP	7.71	0.0	5.80	8	5.51	1	
	12/18/02	Monitoring well was destroyed								

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
MW-7										**10%**
	12/31/97	13.86	NP	8.88	0.0	4.98	8	5.86	0	
	04/13/98	13.86	NP	7.86	0.0	6.00	8	5.86	1	
	11/06/98	13.86	NP	9.55	0.0	4.31	8	5.86	0	
	03/19/99	13.86	NP	8.41	0.0	5.45	8	5.86	0	
	06/24/99	13.86	NP	9.08	0.0	4.78	8	5.86	0	
	09/28/99	13.86	NP	9.60	0.0	4.26	8	5.86	0	
	11/12/99	13.86	NP	9.77	0.0	4.09	8	5.86	0	
	02/11/00	13.86	NP	8.67	0.0	5.19	8	5.86	0	
	05/22/00	13.86	NP	8.43	0.0	5.43	8	5.86	0	
	09/06/00	13.86	NP	8.88	0.0	4.98	8	5.86	0	
	12/19/00	13.86	NP	9.21	0.0	4.65	8	5.86	0	
	02/21/01	13.86	NP	8.13	0.0	5.73	8	5.86	0	
	04/03/01	13.86	NP	8.45	0.0	5.41	8	5.86	0	
	07/10/01	13.86	NP	8.87	0.0	4.99	8	5.86	0	
	12/12/01	13.86	NP	8.39	0.0	5.47	8	5.86	0	
	01/22/02	13.86	NP	7.99	0.0	5.87	8	5.86	1	
	03/08/02	13.86	NP	8.51	0.0	5.35	8	5.86	0	
	06/13/02	13.86	NP	8.90	0.0	4.96	8	5.86	0	
	09/26/02	13.86	NP	9.00	0.0	4.86	8	5.86	0	
	12/12/02	13.86	NP	9.28	0.0	4.58	8	5.86	0	
	12/18/02	Monitoring well was destroyed								
MW-8 [3]										**0%**
	12/31/97	12.45	8.49	8.82	0.33	3.63	8	4.45	0	
	11/06/98	12.45	9.25	10.30	1.05	2.15	8	4.45	0	
	11/21/98	Monitoring well was destroyed and replaced with well MW-8A								
MW-8A										**0%**
	12/12/01	12.45	NP	7.20	0.0	5.25	5	7.45	0	
	01/22/02	12.45	NP	7.20	0.0	5.25	5	7.45	0	
	03/08/02	12.45	NP	7.70	0.0	4.75	5	7.45	0	
	06/13/02	12.45	NP	7.72	0.0	4.73	5	7.45	0	
	09/26/02	12.45	NP	7.91	0.0	4.54	5	7.45	0	
	12/12/02	12.45	NP	8.15	0.0	4.30	5	7.45	0	
	03/17/03	12.45	NP	7.28	0.0	5.17	5	7.45	0	
	06/18/03	12.45	NP	7.72	0.0	4.73	5	7.45	0	
	09/03/03	12.45	NP	8.18	0.0	4.27	5	7.45	0	
	11/26/03	12.45	NP	8.55	0.0	3.90	5	7.45	0	
	03/05/04	12.45	NP	6.92	0.0	5.53	5	7.45	0	
	06/02/04	12.45	NP	7.92	0.0	4.53	5	7.45	0	
	09/03/04	12.45	NP	8.16	0.0	4.29	5	7.45	0	
	12/16/04	12.45	NP	7.62	0.0	4.83	5	7.45	0	
	03/29/05	12.45	NP	6.63	0.0	5.82	5	7.45	0	
	06/14/05	12.45	NP	7.60	0.0	4.85	5	7.45	0	
	08/10/05	12.45	NP	7.50	0.0	4.95	5	7.45	0	
	09/29/05	12.45	NP	7.76	0.0	4.69	5	7.45	0	
	12/21/05	12.45	NP	6.90	0.0	5.55	5	7.45	0	
	03/24/06	12.45	NP	6.65	0.0	5.80	5	7.45	0	
	07/28/06	12.45	NP	7.34	0.0	5.11	5	7.45	0	
	11/29/06	14.99	NP	11.41	0.0	3.58	7.54	7.45	0	
	06/01/07	14.99	NP	11.26	0.0	3.73	7.54	7.45	0	
	11/14/07	14.99	NP	11.40	0.0	3.59	7.54	7.45	0	
	06/05/08	14.99	NP	11.45	0.0	3.54	7.54	7.45	0	
	12/18/08	14.99	NP	11.30	0.0	3.69	7.54	7.45	0	
	03/04/09	14.99	NP	10.07	0.0	4.92	7.54	7.45	0	
	04/01/09	14.99	NP	10.92	0.0	4.07	7.54	7.45	0	
	06/17/09	14.99	NP	11.40	0.0	3.59	7.54	7.45	0	
	12/08/09	14.99	NP	11.64	0.0	3.35	7.54	7.45	0	
	06/16/10	14.99	NP	11.75	0.0	3.24	7.54	7.45	0	
	12/14/10	14.99	NP	10.75	0.0	4.24	7.54	7.45	0	
	06/07/11	14.99	NP	10.51	0.0	4.48	7.54	7.45	0	
	06/21/11	14.99	NP	10.64	0.0	4.35	7.54	7.45	0	
	09/26/11	14.99	NP	11.21	0.0	3.78	7.54	7.45	0	
	12/05/11	14.99	NP	11.29	0.0	3.70	7.54	7.45	0	
	02/06/12	14.99	NP	10.75	0.0	4.24	7.54	7.45	0	
	06/19/12	14.99	NP	11.04	0.0	3.95	7.54	7.45	0	
	09/19/12	14.99	NP	11.38	0.0	3.61	7.54	7.45	0	
	12/04/12	14.99	NP	9.87	0.0	5.12	7.54	7.45	0	
	06/19/13	14.99	NP	11.44	0.0	3.55	7.54	7.45	0	

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555 - 651 Maritime Street, Oakland, California

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MW-9										**100%**
	12/18/08	16.33	NP	12.88	0.0	3.45	15	1.33	1	
	03/04/09	16.33	NP	11.04	0.0	5.29	15	1.33	1	
	04/01/09	16.33	NP	11.51	0.0	4.82	15	1.33	1	
	06/17/09	16.33	NP	11.95	0.0	4.38	15	1.33	1	
	12/08/09	16.33	NP	12.30	0.0	4.03	15	1.33	1	
	06/16/10	16.33	NP	11.75	0.0	4.58	15	1.33	1	
	12/14/10	16.33	NP	11.51	0.0	4.82	15	1.33	1	
	06/07/11	16.33	NP	11.32	0.0	5.01	15	1.33	1	
	06/21/11	16.33	NP	11.37	0.0	4.96	15	1.33	1	
	09/26/11	16.33	NP	11.92	0.0	4.41	15	1.33	1	
	12/05/11	16.33	NP	11.99	0.0	4.34	15	1.33	1	
	02/06/12	16.33	NP	11.70	0.0	4.63	15	1.33	1	
	06/19/12	16.33	NP	11.76	0.0	4.57	15	1.33	1	
	09/19/12	16.33	NP	12.03	0.0	4.30	15	1.33	1	
	12/04/12	16.33	NP	11.15	0.0	5.18	15	1.33	1	
	06/19/13	16.33	NP	12.12	0.0	4.21	15	1.33	1	
MW-10										**100%**
	12/18/08	15.65	NP	14.34	0.0	1.31	15	0.65	1	
	03/04/09	15.65	NP	9.78	0.0	5.87	15	0.65	1	
	04/01/09	15.65	NP	10.33	0.0	5.32	15	0.65	1	
	06/17/09	15.65	NP	10.79	0.0	4.86	15	0.65	1	
	12/08/09	15.65	NP	10.96	0.0	4.69	15	0.65	1	
	06/16/10	15.65	NP	10.62	0.0	5.03	15	0.65	1	
	12/14/10	15.65	NP	10.31	0.0	5.34	15	0.65	1	
	06/07/11	15.65	NP	10.11	0.0	5.54	15	0.65	1	
	06/21/11	15.65	NP	10.19	0.0	5.46	15	0.65	1	
	09/26/11	15.65	NP	10.79	0.0	4.86	15	0.65	1	
	12/05/11	15.65	NP	10.80	0.0	4.85	15	0.65	1	
	02/06/12	15.65	NP	10.51	0.0	5.14	15	0.65	1	
	06/19/12	15.65	NP	10.61	0.0	5.04	15	0.65	1	
	09/19/12	15.65	NP	10.57	0.0	5.08	15	0.65	1	
	12/04/12	15.65	NP	9.96	0.0	5.69	15	0.65	1	
	06/19/13	15.65	NP	10.90	0.0	4.75	15	0.65	1	
MW-11										**100%**
	12/18/08	15.47	NP	13.42	0.0	2.05	15	0.47	1	
	03/04/09	15.47	NP	9.57	0.0	5.90	15	0.47	1	
	04/01/09	15.47	NP	9.94	0.0	5.53	15	0.47	1	
	06/17/09	15.47	NP	10.40	0.0	5.07	15	0.47	1	
	12/09/09	15.47	NP	10.68	0.0	4.79	15	0.47	1	
	06/16/10	15.47	NP	10.02	0.0	5.45	15	0.47	1	
	12/01/10	15.47	NP	10.02	0.0	5.45	15	0.47	1	
	06/07/11	15.47	NP	10.00	0.0	5.47	15	0.47	1	
	06/21/11	15.47	NP	9.85	0.0	5.62	15	0.47	1	
	09/26/11	15.47	NP	10.33	0.0	5.14	15	0.47	1	
	12/05/11	15.47	NP	10.59	0.0	4.88	15	0.47	1	
	02/06/12	15.47	NP	10.59	0.0	4.88	15	0.47	1	
	06/19/12	15.47	NP	10.12	0.0	5.35	15	0.47	1	
	09/19/12	15.47	NP	10.54	0.0	4.93	15	0.47	1	
	12/04/12	15.47	NP	9.65	0.0	5.82	15	0.47	1	
	06/19/13	15.47	NP	10.53	0.0	4.94	15	0.47	1	
MW-12										**100%**
	12/18/08	16.79	NP	12.75	0.0	4.04	15	1.79	1	
	03/04/09	16.79	NP	10.60	0.0	6.19	15	1.79	1	
	04/01/09	16.79	NP	11.23	0.0	5.56	15	1.79	1	
	6/17/2009	16.79	NP	11.83	0.0	4.96	15	1.79	1	
	12/8/2009	16.79	NP	12.13	0.0	4.66	15	1.79	1	
	6/16/2010	16.79	NP	11.31	0.0	5.48	15	1.79	1	
	12/14/2010	16.79	NP	11.15	0.0	5.64	15	1.79	1	
	6/7/2011	16.79	NP	10.81	0.0	5.98	15	1.79	1	
	6/21/2011	16.79	NP	11.01	0.0	5.78	15	1.79	1	
	9/26/2011	16.79	NP	11.77	0.0	5.02	15	1.79	1	
	12/5/2011	16.79	NP	11.89	0.0	4.90	15	1.79	1	
	2/6/2012	16.79	NP	11.60	0.0	5.19	15	1.79	1	
	6/19/2012	16.79	NP	11.49	0.0	5.30	15	1.79	1	
	9/19/2012	16.79	NP	12.04	0.0	4.75	15	1.79	1	
	12/4/2012	16.79	NP	10.74	0.0	6.05	15	1.79	1	
	6/19/2013	16.79	NP	12.01	0.0	4.78	15	1.79	1	

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)

Notes:
ft amsl = feet above mean sea level
ft bTOC = feet below top of casing
ft bgs = feet below ground surface
NP = no product detected with the interface probe
** = Ground elevation assumed to be approximately equal to casing elevation at time of install (top of screen elevation does not change when grade elevation char
NA = Not Available

TABLE 2. Free Product Recovery System Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
RW-1										**NA**
	5/11/2004	NA	NP	6.6	NP	NA	5	NA	NA	
	10/5/2004*	NA	NP	8.45	NP	NA	5	NA	NA	
	2/10/2005	NA	--	--	--	NA	5	NA	NA	
	5/6/2005	NA	--	--	--	NA	5	NA	NA	
	9/12/2005*	NA	NP	7.85	NP	NA	5	NA	NA	
	11/2/2005	NA	NP	8.12	NP	NA	5	NA	NA	
	2/3/2006	NA	--	--	--	NA	5	NA	NA	
	4/23/2006*	NA	--	--	--	NA	5	NA	NA	
	8/18/2006	NA	--	--	--	NA	5	NA	NA	
	11/2/2006	12.95	--	--	--	NA	NA	NA	NA	
	2/1/2007	12.95	--	--	--	NA	NA	NA	NA	
	5/3/2007	12.95	--	--	--	NA	NA	NA	NA	
	8/2/2007	12.95	--	--	--	NA	NA	NA	NA	
	11/2/2007	12.95	--	--	--	NA	NA	NA	NA	
	2/1/2008	12.95	--	--	--	NA	NA	NA	NA	
	5/2/2008	12.95	--	--	--	NA	NA	NA	NA	
	8/1/2008	12.95	--	--	--	NA	NA	NA	NA	
	11/7/2008	12.95	--	--	--	NA	NA	NA	NA	
	2/4/2009	12.95	--	--	--	NA	NA	NA	NA	
	5/4/2009	12.95	--	--	--	NA	NA	NA	NA	
	8/5/2009	12.95	--	--	--	NA	NA	NA	NA	
	11/4/2009	12.95	--	--	--	NA	NA	NA	NA	
	2/3/2010	12.95	--	--	--	NA	NA	NA	NA	
	5/5/2010	12.95	--	--	--	NA	NA	NA	NA	
	8/11/2010	12.95	--	--	--	NA	NA	NA	NA	
	11/3/2010	12.95	--	--	--	NA	NA	NA	NA	
	Well inaccessible; product and water levels not measured.									
RW-2										**NA**
	5/11/2004	NA	NP	9.1	NP	--	8	NA	NA	
	10/5/2004*	NA	--	--	--	--	8	NA	NA	
	2/10/2005	NA	--	--	--	--	8	NA	NA	
	5/6/2005	NA	--	--	--	--	8	NA	NA	
	9/12/2005*	NA	NP	10.23	NP	--	8	NA	NA	
	11/2/2005	NA	NP	10.5	NP	--	8	NA	NA	
	2/3/2006	NA	NP	7.66	NP	--	8	NA	NA	
	4/23/2006*	NA	--	--	--	--	8	NA	NA	
	8/18/2006	NA	--	9.93	--	--	8	NA	NA	
	11/2/2006	15.56	--	--	--	--	NA	NA	NA	
	2/1/2007	15.56	--	--	--	--	NA	NA	NA	
	5/3/2007	15.56	--	--	--	--	NA	NA	NA	
	8/2/2007	15.56	--	--	--	--	NA	NA	NA	
	11/2/2007	15.56	--	--	--	--	NA	NA	NA	
	2/1/2008	15.56	--	--	--	--	NA	NA	NA	
	5/2/2008	15.56	--	--	--	--	NA	NA	NA	
	8/1/2008	15.56	--	--	--	--	NA	NA	NA	
	11/7/2008	15.56	--	--	--	--	NA	NA	NA	
	2/4/2009	15.56	--	--	--	--	NA	NA	NA	
	5/4/2009	15.56	--	--	--	--	NA	NA	NA	
	8/5/2009	15.56	--	--	--	--	NA	NA	NA	
	11/4/2009	15.56	--	--	--	--	NA	NA	NA	
	2/3/2010	15.56	--	--	--	--	NA	NA	NA	
	5/5/2010	15.56	--	--	--	--	NA	NA	NA	
	8/11/2010	15.56	--	--	--	--	NA	NA	NA	
	11/3/2010	15.56	--	--	--	--	NA	NA	NA	
	06/07/11	15.56	NP	7.19	0.00	8.37	NA	NA	NA	
	06/21/11	15.56	NP	9.02	0.00	6.54	NA	NA	NA	
	12/05/11	15.56	NP	9.44	0.00	6.12	NA	NA	NA	
	02/06/12	15.56	NP	9.22	0.00	6.34	NA	NA	NA	
	06/20/12	15.56	NP	9.80	0.00	5.76	NA	NA	NA	
	09/19/12	15.56	NP	10.35	0.00	5.21	NA	NA	NA	
	12/04/12	15.56	NP	6.89	0.00	8.67	NA	NA	NA	
	06/19/13	15.56	NP	10.13	0.00	5.43	NA	NA	NA	
RW-3										**NA**
	5/11/2004	NA	NP	8.9	NP	--	8	NA	NA	
	10/5/2004*	NA	10.81	10.84	0.03	--	8	NA	NA	
	2/10/2005	NA	9.26	10.66	1.4	--	8	NA	NA	

TABLE 2. Free Product Recovery System Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
	5/6/2005	NA	8.99	9.88	0.89	--	8	NA	NA	
	9/12/2005*	NA	10.11	11.11	1	--	8	NA	NA	
	11/2/2005	NA	10.57	10.82	0.25	--	8	NA	NA	
	2/3/2006	NA	8.35	8.7	0.35	--	8	NA	NA	
	4/23/2006*	NA	8.85	8.97	0.12	--	8	NA	NA	
RW-3 (cont.	8/18/2006	NA	--	9.89	--	--	8	NA	NA	
	11/2/2006	15.56	10.65	10.67	0.02	4.89	NA	NA	NA	
	2/1/2007	15.56	10.65	10.66	0.01	4.9	NA	NA	NA	
	5/3/2007	15.56	10.71	10.81	0.1	4.75	NA	NA	NA	
	8/2/2007	15.56	11	11.05	0.05	4.51	NA	NA	NA	
	11/2/2007	15.56	--	--	--	--	NA	NA	NA	
	2/1/2008	15.56	10.77	11.91	1.14	3.65	NA	NA	NA	
	5/2/2008	15.56	10.64	11.66	1.02	3.9	NA	NA	NA	
	8/1/2008	15.56	10.75	11.05	0.3	4.51	NA	NA	NA	
	11/7/2008	15.56	10.22	10.9	0.68	4.66	NA	NA	NA	
	2/4/2009	15.56	11.2	11.32	0.12	4.24	NA	NA	NA	
	5/4/2009	15.56	10.82	11.41	0.59	4.15	NA	NA	NA	
	8/5/2009	15.56	11.1	11.14	0.04	4.42	NA	NA	NA	
	11/4/2009	15.56	10.83	11.24	0.41	4.32	NA	NA	NA	
	2/3/2010	15.56	9.51	12.2	2.69	3.36	NA	NA	NA	
	5/5/2010	15.56	10.07	10.9	0.83	4.66	NA	NA	NA	
	8/11/2010	15.56	10.81	11.19	0.38	4.37	NA	NA	NA	
	11/3/2010	15.56	10.99	11.72	0.73	3.84	NA	NA	NA	
	01/12/11	15.56	9.87	11.04	1.17	5.34	NA	NA	NA	
	01/26/11	15.56	10.28	10.43	0.15	5.24	NA	NA	NA	
	02/10/11	15.56	10.45	10.90	0.45	4.98	NA	NA	NA	
	02/24/11	15.56	9.42	12.13	2.71	5.33	NA	NA	NA	
	03/09/11	15.56	9.45	13.04	3.60	5.04	NA	NA	NA	
	03/23/11	15.56	8.63	12.18	3.55	5.87	NA	NA	NA	
	04/06/11	15.56	9.10	11.49	2.39	5.74	NA	NA	NA	
	04/20/11	15.56	9.70	10.88	1.18	5.51	NA	NA	NA	
	05/04/11	15.56	10.05	10.47	0.42	5.38	NA	NA	NA	
	05/18/11	15.56	9.95	10.17	0.22	5.54	NA	NA	NA	
	06/07/11	15.56	9.73	13.52	3.79	4.69	NA	NA	NA	
	06/21/11	15.56	10.10	11.20	1.10	5.13	NA	NA	NA	
	09/26/11	15.56	10.63	12.66	2.03	4.32	NA	NA	NA	
	10/05/11	15.56	10.48	10.98	0.50	4.93	NA	NA	NA	
	10/19/11	15.56	10.64	11.91	1.27	4.54	NA	NA	NA	
	12/05/11	15.56	10.75	12.67	1.92	4.23	NA	NA	NA	
	02/06/12	15.56	10.32	12.54	2.22	4.57	NA	NA	NA	
	06/20/12	15.56	10.38	12.56	2.18	4.53	NA	NA	NA	
	09/19/12	15.56	10.87	13.07	2.20	4.03	NA	NA	NA	
	12/04/12	15.56	9.35	13.54	4.19	4.95	NA	NA	NA	
	06/19/13	15.56	10.75	13.62	2.87	3.95	NA	NA	NA	
RW-4										**NA**
	5/11/2004	NA	7.7	7.75	0.05	--	8	NA	NA	
	10/5/2004*	NA	10.06	10.11	0.05	--	8	NA	NA	
	2/10/2005	NA	8.3	8.41	0.11	--	8	NA	NA	
	5/6/2005	NA	8.1	8.15	0.05	--	8	NA	NA	
	9/12/2005*	NA	1	9.74	8.74	--	8	NA	NA	
	11/2/2005	NA	9.76	9.99	0.23	--	8	NA	NA	
	2/3/2006	NA	7.73	7.75	0.02	--	8	NA	NA	
	4/23/2006*	NA	7.52	7.52	0	--	8	NA	NA	
	8/18/2006	NA	8.03	8.04	0.01	--	8	NA	NA	
	11/2/2006	14.92	--	9.71	--	5.21	NA	NA	NA	
	2/1/2007	14.92	Sheen	9.84	0	5.08	NA	NA	NA	
	5/3/2007	14.92	--	--	--	--	NA	NA	NA	
	8/2/2007	14.92	10.29	10.38	0.09	4.54	NA	NA	NA	
	11/2/2007	14.92	--	--	--	--	NA	NA	NA	
	2/1/2008	14.92	9.79	9.95	0.16	4.97	NA	NA	NA	
	5/2/2008	14.92	10.09	10.23	0.14	4.69	NA	NA	NA	
	8/1/2008	14.92	10.8	11.3	0.5	3.62	NA	NA	NA	
	11/7/2008	14.92	10.5	11.2	0.7	3.72	NA	NA	NA	
	2/4/2009	14.92	10.29	10.83	0.54	4.09	NA	NA	NA	
	5/4/2009	14.92	9.83	11.44	1.61	3.48	NA	NA	NA	

TABLE 2. Free Product Recovery System Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
	8/5/2009	14.92	10.31	10.88	0.57	4.04	NA	NA	NA	
	11/4/2009	14.92	10.06	10.78	0.72	4.14	NA	NA	NA	
	2/3/2010	14.92	9.12	9.33	0.21	5.59	NA	NA	NA	
	5/5/2010	14.92	9.37	9.69	0.32	5.23	NA	NA	NA	
	8/11/2010	14.92	10.08	10.56	0.48	4.36	NA	NA	NA	
	11/3/2010	14.92	10.38	10.44	0.06	4.48	NA	NA	NA	
	01/12/11	14.92	9.12	9.20	0.08	5.78	NA	NA	NA	
	01/26/11	14.92	9.39	9.89	0.50	5.38	NA	NA	NA	
	02/10/11	14.92	9.52	10.54	1.02	5.09	NA	NA	NA	
RW-4 (cont.	02/24/11	14.92	8.80	9.10	0.30	6.03	NA	NA	NA	
	03/09/11	14.92	8.93	8.96	0.03	5.98	NA	NA	NA	
	03/23/11	14.92	8.39	8.43	0.04	6.52	NA	NA	NA	
	04/06/11	14.92	8.46	8.50	0.04	6.45	NA	NA	NA	
	04/14/11	14.92	8.88	8.91	0.03	6.03	NA	NA	NA	
	05/04/11	14.92	9.13	9.17	0.04	5.78	NA	NA	NA	
	05/18/11	14.92	9.18	9.20	0.02	5.73	NA	NA	NA	
	06/07/11	14.92	NP	8.95	0.00	5.97	NA	NA	NA	
	06/21/11	14.92	9.33 [2]	9.33	0.00	5.59	NA	NA	NA	
	09/26/11	14.92	9.82	10.41	0.59	4.92	NA	NA	NA	
	10/05/11	14.92	9.68	10.17	0.49	5.09	NA	NA	NA	
	10/19/11	14.92	9.60	10.26	0.66	5.12	NA	NA	NA	
	12/05/11	14.92	9.70	10.00	0.30	5.13	NA	NA	NA	
	02/06/12	14.92	9.10	10.66	1.56	5.35	NA	NA	NA	
	06/20/12	14.92	9.20	9.27	0.07	5.70	NA	NA	NA	
	09/19/12	14.92	9.62	14.21	4.59	3.92	NA	NA	NA	
	12/04/12	14.92	8.37	11.69	3.32	5.55	NA	NA	NA	
	06/19/13	14.92	9.94	14.27	4.33	3.68	NA	NA	NA	
RW-5										**NA**
	5/11/2004	NA	NP	7.1	NP	--	8	NA	NA	
	10/5/2004*	NA	NP	8.04	NP	--	8	NA	NA	
	2/10/2005	NA	--	--	--	--	8	NA	NA	
	5/6/2005	NA	--	--	--	--	8	NA	NA	
	9/12/2005*	NA	NP	7.83	NP	--	8	NA	NA	
	11/2/2005	NA	--	--	--	--	8	NA	NA	
	2/3/2006	NA	NP	6.88	NP	--	8	NA	NA	
	4/23/2006*	NA	--	--	--	--	8	NA	NA	
	8/18/2006	NA	--	--	--	--	8	NA	NA	
	11/2/2006	14.79	--	--	--	--	NA	NA	NA	
	2/1/2007	14.79	--	--	--	--	NA	NA	NA	
	5/3/2007	14.79	--	--	--	--	NA	NA	NA	
	8/2/2007	14.79	--	--	--	--	NA	NA	NA	
	11/2/2007	14.79	--	--	--	--	NA	NA	NA	
	2/1/2008	14.79	8	8.17	0.17	6.62	NA	NA	NA	
	5/2/2008	14.79	--	--	--	--	NA	NA	NA	
	8/1/2008	14.79	9.05	9.3	0.25	5.49	NA	NA	NA	
	11/7/2008	14.79	--	--	--	--	NA	NA	NA	
	2/4/2009	14.79	--	--	--	--	NA	NA	NA	
	5/4/2009	14.79	8.45	8.94	0.49	5.85	NA	NA	NA	
	8/5/2009	14.79	--	--	--	--	NA	NA	NA	
	11/4/2009	14.79	--	--	--	--	NA	NA	NA	
	2/3/2010	14.79	sheen	6.6	0	8.19	NA	NA	NA	
	5/5/2010	14.79	--	--	--	--	NA	NA	NA	
	8/11/2010	14.79	--	--	--	--	NA	NA	NA	
	11/3/2010	14.79	6.41	9.54	3.13	5.25	NA	NA	NA	
	04/14/11	14.79	6.74	9.72	2.98	7.16	NA	NA	NA	
	05/18/11	14.79	6.78 [2]	6.78	0.00	8.01	NA	NA	NA	
	06/07/11	14.79	7.38	7.47	0.09	7.38	NA	NA	NA	
	09/26/11	14.79	8.95	9.75	0.80	5.60	NA	NA	NA	
	10/05/11	14.79	8.66	9.09	0.43	6.00	NA	NA	NA	
	02/06/12	14.79	8.47	12.01	3.54	5.26	NA	NA	NA	
	06/20/12	Well not accessible.					NA	NA	NA	
	09/19/12	Well not accessible.					NA	NA	NA	
	12/04/12	Well not accessible.					NA	NA	NA	
	06/19/13	Well not accessible.					NA	NA	NA	
RW-6										**NA**

TABLE 2. Free Product Recovery System Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
	5/11/2004	NA	NP	7.35	NP	--	8	NA	NA	
	10/5/2004*	NA	8.79	8.82	0.03	--	8	NA	NA	
	2/10/2005	NA	7.78	8.47	0.69	--	8	NA	NA	
	5/6/2005	NA	7.66	7.92	0.26	--	8	NA	NA	
	9/12/2005*	NA	8.26	8.79	0.53	--	8	NA	NA	
	11/2/2005	NA	8.52	8.81	0.29	--	8	NA	NA	
	2/3/2006	NA	7.35	7.39	0.04	--	8	NA	NA	
	4/23/2006*	NA	7.25	7.8	0.55	--	8	NA	NA	
	8/18/2006	NA	--	7.88	--	--	8	NA	NA	
	11/2/2006	15.75	8.75	8.84	0.09	6.91	NA	NA	NA	
	2/1/2007	15.75	8.85	8.89	0.04	6.86	NA	NA	NA	
	5/3/2007	15.75	8.82	8.92	0.1	6.83	NA	NA	NA	
	8/2/2007	15.75	9.1	9.48	0.38	6.27	NA	NA	NA	
RW-6 (cont.	11/2/2007	15.75	8.89	9.9	1.01	5.85	NA	NA	NA	
	2/1/2008	15.75	8.24	8.41	0.17	7.34	NA	NA	NA	
	5/2/2008	15.75	8.33	9.17	0.84	6.58	NA	NA	NA	
	8/1/2008	15.75	8.75	10.3	1.55	5.45	NA	NA	NA	
	11/7/2008	15.75	9	10.5	1.5	5.25	NA	NA	NA	
	2/4/2009	15.75	9	10.98	1.98	4.77	NA	NA	NA	
	5/4/2009	15.75	8.45	10.06	1.61	5.69	NA	NA	NA	
	8/5/2009	15.75	8.73	10.93	2.2	4.82	NA	NA	NA	
	11/4/2009	15.75	8.93	10.92	1.99	4.83	NA	NA	NA	
	2/3/2010	15.75	8.55	9.81	1.26	5.94	NA	NA	NA	
	5/5/2010	15.75	8.62	8.94	0.32	6.81	NA	NA	NA	
	8/11/2010	15.75	8.78	10.14	1.36	5.61	NA	NA	NA	
	11/3/2010	15.75	8.84	10.61	1.77	5.14	NA	NA	NA	
	01/12/11	15.75	8.51	9.68	1.17	6.89	NA	NA	NA	
	01/26/11	15.75	8.65	9.55	0.90	6.83	NA	NA	NA	
	02/10/11	15.75	8.44	9.74	1.30	6.92	NA	NA	NA	
	02/24/11	15.75	8.15	9.82	1.67	7.10	NA	NA	NA	
	03/09/11	15.75	8.25	9.37	1.12	7.16	NA	NA	NA	
	03/23/11	15.75	8.18	8.96	0.78	7.34	NA	NA	NA	
	04/06/11	15.75	8.19	8.95	0.76	7.33	NA	NA	NA	
	04/20/11	15.75	8.43	8.54	0.11	7.29	NA	NA	NA	
	05/04/11	15.75	8.51	8.62	0.11	7.21	NA	NA	NA	
	05/18/11	15.75	8.53	8.70	0.17	7.17	NA	NA	NA	
	06/07/11	15.75	8.82	9.05	0.23	6.86	NA	NA	NA	
	06/21/11	15.75	8.89	9.20	0.31	6.77	NA	NA	NA	
	09/26/11	15.75	8.86	10.20	1.34	6.49	NA	NA	NA	
	10/05/11	15.75	9.05	9.72	0.67	6.50	NA	NA	NA	
	10/19/11	15.75	8.99	10.16	1.17	6.41	NA	NA	NA	
	12/05/12	15.75	9.05	10.62	1.57	6.23	NA	NA	NA	
	02/06/12	15.75	8.95	10.82	1.87	6.24	NA	NA	NA	
	06/20/12	15.75	8.92	9.99	1.07	6.51	NA	NA	NA	
	09/19/12	15.75	9.10	10.83	1.73	6.13	NA	NA	NA	
	12/04/12	15.75	8.83	10.79	1.96	6.33	NA	NA	NA	
	06/19/13	15.75	8.86	10.35	1.49	6.44	NA	NA	NA	
RW-7										**NA**
	5/11/2004	NA	NP	7.2	NP	--	8	NA	NA	
	10/5/2004*	NA	8.41	8.67	0.26	--	8	NA	NA	
	2/10/2005	NA	7.51	7.7	0.19	--	8	NA	NA	
	5/6/2005	NA	7.28	7.42	0.14	--	8	NA	NA	
	9/12/2005*	NA	7.85	8.04	0.19	--	8	NA	NA	
	11/2/2005	NA	8.05	8.21	0.16	--	8	NA	NA	
	2/3/2006	NA	7.02	7.09	0.07	--	8	NA	NA	
	4/23/2006*	NA	6.85	6.86	0.01	--	8	NA	NA	
	8/18/2006	NA	7.4	7.5	0.1	--	8	NA	NA	
	11/2/2006	15.02	--	8.2	--	6.82	NA	NA	NA	
	2/1/2007	15.02	NP	8.28	NP	6.74	NA	NA	NA	
	5/3/2007	15.02	--	--	--	--	NA	NA	NA	
	8/2/2007	15.02	--	--	--	--	NA	NA	NA	
	11/2/2007	15.02	8.32	9.24	0.92	5.78	NA	NA	NA	
	2/1/2008	15.02	8.12	8.45	0.33	6.57	NA	NA	NA	
	5/2/2008	15.02	7.75	7.81	0.06	7.21	NA	NA	NA	
	8/1/2008	15.02	8.17	9.4	1.23	5.62	NA	NA	NA	

TABLE 2. Free Product Recovery System Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
	11/7/2008	15.02	8.45	9.2	0.75	5.82	NA	NA	NA	
	2/4/2009	15.02	8.31	10.92	2.61	4.1	NA	NA	NA	
	5/4/2009	15.02	7.2	7.94	0.74	7.08	NA	NA	NA	
	8/5/2009	15.02	8.26	10.26	2	4.76	NA	NA	NA	
	11/4/2009	15.02	8.02	10.51	2.49	4.51	NA	NA	NA	
	2/3/2010	15.02	7.85	8.33	0.48	6.69	NA	NA	NA	
	5/5/2010	15.02	7.95	8.23	0.28	6.79	NA	NA	NA	
	8/11/2010	15.02	7.87	9.85	1.98	5.17	NA	NA	NA	
	11/3/2010	15.02	7.65	9.48	1.83	5.54	NA	NA	NA	
	01/12/11	15.02	7.86	7.91	0.05	7.15	NA	NA	NA	
	01/26/11	15.02	7.55	7.64	0.09	7.44	NA	NA	NA	
	02/10/11	15.02	7.50	7.68	0.18	7.47	NA	NA	NA	
	02/24/11	15.02	7.82	8.92	1.10	6.87	NA	NA	NA	
	03/09/11	15.02	7.42	7.53	0.11	7.57	NA	NA	NA	
	03/23/11	15.02	NP	7.24	0.00	7.78	NA	NA	NA	
	04/06/11	15.02	7.73	7.73	0.00	7.29	NA	NA	NA	
	04/20/11	15.02	7.54	7.56	0.02	7.47	NA	NA	NA	
	05/04/11	15.02	7.68	7.74	0.06	7.32	NA	NA	NA	
RW-7 (cont.	05/18/11	15.02	7.35 [2]	7.35	0.00	7.67	NA	NA	NA	
	06/07/11	15.02	7.98 [2]	7.98	0.00	7.04	NA	NA	NA	
	06/21/11	15.02	8.07	8.09	0.00	6.93	NA	NA	NA	
	09/26/11	15.02	8.29	8.90	0.61	6.55	NA	NA	NA	
	10/05/11	15.02	8.19	8.45	0.26	6.75	NA	NA	NA	
	10/19/11	15.02	8.24	8.90	0.66	6.58	NA	NA	NA	
	12/05/11	15.02	8.26	9.77	1.51	6.31	NA	NA	NA	
	02/06/12	15.02	8.18	9.86	1.68	6.34	NA	NA	NA	
	06/20/12	15.02	8.35	8.41	0.06	6.65	NA	NA	NA	
	09/19/12	15.02	8.45	11.44	2.99	5.67	NA	NA	NA	
	12/04/12	15.02	8.25	8.33	0.08	6.75	NA	NA	NA	
	06/19/13	15.02	8.25	13.75	5.50	5.12	NA	NA	NA	
RW-8										**NA**
	5/11/2004	NA	NP	7.65	NP	--	9	NA	NA	
	10/5/2004*	NA	9.09	9.17	0.08	--	9	NA	NA	
	2/10/2005	NA	8.54	8.55	0.01	--	9	NA	NA	
	5/6/2005	NA	8.22	8.23	0.01	--	9	NA	NA	
	9/12/2005*	NA	8.62	9.26	0.64	--	9	NA	NA	
	11/2/2005	NA	8.81	9.42	0.61	--	9	NA	NA	
	2/3/2006	NA	7.92	8	0.08	--	9	NA	NA	
	4/23/2006*	NA	7.63	7.63	0	--	9	NA	NA	
	8/18/2006	NA	--	8.21	--	--	9	NA	NA	
	11/2/2006	15.91	9.04	9.06	0.02	6.85	NA	NA	NA	
	2/1/2007	15.91	9.15	9.23	0.08	6.68	NA	NA	NA	
	5/3/2007	15.91	9.25	9.31	0.06	6.6	NA	NA	NA	
	8/2/2007	15.91	9.25	9.57	0.32	6.34	NA	NA	NA	
	11/2/2007	15.91	9.4	9.71	0.31	6.2	NA	NA	NA	
	2/1/2008	15.91	9.71	10	0.29	5.91	NA	NA	NA	
	5/2/2008	15.91	8.89	9.16	0.27	6.75	NA	NA	NA	
	8/1/2008	15.91	9.35	10.85	1.5	5.06	NA	NA	NA	
	11/7/2008	15.91	9.3	10.8	1.5	5.11	NA	NA	NA	
	2/4/2009	15.91	9.3	11.16	1.86	4.75	NA	NA	NA	
	5/4/2009	15.91	9.23	9.93	0.7	5.98	NA	NA	NA	
	8/5/2009	15.91	9.6	10.9	1.3	5.01	NA	NA	NA	
	11/4/2009	15.91	9.54	10.41	0.87	5.5	NA	NA	NA	
	2/3/2010	15.91	9.26	9.84	0.58	6.07	NA	NA	NA	
	5/5/2010	15.91	9.14	9.33	0.19	6.58	NA	NA	NA	
	8/11/2010	15.91	9.2	9.76	0.56	6.15	NA	NA	NA	
	11/3/2010	15.91	9.53	10.49	0.96	5.42	NA	NA	NA	
	01/12/11	15.91	9.07	9.21	0.14	6.80	NA	NA	NA	
	01/26/11	15.91	9.23	9.31	0.08	6.66	NA	NA	NA	
	02/10/11	15.91	9.13	9.33	0.20	6.72	NA	NA	NA	
	02/24/11	15.91	8.86	9.23	0.37	6.94	NA	NA	NA	
	03/09/11	15.91	8.78	9.01	0.23	7.06	NA	NA	NA	
	03/23/11	15.91	8.42	8.70	0.28	7.41	NA	NA	NA	
	04/06/11	15.91	8.55	8.80	0.25	7.29	NA	NA	NA	
	04/20/11	15.91	8.92	9.14	0.22	6.92	NA	NA	NA	
	05/04/11	15.91	9.04	9.20	0.16	6.82	NA	NA	NA	

TABLE 2. Free Product Recovery System Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
	05/18/11	15.91	8.85	9.10	0.25	6.99	NA	NA	NA	
	06/07/11	15.91	10.23	10.34	0.11	5.65	NA	NA	NA	
	06/21/11	15.91	9.27	9.41	0.14	6.60	NA	NA	NA	
	09/26/11	15.91	9.23	9.62	0.39	6.56	NA	NA	NA	
	10/05/11	15.91	9.28	9.40	0.12	6.59	NA	NA	NA	
	10/19/11	15.91	9.54	9.77	0.23	6.30	NA	NA	NA	
	12/05/11	15.91	9.62	10.19	0.57	6.12	NA	NA	NA	
	02/06/12	15.91	9.21	10.22	1.01	6.40	NA	NA	NA	
	06/20/12	15.91	9.36	10.28	0.92	6.27	NA	NA	NA	
	09/19/12	15.91	10.55	11.45	0.90	5.09	NA	NA	NA	
	12/04/12	15.91	9.29	11.32	2.03	6.01	NA	NA	NA	
	06/19/13	15.91	9.42	11.11	1.69	5.98	NA	NA	NA	
RW-9										**NA**
	5/11/2004	NA	NP	9.4	NP	--	9	NA	NA	
	10/5/2004*	NA	10.24	10.26	0.02	--	9	NA	NA	
	2/10/2005	NA	--	--	--	--	9	NA	NA	
	5/6/2005	NA	--	--	--	--	9	NA	NA	
	9/12/2005*	NA	NP	10.27	NP	--	9	NA	NA	
	11/2/2005	NA	NP	10.42	NP	--	9	NA	NA	
	2/3/2006	NA	NP	9.21	NP	--	9	NA	NA	
	4/23/2006*	NA	--	--	--	--	9	NA	NA	
RW-9 (cont.	8/18/2006	NA	--	--	--	--	9	NA	NA	
	11/2/2006	16.57	--	--	--	--	NA	NA	NA	
	2/1/2007	16.57	--	--	--	--	NA	NA	NA	
	5/3/2007	16.57	--	--	--	--	NA	NA	NA	
	8/2/2007	16.57	--	--	--	--	NA	NA	NA	
	11/2/2007	16.57	--	--	--	--	NA	NA	NA	
	2/1/2008	16.57	10.71	11.05	0.34	5.52	NA	NA	NA	
	5/2/2008	16.57	8.34	9.41	1.07	7.16	NA	NA	NA	
	8/1/2008	16.57	10.05	11.25	1.2	5.32	NA	NA	NA	
	11/7/2008	16.57	9.9	11.1	1.2	5.47	NA	NA	NA	
	2/4/2009	16.57	9.88	11.7	1.82	4.87	NA	NA	NA	
	5/4/2009	16.57	9.87	10.64	0.77	5.93	NA	NA	NA	
	8/5/2009	16.57	9.95	10.59	0.64	5.98	NA	NA	NA	
	11/4/2009	16.57	9.91	10.5	0.59	6.07	NA	NA	NA	
	2/3/2010	16.57	9.46	9.52	0.06	7.05	NA	NA	NA	
	5/5/2010	16.57	9.57	9.63	0.06	6.94	NA	NA	NA	
	8/11/2010	16.57	9.78	10.02	0.24	6.55	NA	NA	NA	
	11/3/2010	16.57	9.86	10.16	0.3	6.41	NA	NA	NA	
	01/12/11	16.57	9.26	9.45	0.19	7.25	NA	NA	NA	
	01/26/11	16.57	9.32	9.53	0.21	7.19	NA	NA	NA	
	02/10/11	16.57	9.42	9.63	0.21	7.09	NA	NA	NA	
	02/24/11	16.57	9.24	9.43	0.19	7.27	NA	NA	NA	
	03/09/11	16.57	9.16	9.35	0.19	7.35	NA	NA	NA	
	03/23/11	16.57	9.07	9.23	0.16	7.45	NA	NA	NA	
	04/06/11	16.57	9.00	9.16	0.16	7.52	NA	NA	NA	
	04/20/11	16.57	9.10	9.29	0.19	7.41	NA	NA	NA	
	05/04/11	16.57	9.19	9.40	0.21	7.32	NA	NA	NA	
	05/18/11	16.57	9.26	9.46	0.20	7.25	NA	NA	NA	
	06/07/11	16.57	9.35	9.56	0.21	7.16	NA	NA	NA	
	06/21/11	16.57	9.30	9.50	0.20	7.21	NA	NA	NA	
	09/26/11	16.57	9.67	9.85	0.18	6.85	NA	NA	NA	
	10/05/11	16.57	9.70	9.81	0.11	6.84	NA	NA	NA	
	10/19/11	16.57	9.67	9.78	0.11	6.87	NA	NA	NA	
	12/05/11	16.57	9.75	10.14	0.39	6.70	NA	NA	NA	
	02/06/12	16.57	9.88	10.37	0.49	6.54	NA	NA	NA	
	06/20/12	16.57	9.49	10.40	0.91	6.81	NA	NA	NA	
	09/19/12	16.57	9.81	11.04	1.23	6.39	NA	NA	NA	
	12/04/12	16.57	9.50	11.06	1.56	6.60	NA	NA	NA	
	06/19/13	16.57	9.68	10.76	1.08	6.57	NA	NA	NA	

Notes:
From April 2004 to November 2010, only data from the second month of each quarter reported in this table. All available data provided as attachment
ft amsl = feet above mean sea level

TABLE 2. Free Product Recovery System Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Top of Casing (ft amsl)	Depth to Product (ft bTOC)	Depth to Water (ft bTOC)	Product Thickness (ft)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)

ft bTOC = feet below top of casing
ft bgs = feet below ground surface
NP = no product detected with the interface probe
* = data from second month of quarter not available, first or third month shown instead
** = Ground elevation assumed to be approximately equal to casing elevation at time of install (top of screen elevation does not change when grade elevation chan
NA = Not Available
-- = not measured/not applicable

TABLE 3. Historical Groundwater Elevation and Free Product Data
Former 2225 7th Street Wells
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Top of Casing (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
MW-1								**4%**
	01/15/93	13.72	5.21	8.51	5	8.72	0	
	09/12/94	13.72	6.37	7.35	5	8.72	0	
	11/30/94	13.72	5.76	7.96	5	8.72	0	
	03/29/95	13.72	4.57	9.15	5	8.72	1	
	05/25/95	13.72	5.14	8.58	5	8.72	0	
	06/21/95	13.72	5.41	8.31	5	8.72	0	
	06/23/95	13.72	5.44	8.28	5	8.72	0	
	11/20/95	13.72	6.28	7.44	5	8.72	0	
	12/27/95	13.72	5.86	7.86	5	8.72	0	
	03/25/96	13.72	5.21	8.51	5	8.72	0	
	06/26/96	13.72	5.58	8.14	5	8.72	0	
	10/14/96	13.72	6.22	7.50	5	8.72	0	
	03/19/97	13.72	5.48	8.24	5	8.72	0	
	06/26/00	13.72	5.19	8.53	5	8.72	0	
	09/06/00	13.72	5.62	8.10	5	8.72	0	
	12/19/00	13.72	5.57	8.15	5	8.72	0	
	04/03/01	13.72	5.03	8.69	5	8.72	0	
	07/10/01	13.72	5.57	8.15	5	8.72	0	
	12/12/01	13.72	5.60	8.12	5	8.72	0	
	01/22/02	13.72	5.19	8.53	5	8.72	0	
	03/08/02	13.72	5.17	8.55	5	8.72	0	
	06/13/02	13.72	5.60	8.12	5	8.72	0	
	09/26/02	13.72	6.05	7.67	5	8.72	0	
MW-2								**0%**
	01/15/93	13.80	6.21	7.59	5	8.8	0	
	09/12/94	13.80	6.47	7.33	5	8.80	0	
	11/30/94	13.80	6.34	7.46	5	8.80	0	
	03/29/95	13.80	5.51	8.29	5	8.80	0	
	05/25/95	13.80	5.60	8.20	5	8.80	0	
	06/21/95	13.80	5.72	8.08	5	8.80	0	
	06/23/95	13.80	5.72	8.08	5	8.80	0	
	09/28/95	13.80	6.15	7.65	5	8.80	0	
	11/20/95	13.80	6.42	7.38	5	8.80	0	
	12/27/95	13.80	6.31	7.49	5	8.80	0	
	03/25/96	13.80	5.74	8.06	5	8.80	0	
	06/26/96	13.80	5.85	7.95	5	8.80	0	
	10/14/96	13.80	6.36	7.44	5	8.80	0	
	03/19/97	13.80	5.90	7.90	5	8.80	0	
	06/26/00	13.80	5.37	8.43	5	8.80	0	
	09/06/00	13.80	5.62	8.18	5	8.80	0	
	12/19/00	13.80	5.81	7.99	5	8.80	0	
	04/03/01	13.80	5.38	8.42	5	8.80	0	
	07/10/01	13.80	5.80	8.00	5	8.80	0	
	12/12/01	13.80	10.00	3.80	5	8.80	0	
	01/22/02	13.80	5.45	8.35	5	8.80	0	
	03/08/02	13.80	5.49	8.31	5	8.80	0	
	06/13/02	13.80	5.79	8.01	5	8.80	0	
	09/26/02	13.80	8.15	5.65	5	8.80	0	
MW-3								**0%**
	01/15/93	15.06	6.44	8.62	5	10.06	0	
	09/12/94	15.06	7.35	7.71	5	10.06	0	

TABLE 3. Historical Groundwater Elevation and Free Product Data
Former 2225 7th Street Wells
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Top of Casing (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation (ft amsl)	Top of Screen (ft bgs)	Top of Screen** (ft amsl)	Submerged (1=Y/0=N)	Historically Submerged (%)
	11/30/94	15.06	7.12	7.94	5	10.06	0	
	03/29/95	15.06	6.31	8.75	5	10.06	0	
	05/25/95	15.06	6.75	8.31	5	10.06	0	
	06/21/95	15.06	6.87	8.19	5	10.06	0	
	06/23/95	15.06	6.88	8.18	5	10.06	0	
	09/28/95	15.06	7.28	7.78	5	10.06	0	
	11/20/95	15.06	7.51	7.55	5	10.06	0	
	12/27/95	15.06	7.20	7.86	5	10.06	0	
	03/25/96	15.06	6.64	8.42	5	10.06	0	
	06/26/96	15.06	6.98	8.08	5	10.06	0	
	10/14/96	15.06	7.47	7.59	5	10.06	0	
	03/19/97	15.06	6.99	8.07	5	10.06	0	
	06/26/00	15.06	6.82	8.24	5	10.06	0	
	09/06/00	15.06	6.82	8.24	5	10.06	0	
	12/19/00	15.06	7.10	7.96	5	10.06	0	
	04/03/01	15.06	6.66	8.40	5	10.06	0	
	07/10/01	15.06	7.00	8.06	5	10.06	0	
	12/12/01	15.06	7.04	8.02	5	10.06	0	
	01/22/02	15.06	6.67	8.39	5	10.06	0	
	03/08/02	15.06	6.86	8.20	5	10.06	0	
	06/13/02	15.06	7.00	8.06	5	10.06	0	
	09/26/02	15.06	7.40	7.66	5	10.06	0	

Notes:
ft amsl = feet above mean sea level
ft bTOC = feet below top of casing
ft bgs = feet below ground surface
Depth to Product data not available

Attachment 7

Groundwater analytical results

TABLE 1. Groundwater Analytical Results Summary
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1									
	05/22/00	3,600	41,000	<3,000	100	13 [8]	2.9	2.05	3.2 [8]
	12/08/09	1,400	1,200 [2]	<300	120	2.9	1.8	3.0	<1.0
	06/22/11	1,100 [2]	890 [24]	<300 [24]	46	1.9	2.6	2.0	<0.5
	06/19/13	1,600 [2]	3,100	<300	18	2.2	4.4	1.8	<0.5
MW-2									
	05/27/94	87	470	NA	<0.5	<0.5	<0.5	<0.5	NA
	03/29/95	<50	110	1,400	<0.4	<0.3	<0.3	<0.4	NA
	09/06/95	<50	NA	NA	<0.4	<0.3	<0.3	<0.4	NA
	01/08/96	<50	<50	1200	<0.4	<0.3	<0.3	<0.4	NA
	04/04/96	<50	160	320	<0.5	<0.5	<0.5	<1.0	NA
	07/10/96	<50	120	1400	<0.4	<0.3	<0.3	<0.4	NA
	12/03/96	<50	230 [1,2]	<250	<0.5	<0.5	<0.5	<1.0	NA
	03/28/97	<50	714	<250	<0.5	<0.5	<0.5	<1.0	NA
	06/13/97	51	<50	<250	<0.5	<0.5	<0.5	<1.0	NA
	09/18/97	82	<50	<250	0.56	<0.5	<0.5	<1.0	NA
	12/31/97	<50	<47	<280	1.4	<0.5	<0.5	<1.0	NA
	04/13/98	<50	<50	<300	<0.5	<0.5	<0.5	<1.0	NA
	11/06/98	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/19/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/24/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/28/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	11/12/99	<50	120 [2,6]	<300	<0.5	<0.5	<0.5	<0.5	6.3 [8,9]
	02/11/00	<50	<50	<300	5.4	<0.5	<0.5	<0.5	<2
	05/22/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	09/06/00	<50	<50	<300	0.76 [8]	<0.5	<0.5	<0.5	<0.5 [10]
	12/19/00	200 [3,11]	<50	<300	39	1.8	<0.5	2.6	<0.5 [10,12]
	02/21/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	07/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/05/01	<50	<50	<300	4.4	<0.5	<0.5	<0.5	5.0 [14]
	03/08/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	06/13/02	62 [15]	<57	<570	<0.5	<0.5	<0.5	<0.5	<5.0
	09/26/02	69 [2]	<50	<500	1.8	<0.5	<0.5	<0.5	<5.0
	12/12/02	<50	<50	<300	0.98	<0.5	<0.5	<0.5	<2.0
	03/17/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/18/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/03	<50	<50	<300	3.2	<0.5	<0.5	<0.5	<2.0
	11/26/03	<50	<50	<300	3	<0.5	<0.5	<0.5	<2.0
	03/05/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/02/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/16/04	<50	96 [6, 15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/29/05	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0

TABLE 1. Groundwater Analytical Results Summary
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-2 (cont)	08/10/05	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5
	09/29/05	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5
	12/21/05	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	03/24/06	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	07/28/06	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/29/06	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/01/07	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/14/07	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/05/08	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/18/08	390 [2]	840	<300	1.1	<0.5	0.9	<0.5	<0.5
	03/04/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	04/01/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/17/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/09/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/17/10	<50	220 [2]	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/15/10	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/22/11	<50	<50	<300 [2,3]	<0.5	<0.5	<0.5	<0.5	<0.5
	09/26/11	<50	<50 [24]	<300 [24]	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/12	<50	<53	<320	<0.5	<0.5	<0.5	<0.5	<0.5
	12/04/12	<50	<53	<320	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/13	<50	<51	<310	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3									
	Not sampled due to the presence of free-phase product								
MW-4									
	09/11/95	150	<200	500	23	<0.3	<0.3	<0.4	NA
	01/08/96	790	90	400	170	1.2	0.6	0.6	NA
	04/04/96	1,100	180	300	320	1.6	1.1	1.2	NA
	07/10/96	1,200	120	300	470	1.5	0.8	0.8	NA
	12/03/96	990	220 [1,2]	<250	350	3.3	1.3	1.3	NA
	03/28/97	440 [2]	<50	<250	190	1.2	0.64	<1.0	NA
	06/13/97	1,300	92 [5]	<250	500	5.5	3.4	2.8	NA
	09/18/97	1,300	150	<250	550	4.9	2.1	2.00	NA
	12/31/97	73 [1,2,3]	<47	<280	110 [1]	1.0 [1]	<0.5	<1.0	NA
	04/13/98	150 [2,3]	<50	<300	520	2.9	<2.5	<5.0	NA
	11/06/98	<50	<50	<300	250	1.7	<1.0	<1.0	<4
	03/19/99	81	<50	<300	250	<1	1.2	<1.0	<4
Dup.	06/24/99	190	<50	<300	360	1.4	2.2	1.0	24
	09/28/99	750 [3,5]	63 [3,5]	<300	280	1.5	<1.0	<1.0	<4
	11/12/99	330 [3]	840 [2]	<300	740	<2.5	<2.5	<2.5	42 [9]
	02/11/00	200 [2]	<50	<300	58	0.73	<0.5	<0.5	4.4 [8]
	05/22/00	240	<50	<300	500	<2.5	<2.5	<2.5	17
	09/06/00	530 [2,3]	<50	<300	190	0.93	0.6	0.57	<0.5 [10]
	12/19/00	960 [3,11]	70 [5]	<300	420	<2.5	<2.5	<2.5	<0.5 [10,12]

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Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-4 (cont)	12/19/00	1,200 [3,11]	<50	<300	440	<2.5	<2.5	<2.5	<0.5 [10,12]
	02/21/01	450 [13]	<50	<300	120	<0.5	<0.5	<0.5	<0.5 [10]
	07/10/01	<250	110 [2,13]	<300	620	2.6	2.9	<2.5	<0.5 [8,10]
	12/05/01	180	<50	<300	61	<0.5	<0.5	<0.5	3.8 [14]
	03/08/02	490 [2]	54 [2]	<500	180	<2.5	<2.5	<2.5	<25
	06/13/02	830 [2]	<50	<500	250	<5.0	<5.0	<5.0	<50
Dup.	06/13/02	820 [2]	<56	<560	240	<5.0	<5.0	<5.0	<50
	09/26/02	390 [2]	57	<500	150	2.1	<1.0	<1.0	<10
Dup.	09/26/02	500 [2]	<50 [16]	<500 [16]	200	1.5	<1.0	<1.0	<10
	12/12/02	580	<50	<300	240	1.4	0.56	<0.5	<2.0
Dup.	12/12/02	2,400	<50	<300	680	5.0	2.3	1.4	<2.0
	03/17/03	130 [15]	<50	<300	320 [17]	<0.5	<0.5	<0.5	<0.5 [10]
Dup.	03/17/03	82 [15]	<50	<300	190	0.64 [17]	0.56	0.53	<0.5 [10]
	06/18/03	360 [11, 15]	<50	<300	150	<0.5	<0.5	<0.5	<2.0
Dup.	06/18/03	330 [11, 15]	<50	<300	140	<0.5	<0.5	<0.5	<2.0
	09/03/03	140 [11, 15]	<50	<300	240	1.3	<0.5	<0.5	<2.0
Dup.	09/03/03	83 [11, 15]	<50	<300	130	0.58 [17]	<0.5	<0.5	<2.0
	11/26/03	160 [15]	68 [15]	<300	320	0.91 [17]	<0.5	0.53	<2.0
Dup.	11/26/03	120 [15]	<50	<300	210	0.66 [17]	<0.5	<0.5	<2.0
	03/05/04	90 [11]	<50	<300	190	1.1	0.55	0.50 [17]	23 [14,17], <0.5 [10]
Dup.	03/05/04	84 [11]	<50	<300	180	0.81	<0.5	<0.5	21 [14,17], <0.5 [10]
	06/02/04	620 [13]	<50	<300	210	0.55 [17]	<0.5	<0.5	<2.0
Dup.	06/02/04	400 [13]	<50	<300	130	<0.5	<0.5	<0.5	<2.0
	09/03/04	780 [13, 15]	<50	<300	<0.5	1.0 [17]	<0.5	0.57	<2.0
Dup.	09/03/04	370 [13, 15]	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/16/04	840	<50	<300	290	1.3 [17]	0.69	0.75	<2.0
Dup.	12/16/04	670	<50	<300	230	1.3 [17]	<0.5	<0.5	<2.0
	03/29/05	440 [13]	<50	<300	140	0.57	<0.5	<0.5	<2.0
Dup.	03/29/05	540 [13]	<50	<300	170	0.72	<0.5	<0.5	<2.0
	08/10/05	500 [18]	<50	<250	180	<2.5	<2.5	<2.5	<2.5
	09/29/05	360 [18]	59 [20]	<250	160	<5.0	<5.0	<5.0	<5.0
Dup.	09/29/05	420 [18]	<50	<250	150	<5.0	<5.0	<5.0	<5.0
	12/21/05	110	<50	<300	76	<0.5	<0.5	<0.5	<0.5
Dup.	12/21/05	160	<50	<300	76	<0.5	<0.5	<0.5	<0.5
	03/24/06	420	51	<300	120	0.8	<0.7	<0.7	<0.7
Dup.	03/24/06	440	<50	<300	130	<0.7	<0.7	<0.7	<0.7
	08/04/06	560	92 [2]	<300	160	<1.3	4.3	<1.3	<1.3
Dup.	08/04/06	590	100 [2]	<300	150	<1.3	4.5	<1.3	<1.3
	11/29/06	300	<50	<300	42	<0.7	1.0	<0.7	<0.7
Dup.	11/29/06	300	<50	<300	60	<0.7	<0.7	<0.7	<0.7
	06/01/07	100 [13, 15]	<50	<300	10	<0.5	<0.5	<0.5	<0.5
Dup.	06/01/07	100 [13, 15]	<50	<300	11	<0.5	<0.5	<0.5	<0.5

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Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-4 (cont)	11/14/07	54 [15]	<50	<300	2.1	<0.5	<0.5	<0.5	<0.5
Dup.	11/14/07	51 [15]	<50	<300	2.1	<0.5	<0.5	<0.5	<0.5
	06/05/08	67 [15]	<50	<300	14	<0.5	<0.5	<0.5	<0.5
Dup.	06/05/08	91 [15]	<50	<300	15	<0.5	<0.5	<0.5	<0.5
	12/18/08	99 [2]	520	<300	0.5	<0.5	<0.5	<0.5	<0.5
Dup.	12/18/08	88 [2]	850	<300	0.7	<0.5	0.6	<0.5	<0.5
	03/04/09	60 [2]	<50	<300	3.8	<0.5	<0.5	<0.5	<0.5
Dup.	03/04/09	<50	<50	<300	4.4	<0.5	<0.5	<0.5	<0.5
	04/01/09	<50	<50	<300	7.5	<0.5	<0.5	<0.5	<0.5
Dup.	04/01/09	<50	<50	<300	7.8	<0.5	<0.5	<0.5	<0.5
	06/19/09	69 [2]	<50	<300	15	<0.5	<0.5	<0.5	<0.5
	12/08/09	<50	<50	<300	3.3	<0.5	<0.5	<0.5	<0.5
Dup.	12/08/09	<50	<50	<300	3.5	<0.5	<0.5	<0.5	<0.5
	06/16/10	<50	<50	<300	15	<0.5	<0.5	<0.5	<0.5
Dup.	06/16/10	<50	<50	<300	18	<0.5	<0.5	<0.5	<0.5
	12/14/10	<50	<50	<300	2.2	<0.5	<0.5	<0.5	<0.5
Dup.	12/14/10	<50	<50	<300	2.7	<0.5	<0.5	<0.5	<0.5
	06/21/11	160 [2]	<56	<330	30	<0.5	<0.5	<0.5	<0.5
Dup.	06/21/11	84 [2]	<53	<320	28	<0.5	<0.5	<0.5	<0.5
	09/27/11	130 [2]	72	<300	13	<0.5	<0.5	<0.5	<0.5
Dup.	09/27/11	130 [2]	57 [24]	<300 [24]	12	<0.5	<0.5	<0.5	<0.5
	06/19/12	120 [2]	<51	<310	19	<0.5	<0.5	<0.5	<0.5
Dup.	06/19/12	120 [2]	<52	<310	20	<0.5	<0.5	<0.5	<0.5
	12/04/12	76 [2]	<53	<320	1.7	<0.5	<0.5	<0.5	<0.5
Dup.	12/04/12	60 [2]	56 [2]	<310	1.3	<0.5	<0.5	<0.5	<0.5
	06/19/13	150 [2]	<56	<330	19	<0.5	<0.5	<0.5	<0.5
Dup.	06/19/13	150 [2]	<50	<300	19	<0.5	<0.5	<0.5	<0.5
MW-5									
	09/11/95	90	<300	2,500	3.3	<0.3	<0.3	<0.4	NA
	04/04/96	<50	180	520	<0.5	<0.5	<0.5	<1.0	NA
	07/10/96	<50	120	1,500	<0.4	<0.3	<0.3	<0.4	NA
	12/03/96	<50	200 [1,2]	<250	<0.5	<0.5	<0.5	<1.0	NA
	03/28/97	<50	<50	<250	<0.5	<0.5	<0.5	<1.0	NA
	06/13/97	<50	<50	<250	<0.5	<0.5	<0.5	<1.0	NA
	09/18/97	<50	<50	<250	<0.5	<0.5	<0.5	<1.0	NA
	12/31/97	<50	<47	<280	<0.5	<0.5	<0.5	<1.0	NA
	04/13/98	<50	<47	<280	<0.5	<0.5	<0.5	<1.0	NA
	11/06/98	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/19/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/24/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	3.1
	09/28/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	11/12/99	<50	110 [2,6]	<300	<0.5	<0.5	<0.5	<0.5	5.5 [9]
	02/11/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	05/22/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0

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Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-5 (cont)	09/06/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/19/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	02/21/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	07/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/05/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/08/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	06/13/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	09/26/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	12/12/02	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/17/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5 [10]
	06/18/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	11/26/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	4.1 [14], <0.5 [10]
	03/05/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/02/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/16/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	2.2 [14], <0.5 [10]
	03/29/05	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	08/10/05	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5
Dup.	08/10/05	<50 [19]	<50 [19]	<250	<0.5	<0.5	<0.5	<0.5	<0.5
	09/29/05	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5
	12/21/05	<50	180 [15,22]	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	07/28/06	<50	180	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/29/06	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/01/07	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/14/07	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/05/08	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/18/08	3,100 [2]	3,600	<300	0.5	<0.5	<0.5	<0.5	1.8
	03/04/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	04/01/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	04/01/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/08/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/16/10	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/10	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/22/11	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	09/27/11	<50	<50 [24]	<300 [24]	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/12	<50	<51	<310	<0.5	<0.5	<0.5	<0.5	<0.5
	12/04/12	<50	<54	<330	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/13	<50	<53	<320	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 1. Groundwater Analytical Results Summary
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-6									
	11/06/98	120	12,000	1,200	19	0.65	1.8	<0.5	<2
	03/19/99	170	3,800	580	21	0.86	1.5	2.9	<2
	06/24/99	120	1,700 [7]	<300 [7]	18	<0.5	1.0	<0.5	54
	09/28/99	130 [3,5]	820	<300	20	0.51	2.2	<0.5	<2
	11/12/99	150	11,000 [2,6]	3,000 [3,6]	27	<0.5	2.2	<0.5	13 [9]
	02/11/00	270 [2]	2,300	<300	23	0.51	2.7	<0.5	5.8
	05/22/00	350	3,000	<300	18	0.51	<0.5	<0.5	7.7
	09/06/00	190	610	<300	26	<0.5	1.7	<0.5	<0.5 [10]
	12/19/00	130 [3,11]	620	<300	24	<0.5	1.6	<0.5	<2
	02/21/01	120 [13]	440	<300	21	<0.5	0.96	<0.5	<2
	07/10/01	120	560	<300	29	<0.5	0.99	<0.5	<2
	12/12/01	53	550	<300	27	<0.5	1.3	<0.5	<2.0
	03/08/02	160 [2]	640 [2]	<500	30	<0.5	<0.5	<0.5	5.0 [14]
	06/13/02	160 [2]	670 [2]	<500	34	<0.5	<0.5	<0.5	<5.0
	09/26/02	230 [2]	1400 [2]	<500	40	0.64	0.8	<0.5	<5.0
	12/12/02	53	110	<300	43	<0.5	<0.5	<0.5	<2.0
	12/18/02	Monitoring well was destroyed							
MW-7									
	09/06/95	<50	<300	800	<0.4	<0.3	<0.3	<0.4	NA
	01/08/96	<50	410	110	<0.4	<0.3	<0.3	<0.4	NA
	04/04/96	<50	530	340	<0.5	<0.5	<0.5	<1.0	NA
	07/10/96	80	840	1,700	<0.4	<0.3	<0.3	<0.4	NA
	12/03/96	<50	280 [1,2]	<250	<0.5	<0.5	<0.5	<1.0	NA
	03/28/97	65 [6]	94 [2]	<250	<0.5	<0.5	<0.5	<1.0	NA
	06/13/97	<50	100	<250	<0.5	<0.5	<0.5	<1.0	NA
	09/18/97	<50	240	<250	<0.5	<0.5	<0.5	<1.0	NA
	12/31/97	<50	53 [2,3]	<280	<0.5	<0.5	<0.5	<1.0	NA
	04/13/98	<50	<48	<290	<0.5	<0.5	<0.5	<1.0	NA
	11/06/98	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	03/19/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	5.3
	06/24/99	73	<50	<300	<0.5	<0.5	<0.5	<0.5	12
	09/28/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	14
	11/12/99	<50	600 [2,6]	420 [3]	<0.5	<0.5	<0.5	<0.5	15 [9]
	02/11/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	51
	05/22/00	110	53 [2]	<300	<0.5	<0.5	<0.5	<0.5	75
	09/06/00	50 [6]	<50	<300	<0.5	<0.5	<0.5	<0.5	40 [10]
	12/19/00	54 [11]	51 [5]	<300	<0.5	<0.5	<0.5	<0.5	47 [10,12]
	02/21/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	66 [10]
Dup.	02/21/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	60 [10]
	07/10/01	<50	51 [2]	<300	<0.5	<0.5	<0.5	<0.5	76 [10]
Dup.	07/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	75 [10]

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Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-7 (cont)	12/12/01	51	<50	<300	<0.5	<0.5	<0.5	<0.5	98 [14]
Dup.	12/12/01	64	52 [13, 15]	<300	<0.5	<0.5	<0.5	<0.5	96 [14]
	03/08/02	52 [2]	<50	<500	<0.5	<0.5	<0.5	<0.5	24 [14]
	06/13/02	87 [2]	54 [2]	<500	<0.5	<0.5	<0.5	<0.5	51
	09/26/02	83 [2]	84 [2]	<500	<0.5	<0.5	<0.5	<0.5	75 [10]
	12/12/02	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	58 [14]
	12/18/02	Monitoring well was destroyed							
MW-8									
	Not sampled due to the presence of free-phase product								
MW-8A									
	12/12/01	68	720 [11,15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/08/02	<50	760 [2]	<570	<0.5	<0.5	<0.5	<0.5	<5.0
Dup.	03/08/02	<50	350 [2]	<580	<0.5	<0.5	<0.5	<0.5	<5.0
	06/13/02	<50	570 [2]	<570	<0.5	<0.5	<0.5	<0.5	<5.0
	09/26/02	<50	410 [2]	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	12/12/02	<50	160 [15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/17/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5 [10]
	06/18/03	<50	74 [15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	3.0 [14]/<0.5 [10]
	11/26/03	<50	94 [15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/05/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/02/04	<50	67 [15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/04	<50	86 [15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/16/04	<50	160 [6, 15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/29/05	<50	53	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	08/10/05	<50 [19]	150 [15, 19]	<250	<0.5	<0.5	<0.5	<0.5	<0.5
	09/29/05	<50	66 [21]	<250	<0.5	<0.5	<0.5	<0.5	<0.5
	12/21/05	<50	63 [15,22]	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	03/24/06	<50	71	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	07/28/06	<50	70 [15]	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/29/06	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/01/07	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	11/14/07	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/05/08	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/18/08	350 [2]	7,800	2,200 [2]	<0.5	<0.5	<0.5	<0.5	1.3
	03/04/09	<50	51 [2]	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	04/01/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/17/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/08/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/16/10	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 1. Groundwater Analytical Results Summary
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-8A (cont)	12/14/10	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/23/11	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	09/26/11	<50	<50 [24]	<300 [24]	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/12	<50	<51	<310	<0.5	<0.5	<0.5	<0.5	<0.5
	12/04/12	<50	<53	<320	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/13	<50	<52	<310	<0.5	<0.5	<0.5	<0.5	<0.5
MW-9									
	12/18/08	52 [2]	72	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	03/04/09	290 [2]	310 [2]	<300	44	<0.5	0.6	0.6	<0.5
	04/01/09	210 [2]	210 [2]	<300	36	<0.5	<0.5	<0.5	<0.5
	06/19/09	240 [2]	240 [2]	<300	43	<0.5	<0.5	<0.5	<0.5
	12/08/09	210 [2]	210 [2]	<300	48	<0.5	<0.5	<0.5	<0.5
	06/16/10	160 [2]	160 [2]	<300	49	<0.5	1.0	0.6	<0.5
	12/14/10	170 [2]	130 [2]	<300	34	<0.5	<0.5	0.6	<0.5
	06/22/11	200 [2]	160 [2]	<300	25	<0.5	<0.5	<0.5	<0.5
	09/27/11	190 [2]	180 [24]	<300 [24]	21	<0.5	<0.5	<0.5	<0.5
	06/19/12	150 [2]	96 [2]	<320	11	<0.5	<0.5	<0.5	<0.5
	12/04/12	140 [2]	200 [2]	<320	14	<0.5	1.8	1.5	<0.5
	06/19/13	130	100 [2]	<320	14	<0.5	1.1	<0.5	<0.5
MW-10									
	12/18/08	140 [2]	8,000	430 [2]	<0.5	<0.5	<0.5	<0.5	1.0
	03/04/09	96 [2]	110 [2]	<300	11	<0.5	0.5	<0.5	<0.5
	04/01/09	87 [2]	100 [2]	<300	14	<0.5	0.5	<0.5	<0.5
	06/17/09	90 [2]	220 [2]	<300	10	<0.5	1.0	<0.5	<0.5
	12/08/09	120 [2]	240 [2]	<300	26	<0.5	0.8	<0.5	<0.5
	06/16/10	140 [2]	200	<300	46	<0.5	<0.5	<0.5	<0.5
	12/14/10	150 [2]	140 [2]	<300	47	<0.5	<0.5	<0.5	<0.5
	06/22/11	320 [2]	630	<300	54	<0.5	2.2	<0.5	<0.5
	09/26/11	260 [2]	780 [24]	<300 [24]	61	1	2.4	<0.5	<0.5
	06/19/12	330 [2]	430 [2]	<310	58	<0.5	2.9	<0.5	<0.5
	12/04/12	250 [2]	1,100	<320	59	<0.5	0.9	<0.5	<0.5
	06/19/13	320 [2]	280 [2]	<310	61	<0.5	1.2	<0.5	<0.5
MW-11									
	12/18/08	1,900 [2]	15,000	800 [2]	<0.5	<0.5	<0.5	<0.5	5.0
	03/04/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	04/01/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/09/09	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/16/10	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/10	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	06/21/11	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5
	09/26/11	<50	<50 [24]	<300 [24]	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/12	<50	<53	<320	<0.5	<0.5	<0.5	<0.5	<0.5
	12/04/12	<50	<53	<320	<0.5	<0.5	<0.5	<0.5	<0.5
	06/19/13	<50	<50	<300	<1.0	<1.0	<1.0	<1.0	<1.0

TABLE 1. Groundwater Analytical Results Summary
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-12									
	12/18/08	25,000 [2]	19,000	980 [2]	<0.5	<0.5	<0.5	<0.5	5.1
	03/04/09	150 [2]	550 [2]	<300	<0.5	<0.5	<0.5	<0.5	4.8
	04/01/09	71 [2]	420 [2]	<300	<0.5	<0.5	<0.5	<0.5	5.8
	06/17/09	64 [2]	310 [2]	<300	<0.5	<0.5	<0.5	<0.5	5.7
Dup.	06/17/09	67 [2]	310 [2]	<300	<0.5	<0.5	<0.5	<0.5	5.4
	12/08/09	90 [2]	320 [2]	<300	<0.5	<0.5	<0.5	<0.5	4.7
	06/16/10	94 [2]	300	<300	<0.5	<0.5	<0.5	<0.5	4.8
	12/14/10	100 [2]	510	<300	<0.5	<0.5	<0.5	<0.5	4.0
	06/23/11	100 [2]	270 [2]	<300	<0.5	<0.5	<0.5	<0.5	3.2
	09/26/11	62 [2]	500 [24]	<300 [24]	<0.5	<0.5	<0.5	<0.5	4.2
	06/19/12	88	370 [2]	<310	<0.5	<0.5	<0.5	<0.5	2.4
	12/04/12	95 [2]	390 [2]	<320	<0.5	<0.5	<0.5	<0.5	3.9
	06/19/13	66 [2]	220 [2]	<300	<0.5	<0.5	<0.5	<0.5	4.5

Notes:

Data prior to December 2005 from *3rd Quarterly Groundwater Monitoring, and Product Recovery Report* dated 8 November 2005, by Innovative Technical Solutions, Inc.

µg/L = micrograms per liter

Dup. = duplicate sample

NA = not analyzed

TPHg = total petroleum hydrocarbons in gasoline range.

TPHd = total petroleum hydrocarbons in diesel range.

TPHmo = total petroleum hydrocarbons in motor oil range.

MTBE = methyl tert-butyl ether

[1] Analyte found in the associated blank as well as in the sample.

[2] Hydrocarbons present do not match profile of laboratory standard.

[3] Low boiling point/lighter hydrocarbons are present in the sample.

[4] Chromatographic pattern matches known laboratory contaminant.

[5] Hydrocarbons are present in the requested fuel quantification range, but do not resemble pattern of available fuel standard.

[6] High boiling point/heavier hydrocarbons are present in sample.

[7] Sample did not pass laboratory QA/QC and may be biased low.

[8] Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor of two.

[9] Trip blank contained MTBE at a concentration of 4.2 ÿg/L.

[10] MTBE detections confirmed by EPA Test Method 8260; 8260 results displayed.

[11] Sample exhibits unknown single peak or peaks.

[12] EPA Method 8260 confirmation analyzed past holding time.

[13] Lighter hydrocarbons contributed to the quantitation.

[14] MTBE results from EPA Test Method 8021B.

[15] Sample exhibits fuel pattern that does not resemble standard.

[16] Sample extracted out of hold time.

[17] Presence confirmed, but Relative Percent Difference (RPD) between columns exceeds 40%.

[18] Unmodified or weakly modified gasoline is significant.

[19] Liquid sample contains greater than ~1 vol. % sediment.

[20] Gasoline compounds are significant.

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Monitoring Well	Date Sampled	Concentration (µg/L)							
		TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE

[21] Diesel range compounds are significant; no recognizable pattern.

[22] Heavier hydrocarbons contributed to the quantitation.

[23] Analyzed outside of holdtime after confirmation of laboratory contamination by (2-ethylhexyl)phthalate.

[24] Analyzed both pre- and post-silica gel cleanup. Post-silica gel cleanup results are reported herein. Pre-silica gel cleanup results are included in Appendix B.

TABLE 2. Groundwater Analytical Results Summary
Monitored Natural Attenuation Parameters
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Sampled	Field Parameters			Analytical Concentrations																	
		DO (mg/L)	ORP (mV)	Iron (II) (mg/L)	Carbon Dioxide (mg/L)	Methane (µg/L)	Iron (II) (mg/L)	Manganese (II) (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Sulfide (Dissolved, mg/L)	Nitrate (as N, mg/L)	Nitrite (as N, mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Orthophosphate (as P, mg/L)	Carbonate (mg/L)	Bicarbonate (mg/L)	Alkalinity, Total (as $CaCO_3$, mg/L)	Total Dissolved Solids (mg/L)
MW-1																						
	06/22/11	0.04	-99.7	0.91	17	6,300	0.84	0.52	25	16	1.0	48	0.24	<0.05	<0.05	<0.50	11	0.13	<6.7	250	250	270
	09/26/11	Not sampled due to the presence of free-phase product																				
MW-2																						
	06/22/11	3.27	27.3	0.00	23	0.69	<0.10	0.077	26	27	1.1	150	<0.04	0.25	<0.05	31	19	0.13	<6.7	500	500	610
	09/26/11	0.38	108.5	0.00	31	18	<0.10	0.19	29	29	1.3	180	<0.04	<0.05	<0.05	29	23	0.15	<10	560	560	660
MW-3																						
	6/22/2011	Not sampled due to the presence of free-phase product																				
	9/26/2011	Not sampled due to the presence of free-phase product																				
MW-4																						
	06/21/11	0.09	-32.0	0.05	2.5 J	3,400	<0.10	0.18	21	57	14	340	<0.04	<0.05	<0.05	5.3	280	0.64	<6.7	800	800	1,280
Dup.	06/21/11	0.09	-32.0	0.04	3.1	3,500	<0.10	0.18	20	58	14	340	<0.04	<0.05	<0.05	5.5	280	0.64	<6.7	770	770	1,270
	09/27/11	0.42	-137.0	0.51	15	4,100	0.46	0.31	41	68	9.8	250	<0.04	<0.05	<0.05	1.9	170	0.53	<10	860	860	1,150 [1]
Dup.	09/27/11	0.42	-137.0	0.51	16	4,100	0.27	0.25	36	65	9.2	240	<0.04	<0.05	<0.05	2.0	150	0.51	<10	810	810	1,150 [1]
MW-5																						
	06/22/11	0.24	-52.5	0.30	27	74	0.46	0.67	48	21	16	230	<0.04	<0.05	<0.05	69	300	0.35	<6.7	360	360	960
	09/27/11	0.33	-68.5	0.59	30	78	0.59	0.77	54	22	17	260	<0.04	<0.05	<0.05	74	290	0.33	<10	350	350	1,010 [1]
MW-6																						
	12/18/02	Monitoring well was destroyed																				
MW-7																						
	12/18/02	Monitoring well was destroyed																				
MW-8																						
	11/21/98	Monitoring well was destroyed and replaced with well MW-8A																				
MW-8A																						
	06/23/11	0.44	-203.1	1.85	5.0	400	2.3	0.67	46	58	15	230	<0.04	<0.05	<0.05	38	140	1.3	<6.7	760	760	1,060
	09/26/11	0.16	-109.1	2.57	52	310	2.9	0.85	53	65	18	280	<0.04	<0.05	<0.05	47	160	1.3	<10	810	810	360
MW-9																						
	06/22/11	0.14	-130.1	3.30*	71	10,000	6.3	0.87	70	46	14	280	0.09	<0.05	<0.05	0.54	290	1.3	<6.7	750	750	1,240
	09/27/11	0.22	-122.2	3.62	71	9,500	6.6	0.93	71	46	15	350	0.08	<0.05	<0.05	0.69	270	1.3	<10	770	770	1,360 [1]
MW-10																						
	06/22/11	0.03	-118	3.30*	160	7,300	7.8	4.2	130	67	30	420	0.09	<0.05	<0.10	4.1	530	0.46	<6.7	1,100	1,100	2,030
	09/26/11	0.15	-138.7	2.1	170	7,300	8.8	4.5	150	72	31	450	0.11	<0.05	<0.05	28	520	0.60	<10	1,100	1,100	680
MW-11																						
	06/21/11	0.06	-178.4	0.93	44	7,900	1.4	0.39	25	52	46	970	<0.04	<0.10	<0.10	<1.0	970	9.6	<6.7	1,500	1,500	3,140
	09/26/11	0.20	-198.9	0.47	46	8,300	1.5	0.38	25	51	49	1,100	<0.04	<0.05	<0.05	<1.0	1,000	7.7	<10	1,500	1,500	3,180
MW-12																						
	06/23/11	0.18	-253.8	0.41	85	5,100	0.46	1.3	93	43	15	160	4.7	<0.05	<0.05	2.4	180	0.76	<6.7	620	620	940
	09/26/11	0.36	-260.9	0.40	88	4,900	0.67	1.4	96	43	15	180	3.3	<0.05	<0.05	1.5	180	0.73	<10	640	640	1,000

Notes:

* Sample iron (II) concentration exceeded range of instrument.
DO = dissolved oxygen
ORP = oxidation-reduction potential
mg/L = milligrams per liter
ug/L = microgram per Liter
N = nitrogen
P = phosphorus
$CaCO_3$ = calcium carbonate
J = estimated value
[1] Batch spike duplicate for TDS outside of acceptable relative percent difference range.

Table 5. Groundwater Sample Results, 2225 7th Street
Port of Oakland
2277 and 2225 7th Street, Oakland California

Monitoring Well ID	Date	TPHg (µg/l)	TPHd (µg/1)	TPHmo (µg/1)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/1)	MTBE (µg/1)
MW-1	1/15/93	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/12/94	<10 [1]	10,000	NA	0.5	<0.3	<0.3	<0.3	NA
	11/30/94	<10	2,800	NA	<0.3	<0.3	<0.3	<0.3	NA
	3/29/95	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	6/21/95	<50	<50 [2]	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/28/95	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	12/27/95	<50	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	3/25/96	<50	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	6/26/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	10/14/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	3/19/97	<50	<50	NA	<0.5	<0.5	<0 5	<0.5	<5.0
	6/26/00	<50	<50	<300	<0.5	<0.5	<0 5	<0.5	<0.5[5]
	12/19/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
Dup.	12/19/00	<50	<50	<300	<0.5	<0.5	<0 5	<0.5	<2
	7/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
Dup.	7/10/01	<50	<50	310	<0.5	<0.5	<0.5	<0.5	<2
	12/12/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
MW-2	1/15/93	<50	<50	NA	<0.3	<0.3	<0 3	<0.3	NA
	9/12/94	34 [1]	<50	NA	0.5	<0.3	<0.3	<0.3	NA
	11/30/94	<10	81	NA	0.9	<0.3	<0.3	<0.3	NA
	3/29/95	<50 [3]	75	NA	0.3	<0.3	<0.3	<0.3	NA
	6/21/95	<50 [3]	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/28/95	250 [1]	<50	NA	<0.3	<0.3	<0.3	<0 3	NA
	12/27/95	220 [1]	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	3/25/96	200 [1]	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	6/26/96	77 [4]	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	10/14/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	3/19/97	150	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	6/26/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5[5]
	12/19/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	7/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	12/12/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
MW-3	1/15/93	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/12/94	<50	<50	NA	0.3	<0.3	<0.3	<0.3	NA
	11/30/94	110	150	NA	<0.3	<0.3	<0.3	<0.3	NA
	3/29/95	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	6/21/95	<50 [3]	<50 [2]	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/28/95	51 [1]	<50	NA	<0.3	<0.3	<0.3	<0 3	NA
	12/27/95	55 [1]	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	3/25/96	53	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	6/26/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	10/14/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	3/19/97	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	6/26/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5[5]
	12/19/00	<50	50 [2]	<300	<0.5	<0.5	<0.5	<0.5	<2
	7/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	12/12/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2

NA Not Analyzed.

[1] Hydrocarbon pattern is not characteristic of gasoline

[2] Hydrocarbon pattern present in sample is not characteristic of diesel

[3] Uncategorized compound not included in the gasoline concentration

[4] Product is not typical gasoline

[5] MTBE detected by EPA Test Method 8021B but reported as ND<0.5 by EPA Test Method 8260

[6] Heavier hydrocarbons contributed to the quantitation

- Data prior to June 26, 2000 taken from *First Quarter 1997 Groundwater Monitoring and Sampling report* dated May 6, 1999, by Fluor Daniel GTI.

Attachment 8

All available free product thickness data

MONITORING AND RECOVERY WELL PRODUCT THICKNESS MEASUREMENTS
PORT OF OAKLAND
HARBOR FACILITY CENTER
2225 7TH STREET
OAKLAND, CALIFORNIA

Well ID	Installed Well Total Depth (feet)	Total Depth Measured 10/5 & 6/04 (feet)	4/29/2004			5/11/2004			5/18/2004			10/5/2004 - 10/6/2004		
			DTP	DTW	PT	DTP	DTW	PT	DTP	DTW	PT	DTP	DTW	PT
RW-1	18.0	15.02	ND	8.20	ND	ND	6.60	ND	ND	6.90	ND	ND	8.45	ND
RW-2	21.0	--	ND	10.01	ND	ND	9.10	ND	ND	9.19	ND	--	--	ND
RW-3	21.0	15.45	ND	10.10	ND	ND	8.90	ND	ND	9.11	ND	10.81	10.84	0.03
RW-4	21.0	15.85	8.55	8.60	0.05	7.70	7.75	0.05	8.02	8.12	0.10	10.06	10.11	0.05
RW-5	21.0	14.42	ND	8.71	ND	ND	7.10	ND	ND	7.32	ND	ND	8.04	ND
RW-6	21.0	17.02	ND	8.80	ND	ND	7.35	ND	7.45	7.48	0.03	8.79	8.82	0.03
RW-7	21.0	15.60	ND	8.55	ND	ND	7.20	ND	7.35	7.37	0.02	8.41	8.67	0.26
RW-8	22.0	15.91	ND	8.66	ND	ND	7.65	ND	ND	7.70	ND	9.09	9.17	0.08
RW-9	22.0	17.02	ND	10.95	ND	ND	9.40	ND	9.65	9.67	0.02	10.24	10.26	0.02
MW-1	--	14.97	--	--	ND	--	--	ND	8.30	8.75	0.45	8.85	9.36	0.51
MW-2	--	--	--	--	ND	--	--	ND	ND	11.26	ND	--	--	ND
MW-3	--	17.10	--	--	ND	--	--	ND	10.02	11.34	1.32	10.65	12.68	2.03

Notes:
DTP = depth to product in feet below top of well casing
DTW = depth to water in feet below top of well casing
PT = product thickness in measured in feet
-- = not measured
ND = not detected
RW = new recovery well
MW = existing monitoring well

3.2 Measurement Data

The following tables show the data collected from the system over the first year of operation.

TABLE 1
1st Quarter 2005

	Recovery Well ID	12/14/04	12/23/04	1/3/05	1/13/05	1/27/05	2/10/05	3/23/05	3/25/05	3/29/05	3/30/05
Depth to Water	RW-3	11.17	11.10	9.15	8.86	10.85	10.66	8.75	8.64	8.19	8.26
	RW-4	9.24	9.45	7.80	7.87	8.05	8.41	8.05	NM	7.45	NM
	RW-6	9.36	9.47	8.70	8.48	8.36	8.47	7.98	NM	8.01	7.41
	RW-7	8.31	8.45	7.57	7.38	7.67	7.70	7.67	NM	7.39	NM
	RW-8	9.09	9.13	8.66	8.5	8.40	8.55	8.40	NM	8.16	NM
Depth to Product	RW-3	9.86	10.25	8.50	8.32	8.81	9.26	8.16	8.17	8.14	8.22
	RW-4	9.22	9.44	7.79	7.86	8.04	8.30	8.04	NM	7.30	NM
	RW-6	8.36	8.49	7.95	7.81	7.72	7.78	7.37	NM	7.40	7.39
	RW-7	8.11	8.21	7.33	7.38	7.39	7.51	7.39	NM	7.06	NM
	RW-8	9.05	9.10	8.63	8.48	8.38	8.54	8.38	NM	8.15	NM
Product Thickness	RW-3	1.31	0.85	0.65	0.54	2.04	1.40	0.59	0.47	0.05	0.04
	RW-4	0.02	0.01	0.01	0.01	0.01	0.11	0.01	NM	0.15	NM
	RW-6	1.00	0.98	0.75	0.67	0.64	0.69	0.61	NM	0.61	0.02
	RW-7	0.20	0.24	0.24	0.30	0.28	0.19	0.28	NM	0.33	NM
	RW-8	0.04	0.03	0.03	0.02	0.02	0.01	0.02	NM	0.01	NM

NM = Not Measured
Units are in feet.
System operation from initial startup in December of 2004 to the end of the first quarter of 2005.

TABLE 2
2nd Quarter 2005

	Recovery Well ID	4/5/05	4/8/05	4/22/05	5/6/05
Depth to Water	RW-3	8.65	8.61	9.50	9.88
	RW-4	7.73	7.23	7.96	8.15
	RW-6	7.61	7.63	7.91	7.92
	RW-7	7.39	7.33	7.35	7.42
	RW-8	8.02	8.03	8.08	8.23
Depth to Product	RW-3	8.38	8.32	8.78	8.99
	RW-4	7.60	7.11	7.94	8.10
	RW-6	7.42	7.41	7.58	7.66
	RW-7	7.02	6.98	7.16	7.28
	RW-8	8.01	8.02	8.07	8.22
Product Thickness	RW-3	0.27	0.29	0.72	0.89
	RW-4	0.13	0.12	0.02	0.05
	RW-6	0.19	0.22	0.33	0.26
	RW-7	0.37	0.35	0.19	0.14
	RW-8	0.01	0.01	0.01	0.01

Units are in feet.

System operation for the second quarter of 2005.

Note:

In general, the frequency of measurement of free product and water levels in the recovery wells is governed by weather patterns. During the dryer months (typically May – November) measurements can be taken on a monthly basis. Starting with the first rain (typically December) this should be stepped up to bi-weekly. In the case of extremely heavy rainfall during any given week, the measurement frequency may need to be increased to weekly intervals.

TABLE 3
3rd Quarter 2005

	Recovery Well ID	9/12/05	9/27/05
Depth to Water	RW-1	7.85	8.40
	RW-2	10.23	10.33
	RW-3	11.11	11.26
	RW-4	9.74	9.92
	RW-5	7.83	NM
	RW-6	8.79	8.93
	RW-7	8.04	8.15
	RW-8	9.26	9.32
	RW-9	10.27	10.73
Depth to Product	RW-1	ND	ND
	RW-2	ND	ND
	RW-3	10.11	10.26
	RW-4	1.00	9.58
	RW-5	ND	NM
	RW-6	8.26	8.34
	RW-7	7.85	7.92
	RW-8	8.62	8.68
	RW-9	ND	ND
Product Thickness	RW-1	ND	ND
	RW-2	ND	ND
	RW-3	1.00	1.00
	RW-4	0.39	0.34
	RW-5	ND	NM
	RW-6	0.53	0.59
	RW-7	0.19	0.23
	RW-8	0.64	0.64
	RW-9	ND	ND

NM = Not Measured

ND = Not Detected

Units are in feet.

System operation for the third quarter of 2005.

TABLE 4
4th Quarter 2005

	Recovery Well ID	10/5/05	10/21/05	11/2/05	11/16/05	12/2/05	12/14/05	12/28/05
Depth to Water	RW-1	7.96	8.10	8.12	8.72	8.63	NM	NM
	RW-2	10.42	10.52	10.50	10.66	10.01	9.79	8.11
	RW-3	10.85	10.87	10.82	12.08	12.13	11.89	9.83
	RW-4	9.83	9.76	9.99	10.11	9.36	9.82	8.65
	RW-5	NM	8.04	NM	NM	NM	7.96	6.81
	RW-6	8.74	8.65	8.81	8.71	8.73	8.49	7.44
	RW-7	8.14	8.17	8.21	8.30	8.37	8.14	7.22
	RW-8	9.31	9.33	9.42	9.41	9.33	9.02	7.89
	RW-9	10.73	10.42	10.42	10.81	10.67	10.43	9.40
Depth to Product	RW-1	ND	ND	ND	ND	ND	NM	NM
	RW-2	ND	ND	ND	ND	ND	ND	ND
	RW-3	10.28	10.42	10.57	11.43	9.84	10.18	9.36
	RW-4	9.64	9.73	9.76	9.94	9.28	9.56	8.33
	RW-5	NM	ND	NM	NM	NM	ND	ND
	RW-6	8.42	8.48	8.52	8.53	8.57	8.37	7.38
	RW-7	7.97	8.03	8.05	8.09	8.11	7.99	7.06
	RW-8	8.71	8.76	8.81	8.87	8.85	8.78	7.48
	RW-9	ND	ND	ND	ND	ND	ND	ND
Product Thickness	RW-1	ND	ND	ND	ND	ND	NM	NM
	RW-2	ND	ND	ND	ND	ND	ND	ND
	RW-3	0.57	0.45	0.25	0.65	2.29	1.71	0.47
	RW-4	0.19	0.03	0.23	0.17	0.08	0.26	0.32
	RW-5	NM	ND	NM	NM	NM	ND	ND
	RW-6	0.32	0.17	0.29	0.18	0.16	0.12	0.06
	RW-7	0.17	0.14	0.16	0.21	0.26	0.15	0.16
	RW-8	0.60	0.57	0.61	0.54	0.48	0.24	0.41
	RW-9	ND	ND	ND	ND	ND	ND	ND

NM = Not Measured

ND = Not Detected

Units are in feet.

System operation for the fourth quarter of 2005.

Table 4: Summary of Product Thickness Measurements
and Operation and Maintenance Activities - First Semi-Annual 2006
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date:2/3/2006					
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Volume (gallons)	Comments
RW-1	--	--	--	--	Silt grading activities being performed on-site so did not check this vault
RW-2	None	7.66	--	--	No pump
RW-3	8.35	8.70	0.35	0.06	
RW-4	7.73	7.75	0.02	0.003	Air inlet and exhaust tubing disconnected from pump, significant water in vault (1/2 full), lots of biogrowth on outside of pump
RW-5	None	6.88	NA	NA	No cap and no pump
RW-6	7.35	7.39	0.04	0.01	Pumping but looks like only water, vault 1/2 full of water.
RW-7	7.02	7.09	0.07	0.01	Pumping but looks like only water.
RW-8	7.92	8.00	0.08	0.01	Pumping but no product in line, vault 1/2 full of water.
RW-9	None	9.21	NA	NA	No pump
Depth of product in convault			0.11	feet	
Approximate volume recovered			29	gallons	

Site Visit Date:2/8/2006					
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Volume (gallons)	Comments
RW-1	None	6.4	NA	NA	Pulled pump out, put cap on well.
RW-2	--	--	NA	NA	
RW-3	8.50	8.80	0.3	0.05	Kinked discharge line, put piece of 3/4-inch hose around the tubing to provide support.
RW-4	7.74	7.76	0.02	0.003	Exhaust valve stuck open, put back pressure on valve and it began working.
RW-5	--	--	NA	NA	Put cap on well
RW-6	7.26	7.33	0.07	0.01	Pumping but looks like only water, vault 1/2 full of water.
RW-7	6.94	7.01	0.07	0.01	
RW-8	7.68	7.70	0.02	0.00	Exhaust valve stuck open, put back pressure on valve and it began working.
RW-9	--	--	NA	NA	Put cap on well
Depth of product in convault			0.11	feet	
Approximate volume recovered			29	gallons	

Table 4: Summary of Product Thickness Measurements
and Operation and Maintenance Activities - First Semi-Annual 2006
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date:3/3/2006					
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Volume (gallons)	Comments
RW-1	--	--	NA	NA	
RW-2	--	--	NA	NA	
RW-3	8.15	8.16	0.01	0.00	
RW-4	7.12	7.13	0.01	0.002	
RW-5	--	--	NA	NA	
RW-6	7.37	7.41	0.04	0.01	
RW-7	6.95	7.04	0.09	0.01	
RW-8	7.71	7.80	0.09	0.01	
RW-9	--	--	NA	NA	
Depth of product in convault			0.12	feet	
Approximate volume recovered			31	gallons	

Site Visit Date:3/10/2006					
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Volume (gallons)	Comments
RW-1	--	--	NA	NA	
RW-2	--	--	NA	NA	
RW-3	7.90	7.92	0.02	0.00	Replace tubing with more flexible tube to reduce kinking
RW-4	--	--	NA	NA	
RW-5	--	--	NA	NA	
RW-6	7.14	7.15	0.01	0.00	
RW-7	--	--	NA	NA	
RW-8	--	--	NA	NA	
RW-9	--	--	NA	NA	
Depth of product in convault			0.12	feet	
Approximate volume recovered			31	gallons	

Table 4: Summary of Product Thickness Measurements
and Operation and Maintenance Activities - First Semi-Annual 2006
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date:3/22/2006					
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Volume (gallons)	Comments
RW-1	--	--	NA	NA	
RW-2	--	--	NA	NA	
RW-3	8.13	8.14	0.01	0.00	
RW-4	7.09	7.10	0.01	0.002	
RW-5	--	--	NA	NA	
RW-6	7.05	7.06	0.01	0.00	Replace tubing with more flexible tube to reduce kinking.
RW-7	6.70	6.71	0.01	0.00	
RW-8	None	7.43	NA	NA	
RW-9	--	--	NA	NA	
Depth of product in convault			0.14	feet	
Approximate volume recovered			37	gallons	

Site Visit Date:3/22/2006					
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Product Volume (gallons)	Comments
RW-1	--	--	NA	NA	
RW-2	--	--	NA	NA	
RW-3	8.13	8.14	0.01	0.00	
RW-4	7.09	7.10	0.01	0.002	
RW-5	--	--	NA	NA	
RW-6	7.05	7.06	0.01	0.00	Replace tubing with more flexible tube to reduce kinking.
RW-7	6.70	6.71	0.01	0.00	
RW-8	None	7.43	NA	NA	
RW-9	--	--	NA	NA	
Depth of product in convault			0.14	feet	
Approximate volume recovered			37	gallons	

Table 4: Summary of Product Thickness Measurements
and Operation and Maintenance Activities - First Semi-Annual 2006
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Date: 4/4/06					
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Product Volume	Comments:
	feet	feet	feet	gallons	
RW-1	--	--	--	--	
RW-2	--	--	--	--	
RW-3	6.94	6.95	0.01	0.00	Utility box over half full of runoff water, water dripping inside well from leaking vacuum pipe
RW-4	--	--	NA	NA	Utility box full of runoff water
RW-5	--	--	--	--	
RW-6	6.84	6.85	0.01	0.00	
RW-7	6.44	6.45	0.01	0.00	
RW-8	None	7.35		--	
RW-9	--	--	--	--	
Depth of product in convault			0.14	feet	
Approximate volume recovered			37	gallons	

Date: 4/7/06					
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Product Volume	Comments:
	feet	feet	feet	gallons	
RW-1	--	--	--	--	
RW-2	--	--	--	--	
RW-3	7.38	7.39	0.01	0.00	Installed temporary rubber seal around utility box lid to reduce surface water intrusion
RW-4	6.35	6.37	0.02	0.003	Installed temporary rubber seal around utility box lid to reduce surface water intrusion
RW-5	--	--	--	--	
RW-6	6.80	6.81	0.01	0.00	
RW-7	6.40	6.41	0.01	0.00	
RW-8	None	7.22		--	
RW-9	--	--	--	--	
Depth of product in convault			0.14	feet	
Approximate volume recovered			37	gallons	

Table 4: Summary of Product Thickness Measurements
and Operation and Maintenance Activities - First Semi-Annual 2006
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Date: 4/28/06					
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Product Volume	Comments:
	feet	feet	feet	gallons	
RW-1	--	--	--	--	
RW-2	--	--	--	--	
RW-3	8.09	8.10	0.01	0.00	
RW-4	6.75	6.75	0	0.000	
RW-5	--	--	--	--	
RW-6	6.90	6.90	0	0.00	Some water in vault. Water in discharge line, replaced pump with spare.
RW-7	6.50	6.50	0	0.00	
RW-8	7.27	7.27		--	
RW-9	--	--	--	--	
Depth of product in convault			0.15	feet	
Approximate volume recovered			39	gallons	

Date: 4/23/06					
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Product Volume	Comments:
	feet	feet	feet	gallons	
RW-1	--	--	--	--	
RW-2	--	--	--	--	
RW-3	8.85	8.97	0.12	0.02	
RW-4	7.52	7.52	0	0.000	
RW-5	--	--	--	--	
RW-6	7.25	7.80	0.55	0.09	
RW-7	6.85	6.86	0.01	0.00	
RW-8	7.63	7.63		--	
RW-9	--	--	--	--	
Depth of product in convault			0.16	feet	
Approximate volume recovered			42	gallons	

Table 4: Summary of Product Thickness Measurements
and Operation and Maintenance Activities - First Semi-Annual 2006
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Date: 6/6/06					
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Product Volume	Comments:
	feet	feet	feet	gallons	
RW-1	--	--	--	--	
RW-2	--	--	--	--	
RW-3	9.05	9.16	0.11	0.02	Removed all product in well then tuned off pump to RW-3 to do product recovery test.
RW-4	7.74	7.75	0.01	0.002	
RW-5	--	--	--	--	
RW-6	7.32	7.69	0.37	0.06	H_2O in product line, turned on pump, cleaned filter w/pressure washer, reinstalled filter.
RW-7	--	6.95	--	--	Observed product and H_2O in line, turned pump on blowing bubbles. Washed off filter and reinstalled with same results. Replaced pump with spare.
RW-8	--	7.70		--	
RW-9	--	--	--	--	
Depth of product in convault			0.17	feet	
Approximate volume recovered			45	gallons	

Date: 6/27/06					
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Product Volume	Comments:
	feet	feet	feet	gallons	
RW-1	--	--	--	--	
RW-2	--	--	--	--	
RW-3	9.29	9.30	0.01	0.00	Slowed down pump rate.
RW-4	--	8.07	--	--	No product, left inactive.
RW-5	--	--	--	--	
RW-6	7.53	7.62	0.09	0.01	Pumping water, replaced filter but did not work,, replaced pump with spare.
RW-7	7.11	7.12	0.01	0.00	Lowered pump.
RW-8	--	7.87		--	Lowered pump.
RW-9	--	--	--	--	
Depth of product in convault			0.25	feet	
Approximate volume recovered			65	gallons	

Table 4: Summary of Product Thickness Measurements
and Operation and Maintenance Activities - First Semi-Annual 2006
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Date: 7/31/06					
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Product Volume	Comments:
	feet	feet	feet	gallons	
RW-1	--	--	--	--	
RW-2	--	--	--	--	
RW-3	9.64	9.68	0.04	0.01	Began pilot test by applying a low vacuum to well head.
RW-4	--	--	--	--	
RW-5	--	--	--	--	
RW-6	--	7.74	--	--	Began pilot test by applying a low vacuum to well head.
RW-7	--	--	--	--	
RW-8	--	--		--	
RW-9	--	--	--	--	
Depth of product in convault			0.25	feet	
Approximate volume recovered			65	gallons	

Notes:
See Figure 2 for recovery well locations.
-- = not measured
NA = not applicable

TABLE 4: **Product Thickness Measurements and Operations and Maintenance Activities - August to December 2006**
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date: 8/18/2006				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	On-going construction. No access.
RW-2	--	9.93	--	
RW-3	--	9.89	--	Little product in line. No water. Pump currently cycling.
RW-4	8.03	8.04	0.01	
RW-5	--	--	--	No access, vehicle parked on top of lid.
RW-6	--	7.88	--	Little water in the line.
RW-7	7.40	7.50	0.10	Product/ little water in line. Turned pump on; product only pumping.
RW-8	--	8.21	--	No product.
RW-9	--	--	--	Capped too tight.
Depth of product in convault:			0.24	foot
Approximate total volume recovered:			63	gallons

Site Visit Date: 8/25/2006				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	7.65	--	
RW-2	--	10.00	--	
RW-3	9.91	9.92	0.01	Product in line. Pump turned on. Little product in line. Skimmer pump is at 10 feet below top of casing.
RW-4	--	9.09	--	Product in line.
RW-5	--	--	--	Vehicle parked on vault cover.
RW-6	--	7.98	--	No product in line.
RW-7	7.48	7.55	0.07	Product in line. Turned pump on; product and little water in line.
RW-8	--	8.29	--	No product in line.
RW-9	--	9.81	--	
Depth of product in convault:			0.24	foot
Approximate total volume recovered:			63	gallons

TABLE 4: **Product Thickness Measurements and Operations and Maintenance Activities - August to December 2006**
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date: 9/1/2006				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	7.79	--	No measurable product.
RW-2	--	10.07	--	No measurable product.
RW-3	10.08	10.09	0.01	Product in line. Pump turned on; no product in line.
RW-4	--	9.24	--	No product or water in line. Pump turned on; no product or water in line. Pump was set to inactive.
RW-5	--	--	--	Inaccessible. Port truck parked on recovery well location.
RW-6	--	8.13	--	No measurable product. No product in line. Pump turned on; water being pumped.
RW-7	7.59	7.64	0.05	Product in line. Pump turned on; product only being pumped.
RW-8	--	8.42	--	No measurable product. Water in line. Pump turned on; product and water in line. Pump was set to inactive.
RW-9	--	9.87	--	Measurable products.
Depth of product in convault:			0.24	foot
Approximate total volume recovered:			63	gallons

Site Visit Date: 9/8/2006				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	7.84	--	
RW-2	--	10.16	--	
RW-3	10.13	10.15	0.02	Cycle on-going. Product in line. Pump turned on after cycle has stopped. Product and air being pumped.
RW-4	--	9.30	--	Product in line.
RW-5	--	7.97	--	No measurable product.
RW-6	8.27	8.31	0.04	Pump turned on. Bubbles observed in line. Change pump settings from off to Duration 15 minutes and Period of 1 day. Little water and product in line.
RW-7	7.71	7.72	0.01	Product in line. Pump turned on.
RW-8	8.52	8.64	0.12	Product and water in line. Pumped turned on; water only being pumped. Pump was jiggled and was blowing air after.
RW-9	--	9.92	--	
Depth of product in convault:			0.24	foot
Approximate total volume recovered:			63	gallons

TABLE 4: **Product Thickness Measurements and Operations and Maintenance Activities - August to December 2006**
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date: 9/15/2006				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.10	10.14	0.04	Product in line. Pump was not turned on.
RW-4	--	9.37	--	No product or water in line. Air in line.
RW-5	--	8.08	--	
RW-6	8.37	8.42	0.05	Product in line. Pump turned on. Product only being pumped.
RW-7	7.81	7.82	0.01	Product in line. Pump turned on. Product only being pumped.
RW-8	8.60	8.89	0.29	Product and air in line. Turned on pump. After pumping for 5 minutes, product level dropped approximately 0.01 ft.
RW-9	--	--	--	
Depth of product in convault:			NA	
Approximate total volume recovered:			NA	

Site Visit Date: 9/22/2006				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.22	10.23	0.01	Product and water in line. Pump turned on; product and little water being pumped. Pump was jiggled and more product was observed in the line.
RW-4	9.37	9.38	0.01	No product in line. Pump turned on; product in line.
RW-5	--	--	--	
RW-6	8.46	8.52	0.06	Product in line. Pump was turned on. Product being pumped. Water also in line.
RW-7	--	7.88	--	Product in line. Pump was turned on. Air in line.
RW-8	8.70	8.85	0.15	Product in line. Pump turned on; product only being pumped.
RW-9	--	--	--	
Depth of product in convault:			0.26	foot
Approximate total volume recovered:			68	gallons

TABLE 4: **Product Thickness Measurements and Operations and Maintenance Activities - August to December 2006**
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date: 9/29/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.38	10.39	0.01	Product in line.
RW-4	--	9.54	--	No product in line. Pump turned on for 3 minutes; air only being pumped.
RW-5	--	--	--	
RW-6	8.55	8.57	0.02	Product with little water in line. Pump was turned on for 3 minutes; air only being pumped.
RW-7	--	7.95	--	Product in line. Pump turned on for 3 minutes; air only being pumped.
RW-8	8.79	8.93	0.14	No product in line. Pump turned on for 3 minutes; air only being pumped.
RW-9	--	--	--	
Depth of product in convault:			0.26	foot
Approximate total volume recovered:			68	gallons

Site Visit Date: 10/3/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	Well was not inspected.
RW-2	--	--	--	Well was not inspected.
RW-3	--	--	--	Well was not inspected.
RW-4	--	--	--	Well was not inspected.
RW-5	--	--	--	Well was not inspected.
RW-6	--	--	--	Well was not inspected.
RW-7	--	--	--	Well was not inspected.
RW-8	8.78	8.92	0.14	Product line full of water. Pulled pump and replaced filter (black thick sludge covering filter). Pump assembly was pressured washed.
RW-9	--	--	--	Well was not inspected.
Depth of product in convault:			NA	
Approximate total volume recovered:			NA	

TABLE 4: **Product Thickness Measurements and Operations and Maintenance Activities - August to December 2006**
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date: 10/6/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.37	10.38	0.01	Product in line. Pump assembly was removed and washed. Pump turned on; only air being pumped.
RW-4	--	9.54	--	No product in line. Pump assembly was removed and washed. Pumped was turned on; air only being pumped.
RW-5	--	--	--	
RW-6	8.58	8.60	0.02	Product in line. Pump assembly was removed and washed. Pump turned on; product only being pumped.
RW-7	--	8.05	--	Standing water in vault. Product in line. Pump assembly was pulled out and washed. Pump turned on; product only being pumped.
RW-8	--	8.87		Water in line. No product. Pump assembly was pulled out and washed. Replaced float. Pump turned on; no product, only air being pumped.
RW-9	--	--	--	
Depth of product in convault:			0.32	foot
Approximate total volume recovered:			84	gallons

Site Visit Date: 10/13/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.35	10.36	0.01	Little water in line. Ran pump, no water pumping; just air.
RW-4	--	9.57	--	No product in line. Pump was turned on; air only being pumped.
RW-5	--	--	--	
RW-6	8.62	8.64	0.02	Product in line. Ran pump, just product and air in line.
RW-7	--	8.04	--	Product in line. Pump air only.
RW-8	8.90	8.90	--	Air in product line only. Ran pump; only air being pumped.
RW-9	--	--	--	
Depth of product in convault:			0.33	foot
Approximate total volume recovered:			86	gallons

TABLE 4: **Product Thickness Measurements and Operations and Maintenance Activities - August to December 2006**
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date: 10/20/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.65	10.66	0.01	Pump was set to inactive. Product observed in line.
RW-4	--	9.87	--	Pump was set to inactive. No product observed in line.
RW-5	--	--	--	
RW-6	8.72	8.74	0.02	Pump was set to inactive. Product was observed in line.
RW-7	--	8.17	--	Pump was set to inactive. No product observed in line.
RW-8	9.02	9.03	0.01	Pump was set to inactive. Product in line.
RW-9	--	--	--	
Depth of product in convault:			0.32	foot
Approximate total volume recovered:			84	gallons

Site Visit Date: 11/2/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.65	10.67	0.02	Utility box was dry. Pump was not activated.
RW-4	--	9.71	--	Water observed in utility box. Pump was not activated.
RW-5	--	--	--	
RW-6	8.75	8.84	0.09	Utility box was dry. Pump was not activated. Pump was turned on; observed product being pumped.
RW-7	--	8.20	--	Rain water was observed in utility box. Pump was not activated.
RW-8	9.04	9.06	0.02	Utility box is dry. Pump was not activated.
RW-9	--	--	--	
Depth of product in convault:			0.32	foot
Approximate total volume recovered:			84	gallons

TABLE 4: **Product Thickness Measurements and Operations and Maintenance Activities - August to December 2006**
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date: 11/15/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.47	10.50	0.03	Utility box was dry. Pump turned on; only air being pumped. Pump was activated.
RW-4	--	9.62	--	Utility box was dry. Pump turned on; only air being pumped. Pump was not activated.
RW-5	--	--	--	
RW-6	8.72	8.80	0.08	Utility box is dry. Pump turned on. Product being pumped. Pump was activated.
RW-7	--	9.12	--	Standing water inside utility box. Pump turned on; only air being pumped. Pump was not activated.
RW-8	9.04	9.07	0.03	Utility box is dry. Pump turned on. Product being pumped. Pump was activated.
RW-9	--	--	--	
Depth of product in convault:			0.36	foot
Approximate total volume recovered:			94	gallons

Site Visit Date: 11/29/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	8.06	--	Well head box soon to be raised to recent grade change elevation.
RW-2	--	10.27	--	Capped.
RW-3	10.78	10.86	0.08	Air and product in line.
RW-4	--	9.99	--	Air only in line.
RW-5	--	8.49	--	Capped well head.
RW-6	8.85	8.94	0.09	Air and product in line.
RW-7	--	8.26	--	Air only in product line.
RW-8	9.12	9.22	0.10	Air and product in line.
RW-9	--	10.24	--	Capped well head.
Depth of product in convault:			0.36	foot
Approximate total volume recovered:			94	gallons

TABLE 4: **Product Thickness Measurements and Operations and Maintenance Activities - August to December 2006**
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date: 12/11/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.50	10.55	0.05	Utility box was dry. Product observed in line.
RW-4	--	9.74	--	Utility box was dry. No product in line. Pump turned on; air only being pumped.
RW-5	--	--	--	
RW-6	8.76	8.90	0.14	Utility box has water. Product in line. Pump turned on; product only being pumped.
RW-7	--	8.22	--	Utility box was dry. No product in line. Pump turned on; air only being pumped.
RW-8	9.12	9.21	0.09	Utility box was dry. Product in line. Pump turned on; product only being pumped.
RW-9	--	--	--	
Depth of product in convault:			0.38	foot
Approximate total volume recovered:			99	gallons

Site Visit Date: 12/19/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.17	10.20	0.03	Product and water in line. Turned pump on; pumping mostly water. Pulled pump; changed filter and washed pump. Skimmer pump pumped water for about 3 minutes then just product.
RW-4	--	9.41	--	Pump was set to inactive.
RW-5	--	--	--	
RW-6	8.70	8.71	0.01	Product in line. Turned on pump; product only being pumped. Utility box is half full of water.
RW-7	--	8.10	--	Pump was set to inactive.
RW-8	9.01	9.10	0.09	Air in line. Turned on pump; product only being pumped.
RW-9	--	--	--	
Depth of product in convault:			0.4	foot
Approximate total volume recovered:			105	gallons

TABLE 4: **Product Thickness Measurements and Operations and Maintenance Activities - August to December 2006**
Port of Oakland Harbor Facilities Center
2277 and 2225 7th Street, Oakland, California

Site Visit Date: 12/27/2006				
Recovery Well	Depth to Product	Depth to Water	Product Thickness	Comments:
	feet	feet	feet	
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	9.62	9.68	0.06	Water in line. Removed pump and replaced with spare pump. Cleaned previously installed pump. Started spare pump; product and air only being pumped.
RW-4	9.19	9.22	0.03	Air only in line.
RW-5	--	--	--	
RW-6	--	8.67	--	Product and air in line. Utility box is half full of water.
RW-7	8.06	8.07	0.01	Air only in line. Utility box contains water.
RW-8	9.01	9.02	0.01	Line contains air and some product. Water also noted inside the utility box.
RW-9	--	--	--	
Depth of product in convault:			0.43	foot
Approximate total volume recovered:			113	gallons

Notes:

See Figure 2 for recovery well locations.

-- = not measured.

NA = not applicable or available.

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 1/5/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.43	10.47	0.04	Product and air in line only. Turned on pump, only product and air being pumped.
RW-4	9.56	9.57	0.01	
RW-5	--	--	--	
RW-6	8.72	8.76	0.04	Product and air only in line. Turned on pump, only product and air being pumped.
RW-7	8.12	8.13	0.01	Product and air only in line. Turned on pump, only product and air being pumped.
RW-8	9.04	9.08	0.04	Product and air only in line. Turned on pump, only product and air being pumped.
RW-9	--	--	--	
MW-3	10.41	10.98	0.57	Removed 1.25 gallons of mostly product, placed into convault.
Depth of product in convault			0.43	feet
Approximate total volume recovered			113	gallons

Site Visit Date: 1/12/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	8.02	--	Vault is dry.
RW-2	--	9.84	--	
RW-3	10.42	10.43	0.01	Pump turned on; product being pumped. Vault is dry.
RW-4	--	9.61	--	Vault is dry. Pump turned on; only air being pumped. Pump set to inactive.
RW-5	--	--	--	No access.
RW-6	8.79	8.80	0.01	Vault has water. Pump turned on; product being pumped.
RW-7	--	8.19	--	Vault is dry. Pump turned on; air only being pumped. Pump set to inactive.
RW-8	9.07	9.15	0.08	Air and product in line. Pump turned on; product being pumped. Vault is dry.
RW-9	--	9.96	--	Vault is dry.
MW-3	10.44	10.97	0.53	Removed ~ 1.25 gallons of mostly product from well, placed into convault.
Depth of product in convault			0.44	feet
Approximate total volume recovered			114	gallons

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 1/19/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.55	10.56	0.01	Vault is dry. Product observed in line. Pump turned on. Product only being pumped.
RW-4	--	9.71	--	Vault is dry. Pump set to inactive.
RW-5	--	--	--	
RW-6	--	8.82	--	Water noted inside the vault. Product observed in line. Pump turned on. Product being pumped.
RW-7	--	8.24	--	Vault is dry. Pump set to inactive.
RW-8	9.10	9.13	0.03	Vault is dry. Product observed in line. Pump turned on. Product being pumped.
RW-9	--	--	--	
MW-3	10.54	11.21	0.67	Purged ~ 2.0 gallons of product, placed into convault..
Depth of product in convault			0.44	feet
Approximate total volume recovered			115	gallons

Site Visit Date: 1/26/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.58	10.59	0.01	Vault is dry; observed product in product line; pump turned on, product only being pumped.
RW-4	--	9.76	--	Vault is dry. Pump set to inactive.
RW-5	--	--	--	No measurable product.
RW-6	8.84	8.85	0.01	being pumped.
RW-7	--	8.27	--	Vault is dry. Pump set to inactive.
RW-8	9.14	9.20	0.06	Vault is dry; product observed in product line; pump turned on, product being pumped.
RW-9	--	--	--	
MW-3	10.61	11.24	0.63	Purged ~ 2.5 gallons of product, placed into convault.
Depth of product in convault			0.45	
Approximate total volume recovered			118	

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 2/1/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.65	10.66	0.01	Little product in line, no water, lowered skimmer to 10, cycled pump for 5 minutes. No water pumping.
RW-4	Sheen	9.84	Sheen	Pump set to inactive.
RW-5	--	--	--	
RW-6	8.85	8.89	0.04	Little product in line, no water, lowered skimmer to 9 ft., cycled pump for 5 minutes. Water being pumped, changed out filter to new.
RW-7	None	8.28	None	Pump set to inactive.
RW-8	9.15	9.23	0.08	Little product in line, no water, cycled pump. Product being pumped only.
RW-9	--	--	--	
MW-3	10.64	11.40	0.76	Purged ~ 4 gallons of liquid, placed into convault..
Depth of product in convault			0.45	feet
Approximate total volume recovered			118	gallons

Site Visit Date: 2/9/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	9.86	9.87	0.01	Water observed in vault. Product observed in line. Pump turned on; water being pumped. Depth-to-pump was adjusted from 10 to 9 feet. Water still being pumped. Skimmer pump pressure washed; replaced hydrophobic filter; pump depth was set to 9; pumping air and little water.
RW-4	--	9.57	--	Water observed in vault. Pump set to inactive.
RW-5	--	--	--	
RW-6	8.80	8.81	0.01	Vault contains water; product and water in line.
RW-7	--	8.25	--	Half of vault is filled with water. Pump set to inactive.
RW-8	9.16	9.23	0.07	Vault contained water; product observed in line; pump turned on; product being pumped.
RW-9	--	--	--	
MW-3	9.94	11.15	1.21	~ 4 gallons of product were purged, placed into convault..
Depth of product in convault			0.46	feet
Approximate total volume recovered			120	gallons

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 2/13/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	9.78	10.96	1.18	Utility box is dry; no product in product line; pump turned on; product only being pumped. Depth-to-pump was re-adjusted 9 feet; air only being pumped. Product thickness is greater than last visit.
RW-4	Sheen	9.22	Sheen	Utility vault is dry; water level is higher by 0.35' compared to last visit. Pump set to inactive.
RW-5				
RW-6	8.65	8.77	0.12	Utility box contains water; product observed in line; depth-to-pump was adjusted to 8 feet; pump turned on; product being pumped.
RW-7		8.10		Pump set to inactive.
RW-8	9.05	9.09	0.04	Little water observed in utility box; product observed in product line; water level is 0.14 higher compared to last visit; pump turned on; only air being pumped. Product thickness is less than last visit.
RW-9				
MW-3	9.84	10.89	1.05	Depth-to-water is 0.26 foot higher; ~ 4.0 gallons of mostly product were purged, placed into convault.
Depth of product in convault			0.48	feet
Approximate total volume recovered			126	gallons

Site Visit Date: 2/15/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.27	10.28	0.01	Utility box is dry; product observed in product line; pump turned on; product being pumped. Water level is 0.68 foot higher compared to last visit.
RW-4	Sheen	9.42	Sheen	Utility is dry; water level is lower by 0.20 foot compared to last visit. Pump set to inactive.
RW-5	--	--	--	
RW-6	8.69	8.73	0.04	Utility box contains water; product observed in line; pump turned on; product being pumped. Water level is 0.04 foot higher compared to last visit.
RW-7	--	8.13	--	Utility box is dry; water level is lower by 0.03 foot compared to last visit. Pump set to inactive.
RW-8	9.05	9.06	0.01	Utility box is dry; no product observed in product line; water level is 0.03 foot lower compared to last visit. Pump turned on; only air being pumped.
RW-9	--	--	--	
MW-3	10.27	10.7	0.43	Water level is lower by 0.43 foot compared to last visit. ~ 2.0 gallons of product were purged, placed into convault..
Depth of product in convault			0.50	feet
Approximate total volume recovered			131	gallons

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 2/23/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	7.63	--	
RW-2	--	9.38	--	
RW-3	10.04	10.05	0.01	Utility vault is dry; water and product observed in line. Water level is 0.23 foot higher compared to last visit. Skimmer pump lowered to 10 feet; pumping water; pump raised to 9 feet; pumping air; replaced skimmer pump with pump from RW-4; pumping air.
RW-4	--	9.45		Utility vault is dry; water level is 0.03' lower compared to last visit; skimmer pump removed from well.
RW-5	--	--	--	No access.
RW-6	8.72	8.90	0.18	Utility vault contains water; observed product in line; water level is 0.17 foot lower compared to last visit. Pump turned on; product being pumped.
RW-7	--	8.16	--	Utility vault contains water; water level is 0.03 foot lower compared to last visit; skimmer pump removed from well.
RW-8	9.07	9.09	0.02	Utility vault contains water; product observed in product line; pump turned on; product being pumped. Water level is 0.03 foot lower compared to last visit.
RW-9	--	9.88	--	
MW-3	10.06	10.94	0.88	Water level is 0.24' lower compared to last visit. ~ 3 gallons of liquid was purged, placed into convault..
Depth of product in convault			0.52	feet
Approximate total volume recovered			136	gallons

Site Visit Date: 3/2/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.13	10.14	0.01	Little water in line once pump activated. Ran pump for 10 minutes; mostly air with some product pumped.
RW-4	--	9.25	--	Vault is dry.
RW-5	--	--	--	
RW-6	8.61	8.80	0.19	Air and product in line; no water; vault half full of water.
RW-7	--	8.01	--	
RW-8	8.97	8.98	0.01	Air, little product in line. Vault is dry.
RW-9	--	--	--	
MW-3	10.1	10.65	0.55	Removed 4 gallons of mostly product, placed into convault..
Depth of product in convault			0.54	feet
Approximate total volume recovered			141	gallons Note: Bled water from compressor; check compressor oil level.

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 3/9/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	--	10.25	--	Product observed in line; pulled the skimmer pump; surge blocked the well; pump was not replaced to allow settlement of sediments. Pump set to inactive.
RW-4	--	--	--	
RW-5	--	--	--	
RW-6	8.41	8.45	0.04	Pump turned on; product only being pumped. Product thickness decreased to 0.02 after 10 minutes.
RW-7	--	--	--	
RW-8	9.00	9.01	0.01	Pump turned on; product only being pumped.
RW-9	--	--	--	
MW-3	10.25	10.67	0.42	~ 3 gallons were purged, placed into convault..
Depth of product in convault			0.54	feet
Approximate total volume recovered			141	gallons Note:

Site Visit Date: 3/13/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.32	10.34	0.02	Accumulation of product after well was surge blocked on 3/9/07. Left skimmer pump out. Will check product level next event.
RW-4	--	--	--	
RW-5	--	--	--	
RW-6	--	--	--	
RW-7	--	--	--	
RW-8	--	--	--	
RW-9	--	--	--	
MW-3	10.29	10.73	0.44	Removed ~ 2 gallons of mostly product, placed into convault..
Depth of product in convault			0.55	feet
Approximate total volume recovered			144	gallons

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 3/16/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.42	10.46	0.04	Installed pump #7; product thickness was skimmed for about 15 minutes after which air was observed. Air observed in product line. Water level is 0.21 foot lower compared to last visit. Pump was set to period = 7; duration = 30.
RW-4	--	--	--	
RW-5	--	--	--	
RW-6	8.75	8.81	0.06	Product observed in line. Pump turned on. Product being pumped. Water level is 0.36 foot lower compared to last visit.
RW-7	--	--	--	
RW-8	9.03	9.04	0.01	No product observed in line. Pump turned on; product being pumped. Water level is 0.03 foot lower compared to last visit.
RW-9	--	--	--	
MW-3	10.37	10.85	0.48	~ 1.0 gallon of liquid purged, placed into convault..
Depth of product in convault			0.59	feet
Approximate total volume recovered			154	gallons

Site Visit Date: 3/22/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.47	Sheen		
RW-4	--	--	--	
RW-5	--	--	--	
RW-6	8.76	8.86	0.10	Pump turned on; product being pumped.
RW-7	--	--	--	
RW-8	9.04	9.08	0.04	Pump turned on; product being pumped.
RW-9	--	--	--	
MW-3	10.43	10.98	--	~ 2.0 gallons of product were purged, placed into convault.
Depth of product in convault			0.59	feet
Approximate total volume recovered			154	gallons

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 3/28/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	8.06	--	
RW-2	--	9.85	--	
RW-3	10.71	10.72	0.01	Product observed in line.
RW-4	--	9.83	--	
RW-5	--	8.49	--	
RW-6	8.81	8.88	0.07	Product observed in line.
RW-7	--	8.24	--	
RW-8	9.11	9.17	0.06	Product observed in line.
RW-9	--	9.93	--	
MW-3	10.59	11.45	0.86	~ 1.5.0 gallons of product purged, placed into convault.
Depth of product in convault			0.59	feet
Approximate total volume recovered			154	gallons Note: Shut-off entire system for pump controller software upgrade.

Site Visit Date: 4/3/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.67	10.68	0.01	
RW-4	--	--	--	
RW-5	--	--	--	
RW-6	8.82	8.97	0.15	
RW-7	--	--	--	
RW-8	9.12	19.19	0.07	
RW-9	--	--	--	
MW-3	10.6	11.48	0.88	Purged ~ 1.5 gallons of liquid, placed into convault..
Depth of product in convault			0.60	feet
Approximate total volume recovered			157	gallons Note: Reinstalled pump controller.

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 4/13/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--			
RW-2	--	--	--	
RW-3	10.20	10.35	0.15	
RW-4	--	--	--	Old brass ball valve; not tapped for vacuum valve.
RW-5	--	--	--	
RW-6	8.88	8.94	0.06	
RW-7	--	--	--	Old brass ball valve; tapped for vacuum valve
RW-8	9.17	9.27	0.10	Older brass gate valve; not tapped for vacuum valve.
RW-9	--	--	--	
MW-3	10.75	11.57	0.82	Purged ~ 2.0 gallons of product, placed into convault..
Depth of product in convault			0.61	feet
Approximate total volume recovered			160	gallons Note: Made inventory of existing plumbing at recovery wells.

Site Visit Date: 4/18/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	--	--	--	
RW-4	--	--	--	
RW-5	--	--	--	
RW-6	--	--	--	
RW-7	--	--	--	
RW-8	--	--	--	
RW-9	--	--	--	
MW-3	--	--	--	Removed 2 gallons and placed into convault.
Depth of product in convault			0.61	feet
Approximate total volume recovered			160	gallons Note: Skimmer system was turned off for installation of low-vacuum blower.

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 4/25/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	8.1	--	
RW-2	--	--	--	
RW-3	10.72	10.82	0.10	
RW-4	9.74	9.75	0.01	
RW-5	--	8.41	--	
RW-6	8.92	9.03	0.11	
RW-7	8.65	8.65	Sheen	
RW-8	9.34	9.42	0.08	
RW-9	--	9.94	--	
MW-3	--	--	--	
Depth of product in convault			0.61	feet
Approximate total volume recovered			160	gallons

Site Visit Date: 5/3/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.71	10.81	0.10	
RW-4	--	--	--	
RW-5	--	--	--	
RW-6	8.82	8.92	0.01	
RW-7	--	--	--	
RW-8	9.25	9.31	0.06	
RW-9	--	--	--	
MW-3	10.63	11.54	0.91	Removed 1.5 gallons of product and placed into convault.
Depth of product in convault			0.64	feet
Approximate total volume recovered			166	gallons

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 5/18/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.80	10.81	0.01	Product observed in line.
RW-4	--	--	--	
RW-5	--	--	--	
RW-6	8.86	8.91	0.05	
RW-7	--	--	--	
RW-8	9.13	9.17	0.04	
RW-9	--	--	--	
MW-3	10.7	11.55	0.85	Pumped ~ 3.0 gallons of product, placed into convault.
Depth of product in convault			0.64	feet
Approximate total volume recovered			166	gallons

Site Visit Date: 5/25/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1	--	--	--	
RW-2	--	--	--	
RW-3	10.80	10.81	0.01	Product in line.
RW-4	10.03	10.05	0.02	
RW-5	--	--	--	
RW-6	8.87	8.91	0.04	Product and water in line.
RW-7	8.30	8.31	0.01	
RW-8	9.15	9.20	0.05	Product observed in line.
RW-9	--	--	--	
MW-3	10.72	11.57	0.85	Purged ~ 2.0 gallons of product, placed into convault.
Depth of product in convault			0.64	feet
Approximate total volume recovered			166	gallons

Note: Removed oxygen releasing compound socks from MW-4. Dissolved oxygen in groundwater is 8.79 mg/L.

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - January through June 2007
Harbor Facilities Center and Portion of Shippers Transport Express Leasehold

Site Visit Date: 6/8/2007				
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Comments
RW-1				
RW-2				
RW-3	10.5	10.51	0.01	
RW-4	9.77	9.80	0.03	
RW-5				
RW-6	8.65	8.82	0.17	
RW-7	8.39	8.42	0.03	
RW-8	9.10	9.25	0.15	
RW-9				
MW-3	10.71	11.17	0.46	Pumped out product on 6/6/07. ~ 2.0 gallons; again on 6/8/07 ~ 1.0 gallon. Placed product into convault.
Depth of product in convault			0.64	feet
Approximate total volume recovered			166	gallons

Notes:
See Figure 2 for recovery well locations.
-- = not measured.
Sheen = less than 0.01 foot thickness of product.
Product purging in MW-3 is conducted using a peristaltic pump.

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 7/6/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	10.86	10.91	0.05	P=1;D=10	Off	
RW-4	10.10	10.35	0.25	P=1;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	9.19	9.45	0.26	P=1;D=10	Off	
RW-7	8.36	8.44	0.08	P=7;D=10	Off	
RW-8	9.03	9.40	0.37	P=1;D=10	Off	
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.80	feet		
Approximate total volume recovered			175	gallons		

Site Visit Date: 7/26/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments Six new carbon canisters delivered to site.
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=1;D=10	Off	
RW-4	--	--	--	P=1;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	--	--	--	P=1;D=10	Off	
RW-7	--	--	--	P=7;D=10	Off	
RW-8	--	--	--	P=1;D=10	Off	
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.79	feet		
Approximate total volume recovered			178	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 8/2/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments Installed four carbon canisters to vacuum system discharge line. Started vacuum system.
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	11.00	11.05	0.05	P=7;D=10	11.0	
RW-4	10.29	10.38	0.09	P=1;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	9.10	9.48	0.38	P=1;D=10	Off	
RW-7	--	--	--	P=7;D=10	Off	
RW-8	9.25	9.57	0.32	P=7;D=10	11.0	
RW-9	--	--	--	Off	Off	
MW-3	10.94	11.86	0.92	NA	NA	
Depth to product in Convault			1.79	feet		
Approximate total volume recovered			178	gallons		

Site Visit Date: 8/10/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	10.50	10.52	0.02	P=7;D=10	11.0	
RW-4	--	--	--	P=1;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	--	--	--	P=1;D=10	Off	
RW-7	--	--	--	P=7;D=10	Off	
RW-8	9.04	9.58	0.54	P=1;D=15	8.0	
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.80	feet		
Approximate total volume recovered			175	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 8/17/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments Changed out two down stream carbon canisters on the vacuum system.
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	10.45	10.55	0.10	P=7;D=10	11.0	
RW-4	--	--	--	P=1;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	--	--	--	P=1;D=10	Off	
RW-7	--	--	--	P=7;D=10	Off	
RW-8	8.96	9.32	0.36	P=1;D=15	8.0	
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.78	feet		
Approximate total volume recovered			181	gallons		

Site Visit Date: 8/23/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	10.52	10.54	0.02	P=7;D=10	11.0	
RW-4	--	--	--	P=1;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.99	9.51	0.52	P=1;D=10	Off	
RW-7	--	--	--	P=7;D=10	Off	
RW-8	9.16	9.66	0.50	P=1;D=15	8.0	Vacuum at 5 inches of H20 before adjusting to 10.5 in/H2O.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.77	feet		
Approximate total volume recovered			183	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 8/29/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	11.04	11.07	0.03	P=7;D=10	Off	Turned off vacuum to well due do little response.
RW-4	10.27	10.41	0.14	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.84	9.43	0.59	P=1;D=15	10.0	Turned vacuum on to well set to 10 in/H2O.
RW-7	8.28	8.70	0.42	P=3;D=10	10.0	Turned vacuum on to well set to 10 in/H2O.
RW-8	9.19	9.80	0.61	P=1;D=15	10.0	Vacuum at 8.4 in/H2O adjusted to 10 in/H2O. Started skimmer, little product being pumped, replaced filter, more being pumped.
RW-9	--	--	--	Off	Off	
MW-3	10.90	11.80	0.90	NA	NA	
Depth to product in Convault			1.77	feet		
Approximate total volume recovered			183	gallons		

Site Visit Date: 9/7/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.81	9.84	1.03	P=1;D=15	8.0	Vacuum at 7.5 in/H2O adjusted to 8 in/H2O.
RW-7	8.45	8.75	0.30	P=3;D=10	9.0	Vacuum at 8 in/H2O adjusted to 9 in/H2O.
RW-8	9.60	9.80	0.20	P=1;D=10	9.0	Vacuum at 17 in/H2O adjusted to 9. in/H2O.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.75	feet		
Approximate total volume recovered			188	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 9/14/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.69	8.79	0.10	P=1;D=15	7.2	Vacuum at 7.2 in/H2O.
RW-7	7.85	8.15	0.30	P=3;D=10	9.0	Vacuum at 9 in/H2O.
RW-8	9.20	9.60	0.40	P=1;D=10	12.0	Vacuum at 5.5 in/H2O, adjusted vacuum to 12 in/H2O. Turned on skimmer for 15 minutes,1.5 cups of product generated.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.73	feet		
Approximate total volume recovered			194	gallons		

Site Visit Date: 9/20/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	9.01	9.42	0.41	P=1;D=15	9.5	Vacuum at 6.9 in/H2O adjusted vacuum to 9. in/H2O.
RW-7	8.35	8.72	0.37	P=3;D=10	8.0	Vacuum at 6 in/H2O adjusted vacuum to 8. in/H2O.
RW-8	9.25	9.90	0.65	P=1;D=10	9.0	Vacuum at 16.5 in/H2O adjusted vacuum to 10. in/H2O.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.71	feet		
Approximate total volume recovered			199	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 9/27/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments Changed out two down stream carbon canisters on the vacuum system.
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	9.04	9.64	0.60	P=1;D=15	9.5	Vacuum at 7.5 adjusted vacuum to 9 in/H2O.
RW-7	8.46	8.83	0.37	P=3;D=10	8.0	Vacuum at 5 adjusted vacuum to 7.75 in/H2O.
RW-8	9.60	9.82	0.22	P=1;D=10	11.5	Vacuum at 2 adjusted vacuum to 11.5 in/H2O.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.69	feet		
Approximate total volume recovered			204	gallons		

Site Visit Date: 10/4/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.96	9.46	0.50	P=1;D=15	10.0	Vacuum at 10. in/H2O.
RW-7	8.38	8.81	0.43	P=3;D=10	8.0	Vacuum at 8 in/H2O.
RW-8	9.47	9.91	0.44	P=1;D=10	9.0	Vacuum at >15 in/H2O adjusted vacuum to 9. in/H2O.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.63	feet		
Approximate total volume recovered			220	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 10/11/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.85	10.15	1.30	P=1;D=15	10.2	Vacuum at 10.2 in/H2O, turned on skimmer, pumping very little product, replaced skimmer filter, pumping ok.
RW-7	8.29	8.89	0.60	P=3;D=10	11.4	Vacuum at 11.4 in/H2O, turned on skimmer, pumping very little product, picked up pump, pumping ok.
RW-8	9.44	9.91	0.47	P=1;D=10	9.1	Vacuum at 9.1 in/H2O, turned on skimmer, pumping very little product, replaced skimmer filter, pumping ok.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.60	feet		
Approximate total volume recovered			228	gallons		

Site Visit Date: 10/17/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.72	10.40	1.68	P=1;D=15	10.0	Vacuum at 12.4 in/H2O adjusted to 10, turned on skimmer, pumping very little product, replaced skimmer with refurbished one, pumping ok.
RW-7	8.14	8.70	0.56	P=2;D=10	10.0	Vacuum at >15 in/H2O adjusted to 10, turned on skimmer, pumping very little product, picked up pump, pumping ok.
RW-8	9.34	9.55	0.21	P=1;D=10	8.8	Vacuum at 8.8 in/H2O, turned on skimmer, pumping product ok.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.57	feet		
Approximate total volume recovered			236	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 10/25/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments Changed out two down stream carbon canisters on the vacuum system.
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.98	9.55	0.57	P=1;D=15	12.6	Vacuum at 12.6 in/H2O adjusted to 10 in/H2O, water observed in product line, raised skimmer.
RW-7	8.34	9.25	0.91	P=2;D=15	9.0	Vacuum at 6.0 in/H2O adjusted to 9 in/H2O, turned on skimmer, pumping product ok.
RW-8	9.50	9.75	0.25	P=1;D=10	8.2	Vacuum at 8.2 in/H2O, turned on skimmer, pumping product ok.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.52	feet		
Approximate total volume recovered			249	gallons		

Site Visit Date: 11/2/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.89	9.90	1.01	P=1;D=20	9.0	Vacuum at 9.0 in/H2O.
RW-7	8.32	9.24	0.92	P=1;D=15	5.0	Vacuum at 5.0 in/H2O.
RW-8	9.40	9.71	0.31	P=1;D=10	6.4	Vacuum at 6.4 in/H2O.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.47	feet		
Approximate total volume recovered			262	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 11/8/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	8.95	9.95	1.00	C=2;D=15	8.8	Vacuum at 8.8 in/H2O.
RW-7	8.38	9.15	0.77	P=1;D=15	5.0	Vacuum at 5.0 in/H2O.
RW-8	9.43	9.72	0.29	P=1;D=10	9.0	Vacuum at 6 in/H2O, adjusted to in/H2O.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	
Depth to product in Convault			1.40	feet		
Approximate total volume recovered			280	gallons		

Site Visit Date: 11/15/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=7;D=10	Off	
RW-5	--	--	--	Off	Off	
RW-6	9.00	9.80	0.80	C=3;D=15	10.0	Vacuum at 10 in/H2O.
RW-7	8.29	9.75	1.46	C=2;D=15	6.0	Vacuum at 6.0 in/H2O.
RW-8	9.45	9.80	0.35	P=1;D=10	10.0	Vacuum at 13 in/H2O, adjusted to 10 in/H2O.
RW-9	--	--	--	Off	Off	
MW-3	--	--	--	NA	NA	Purged ~ 6.5 gallons of product, placed into Convault.
Depth to product in Convault			1.35	feet		
Approximate total volume recovered			293	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 11/20/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	8.62	8.63	0.01	Off	Off	
RW-2	None	9.87	None	Off	Off	
RW-3	11.22	11.35	0.13	P=7;D=10	Off	
RW-4	10.34	10.65	0.31	P=1;D=10	Off	
RW-5	8.52	10.20	1.68	Off	Off	
RW-6	9.04	9.50	0.46	C=3;D=15	9.2	
RW-7	8.29	9.59	1.30	C=4;D=15	5.2	
RW-8	9.38	9.64	0.26	P=1;D=10	10.5	
RW-9	10.02	12.50	2.48	Off	Off	
MW-3	11.00	12.40	1.40	NA	NA	Purged ~ 6.0 gallons of product, placed into Convault.
Depth to product in Convault			1.25	feet		
Approximate total volume recovered			319	gallons		

Site Visit Date: 11/21/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	--	--	--	Off	Off	
RW-3	--	--	--	P=7;D=10	Off	
RW-4	--	--	--	P=1;D=10	Off	
RW-5	8.60	10.32	1.72	Off	Off	Purged ~ 3.0 gallons of product, placed into Convault.
RW-6	--	--	--	C=3;D=15	9.2	
RW-7	--	--	--	C=4;D=15	5.2	
RW-8	--	--	--	P=1;D=10	10.5	
RW-9	10.10	12.50	2.40	Off	Off	Purged ~ 3.0 gallons of product, placed into Convault.
MW-3	11.00	12.26	1.26	NA	NA	Purged ~ 1.5 gallons of product, placed into Convault.
Depth to product in Convault			--	feet		
Approximate total volume recovered			--	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 11/28/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments Breakthrough on carbon vessels, turn off low vacuum.
RW-1	--	--	--	Off	Off	
RW-2	None	10.10	None	Off	Off	
RW-3	11.32	11.49	0.17	P=7;D=10	Off	
RW-4	10.46	10.79	0.33	P=1;D=10	Off	
RW-5	8.80	8.95	0.15	Off	Off	
RW-6	9.15	9.53	0.38	C=3;D=15	Off	
RW-7	8.53	8.89	0.36	C=4;D=15	Off	
RW-8	9.45	9.60	0.15	P=1;D=10	Off	
RW-9	10.37	10.99	0.62	P=1;D=15	Off	Installed skimmer pump.
MW-3	11.11	12.67	1.56	NA	NA	Purged ~ 5 gallons of product, placed into Convault.
Depth to product in Convault			1.09	feet		
Approximate total volume recovered			361	gallons		

Site Visit Date: 12/07/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	None	9.55	None	Off	Off	
RW-3	10.91	11.06	0.15	P=7;D=10	Off	
RW-4	10.15	10.46	0.31	P=1;D=10	Off	
RW-5	8.68	8.79	0.11	Off	Off	
RW-6	9.20	9.34	0.14	C=3;D=15	Off	
RW-7	8.44	8.80	0.36	C=4;D=15	Off	
RW-8	9.70	10.00	0.30	P=1;D=10	Off	
RW-9	10.65	10.77	0.12	P=7;D=15	Off	Reduced skimmer activation from every day to once a week
MW-3	10.70	11.88	1.18	NA	NA	Purged ~ 4 gallons of product, placed into Convault.
Depth to product in Convault			1.05	feet		
Approximate total volume recovered			372	gallons		Product removed by Port waste disposal contractor.

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 12/14/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	None	9.61	None	Off	Off	
RW-3	11.24	11.40	0.16	P=7;D=10	Off	
RW-4	10.39	10.62	0.23	P=1;D=10	Off	
RW-5	8.85	9.00	0.15	Off	Off	
RW-6	9.29	9.45	0.16	C=3;D=15	Off	
RW-7	8.67	8.80	0.13	C=4;D=15	Off	
RW-8	9.71	10.17	0.46	P=1;D=10	Off	
RW-9	10.62	10.85	0.23	P=7;D=15	Off	
MW-3	11.06	12.26	1.20	NA	NA	Purged ~ 4 gallons of product, placed into Convault.
Depth to product in Convault			2.42	feet		
Approximate total volume recovered			13	gallons		

Site Visit Date: 12/21/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments
RW-1	--	--	--	Off	Off	
RW-2	None	10.10	None	Off	Off	
RW-3	10.91	11.22	0.31	P=7;D=10	Off	Cycled skimmer, product and air being pumped
RW-4	10.15	10.17	0.02	P=1;D=10	Off	Evidence of vaults being filled with rain water from storm run-off. Cycled skimmer, product and air being pumped
RW-5	8.63	8.82	0.19	Off	Off	
RW-6	9.12	9.25	0.13	C=3;D=15	Off	Cycled skimmer, product and air being pumped
RW-7	8.45	8.63	0.18	C=4;D=15	Off	Evidence of vaults being filled with rain water from storm run-off. Cycled skimmer, product and air being pumped
RW-8	9.65	9.90	0.25	P=1;D=10	Off	Cycled skimmer, product and air being pumped
RW-9	10.47	10.80	0.33	P=7;D=15	Off	Cycled skimmer, product being pumped
MW-3	10.71	11.59	0.88	NA	NA	Purged ~ 1.5 gallons of product, placed into Convault.
Depth to product in Convault			2.41	feet		
Approximate total volume recovered			16	gallons		

TABLE 3**: Product Thickness Measurements and**
Operations and Maintenance Activities - July through December 2007
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 12/28/2007						
Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (Inches of H2O)	Comments Two 1,000 lbs carbon canisters installed to vacuum system discharge line. Started vacuum system.
RW-1	--	--	--	Off	Off	
RW-2	None	8.95	None	Off	Off	
RW-3	10.89	11.22	0.33	P=7;D=10	Off	
RW-4	10.00	10.03	0.03	P=1;D=10	Off	
RW-5	8.67	8.84	0.17	Off	Off	
RW-6	9.16	9.28	0.12	C=3;D=15	8.0	Applied vacuum to skimmer, adjusted vacuum to 8 in/H2O.
RW-7	8.51	8.98	0.47	C=4;D=15	7.4	Applied vacuum to skimmer, adjusted vacuum to 7.4 in/H2O.
RW-8	9.65	9.78	0.13	P=1;D=10	8.0	Applied vacuum to skimmer, adjusted vacuum to 8. in/H2O.
RW-9	10.40	11.15	0.75	P=7;D=15	Off	
MW-3	10.78	11.70	0.92	NA	NA	Purged ~ 4 gallons of product, placed into Convault.
Depth to product in Convault			2.38	feet		
Approximate total volume recovered			24	gallons		

Notes:
See Figure 2 for recovery well locations.
D= Duration (length of time in minutes the skimmer will run upon activation)
P= Period (P=1 would indicate skimmer activated every day; P=4 would be skimmer activated every fourth day)
C=Cycles (C=2 would indicate skimmer activated twice per day; C=4 would indicate skimmer activated four times per day)
H2O = water
lbs = pounds
-- = not measured.
Sheen = less than 0.01 foot thickness of product.
Product purging in is conducted using a peristaltic pump.

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 1/4/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.90	11.83	0.93	P=7, D=10	Off	
RW-4	10.20	10.44	0.24	P=1, D=10	Off	
RW-5	8.79	8.89	0.10	Off	Off	
RW-6	9.20	9.36	0.16	C=3, D=15	Off	
RW-7	8.49	8.88	0.39	C=4, D=15	Off	
RW-8	9.70	10.00	0.30	P=1, D=10	Off	
RW-9	10.69	11.00	0.31	P=7, D=15	Off	
MW-3	10.75	11.41	0.66		Off	

Depth to product in Convault 1.12 feet Depth to water in Convault 1.28 feet Volume of Product in Convault 42 gallons
Approximate total volume recovered 353 gallons
PID Readings on vapor: Inlet: 40.9 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 1/11/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1					Off	
RW-2					Off	
RW-3	10.94	11.81	0.87	P=7, D=10	Off	
RW-4	10.19	10.47	0.28	P=1, D=10	Off	
RW-5	8.69	8.80	0.11	Off	Off	
RW-6	9.25	9.38	0.13	C=3, D=15	Off	
RW-7	8.46	8.88	0.42	C=4, D=15	Off	
RW-8	9.75	10.05	0.30	P=1, D=10	Off	
RW-9	10.68	10.79	0.11	P=1, P=7, D=15	Off	
MW-3	10.70	11.95	1.25		Off	Recovered 3 gal. of product.

Depth to product in Convault 1.13 feet Depth to water in Convault 1.29 feet Volume of Product in Convault 42 gallons
Approximate total volume recovered 351 gallons
PID Readings on vapor: Inlet: 40 ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 1/18/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.90	11.86	0.96	P=7, D=10	Off	
RW-4	10.21	10.49	0.28	P=1, D=10	Off	
RW-5	8.70	8.81	0.11	Off	Off	
RW-6	9.29	9.36	0.07	C=3, D=15	Off	
RW-7	8.50	8.86	0.36	C=4, D=15	Off	
RW-8	9.79	10.15	0.36	P=1, D=10	Off	
RW-9	10.66	10.72	0.06	P=7, D=15	Off	
MW-3	10.79	11.98	1.19		Off	

Depth to product in Convault 1.13 feet Depth to water in Convault 1.27 feet Volume of Product in Convault 37 gallons
Approximate total volume recovered 351 gallons
PID Readings on vapor: Inlet: 48 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 1/25/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.87	11.88	1.01	P=7, D=10	Off	
RW-4	10.24	10.51	0.27	P=1, D=10	Off	
RW-5	8.71	8.79	0.08	Off	Off	
RW-6	9.24	9.33	0.09	C=3, D=15	Off	
RW-7	8.47	8.81	0.34	C=4, D=15	Off	
RW-8	9.74	10.18	0.44	P=1, D=10	Off	
RW-9	10.69	10.79	0.10	P=7, D=15	Off	
MW-3	10.94	11.90	0.96		Off	

Depth to product in Convault -- feet Depth to water in Convault -- feet Volume of Product in Convault -- gallons
Approximate total volume recovered -- gallons
PID Readings on vapor: Inlet: 48 ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 2/1/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.77	11.91	1.14	P=7, D=10	Off	
RW-4	9.79	9.95	0.16	P=1, D=10	Off	
RW-5	8.00	8.17	0.17	Off	Off	
RW-6	8.24	8.41	0.17	C=3, D=15	Off	
RW-7	8.12	8.45	0.33	C=4, D=15	Off	
RW-8	9.71	10.00	0.29	P=1, D=10	Off	
RW-9	10.71	11.05	0.34	P=7, D=15	Off	
MW-3	10.86	11.91	1.05		Off	Unable to pump.

Depth to product in Convault 1.77 feet Depth to water in Convault 1.95 feet Volume of Product in Convault 47 gallons
Approximate total volume recovered 183 gallons
PID Readings on vapor: Inlet: 40 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 2/8/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.70	11.94	1.24	P=7, D=10	Off	
RW-4	9.77	9.94	0.17	P=1, D=10	Off	
RW-5	8.20	8.36	0.16	Off	Off	
RW-6	8.21	8.38	0.17	C=3, D=15	Off	
RW-7	8.10	8.33	0.23	C=4, D=15	Off	
RW-8	8.65	8.74	0.09	P=1, D=10	Off	
RW-9	9.69	9.95	0.26	P=7, D=15	Off	
MW-3	10.71	11.20	0.49		Off	

Depth to product in Convault -- feet Depth to wat -- feet Volume of Product in Convault -- gallons
Approximate total volume recovered -- gallons
PID Readings on vapor: Inlet: 40 ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 2/15/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.71	11.86	1.15	P=7, D=10	Off	
RW-4	9.65	9.88	0.23	P=1, D=10	Off	
RW-5	8.81	8.89	0.08	Off	Off	
RW-6	8.23	8.41	0.18	C=3, D=15	Off	
RW-7	8.10	8.33	0.23	C=4, D=15	Off	
RW-8	8.71	8.78	0.07	P=1, D=10	Off	
RW-9	8.95	9.34	0.39	P=7, D=15	Off	
MW-3	10.79	11.24	0.45		Off	

Depth to product in Convault -- feet Depth to water in Convault -- feet Volume of Product in Convault -- gallons
Approximate total volume recovered -- gallons
PID Readings on vapor: Inlet: 40 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 2/25/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	9.41	13.25	3.84	P=7, D=10	Off	
RW-4	9.25	9.95	0.70	P=1, D=10	Off	
RW-5	--	--	--	Off	Off	Unable to check - truck parked on top.
RW-6	8.12	8.20	0.08	C=3, D=15	Off	
RW-7	7.15	7.33	0.18	C=4, D=15	Off	
RW-8	7.25	7.55	0.30	P=1, D=10	Off	Need to fix petcock.
RW-9	9.85	9.95	0.10	P=7, D=15	Off	
MW-3	--	--	--		Off	Truck parked on top. Returned to site 2/26 to pump well. Removed 17 gal.

Depth to product in Convault 1.80 feet Depth to water in Convault 2 feet Volume of Product in Convault 52 gallons
Approximate total volume recovered 175 gallons
PID Readings on vapor: Inlet: 40.6 ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 2/28/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.20	11.40	1.20	P=7, D=10	Off	
RW-4	9.29	9.95	0.66	P=1, D=10	Off	
RW-5	7.84	8.66	0.82	Off	Off	
RW-6	8.80	8.90	0.10	C=3, D=15	Off	
RW-7	7.29	7.56	0.27	C=4, D=15	Off	
RW-8	7.22	7.56	0.34	P=1, D=10	Off	
RW-9	9.80	9.95	0.15	P=7, D=15	Off	
MW-3	10.39	11.55	1.16		Off	

Depth to product in Convault 1.80 feet Depth to water in Convault 2.00 feet Volume of Product in Convault 52 gallons
Approximate total volume recovered 175 gallons
PID Readings on vapor: Inlet: 40.7 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 3/7/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.27	12.15	1.88	P=7, D=10	Off	
RW-4		9.57		P=1, D=10	Off	
RW-5	8.20	8.75	0.55	Off	Off	
RW-6	8.00	8.15	0.15	C=3, D=15	Off	
RW-7	7.65	7.70	0.05	C=4, D=15	Off	
RW-8	8.30	8.35	0.05	P=1, D=10	Off	
RW-9	8.10	8.32	0.22	P=7, D=15	Off	
MW-3	--	--	--		Off	Truck parked on top of well.

Depth to product in Convault 1.79 feet Depth to water in Convault 1.91 feet Volume of Product in Convault 31 gallons
Approximate total volume recovered 178 gallons
PID Readings on vapor: Inlet: 40 ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 3/12/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.22	12.19	1.97	P=7, D=10	Off	
RW-4	9.77	9.80	0.03	P=1, D=10	Off	
RW-5	8.21	8.79	0.58	Off	Off	
RW-6	8.01	8.14	0.13	C=3, D=15	Off	
RW-7	7.66	7.74	0.08	C=4, D=15	Off	
RW-8	7.21	7.39	0.18	P=1, D=10	Off	
RW-9	8.14	8.30	0.16	P=7, D=15	Off	
MW-3	--	--	--		Off	Truck parked on top of well.

Depth to product in Convault 1.79 feet Depth to water in Convault 1.91 feet Volume of Product in Convault 31 gallons
Approximate total volume recovered 178 gallons
PID Readings on vapor: Inlet: 40.6 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 3/21/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.48	11.95	1.47	P=7, D=10	Off	
RW-4	9.78	9.81	0.03	P=1, D=10	Off	
RW-5	8.29	8.49	0.20	Off	Off	
RW-6	8.80	9.20	0.40	C=3, D=15	Off	
RW-7	8.10	8.29	0.19	C=4, D=15	Off	
RW-8	9.29	7.44	-1.85	P=1, D=10	Off	
RW-9	8.20	8.35	0.15	P=7, D=15	Off	
MW-3	--	--	--		Off	Truck parked on top of well.

Depth to product in Convault 1.79 feet Depth to water in Convault 1.91 feet Volume of Product in Convault 31 gallons
Approximate total volume recovered 178 gallons
PID Readings on vapor: Inlet: 40.6 ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 3/28/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.55	11.75	1.20	P=7, D=10	Off	
RW-4	9.79	9.82	0.03	P=1, D=10	Off	
RW-5	8.30	8.50	0.20	Off	Off	
RW-6	8.80	9.25	0.45	C=3, D=15	Off	
RW-7	8.15	8.20	0.05	C=4, D=15	Off	
RW-8	9.30	9.40	0.10	P=1, D=10	Off	
RW-9	10.04	10.25	0.21	P=7, D=15	Off	Product in line, Station #2.
MW-3	--	--	--		Off	Truck parked on top of well.

Depth to product in Convault 1.78 feet Depth to water in Convault 1.91 feet Volume of Product in Convault 34 gallons
Approximate total volume recovered 181 gallons
PID Readings on vapor: Inlet: 21.9 ppmv Midpoint: 0 ppmv Final: 0 ppmv Flowrate: 44 CFM

Site Visit Date: 4/4/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.83	11.69	0.86	P=7, D=10	Off	
RW-4	9.93	10.24	0.31	P=1, D=10	Off	
RW-5	--	--	--	Off	Off	Truck parked on well vault
RW-6	8.31	9.15	0.84	C=3, D=15	Off	
RW-7	7.80	8.02	0.22	C=4, D=15	Off	
RW-8	8.99	9.10	0.11	P=1, D=10	Off	
RW-9	8.37	9.48	1.11	P=7, D=15	Off	
MW-3	--	--	--		Off	Truck parked on well vault

Depth to product in Convault 1.75 feet Depth to water in Convault 1.91 feet Volume of Product in Convault 42 gallons
Approximate total volume recovered 189 gallons
PID Readings on vapor: Inlet: 71.5 ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 4/11/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.85	11.71	0.86	P=7, D=10	Off	
RW-4	9.95	10.26	0.31	P=1, D=10	Off	
RW-5	--	--	--	Off	Off	Truck parked on well vault
RW-6	8.33	9.17	0.84	C=3, D=15	Off	
RW-7	7.79	8.10	0.31	C=4, D=15	Off	
RW-8	8.95	9.09	0.14	P=1, D=10	Off	
RW-9	8.36	9.46	1.10	P=7, D=15	Off	
MW-3	10.77	11.54	0.77		Off	

Depth to product in Convault 1.77 feet Depth to water in Convault 1.91 feet Volume of Product in Convault 37 gallons
Approximate total volume recovered 183 gallons
PID Readings on vapor: Inlet: 68 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 4/18/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.85	11.70	0.85	P=7, D=10	Off	
RW-4	10.00	10.25	0.25	P=1, D=10	Off	
RW-5	--	--	--	Off	Off	Truck parked on well vault
RW-6	8.33	9.17	0.84	C=3, D=15	11	Product in line
RW-7	7.75	7.80	0.05	C=4, D=15	15	
RW-8	8.98	9.10	0.12	P=1, D=10	14	
RW-9	8.35	9.42	1.07	P=7, D=15	Off	
MW-3	10.75	11.57	0.82		Off	

Depth to product in Convault 1.75 feet Depth to water in Convault 1.90 feet Volume of Product in Convault 39 gallons
Approximate total volume recovered 189 gallons
PID Readings on vapor: Inlet: ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 4/25/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.63	11.69	1.06	P=7, D=10	14	
RW-4	10.10	10.25	0.15	P=1, D=10	13	
RW-5	--	--	--	Off	Off	
RW-6	8.36	9.19	0.83	C=3, D=15	13	
RW-7	7.77	7.81	0.04	C=4, D=15	14	
RW-8	8.99	9.11	0.12	P=1, D=10	11	
RW-9	8.37	9.41	1.04	P=7, D=15	Off	
MW-3	10.77	11.55	0.78		Off	

Depth to product in Convault 1.70 feet Depth to water in Convault 1.88 feet Volume of Product in Convault 47 gallons
Approximate total volume recovered 202 gallons
PID Readings on vapor: Inlet: 77 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 5/2/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.64	11.66	1.02	P=7, D=10	14	
RW-4	10.09	10.23	0.14	P=1, D=10	13	
RW-5	--	--	--	Off	Off	
RW-6	8.33	9.17	0.84	C=3, D=15	13	
RW-7	7.75	7.81	0.06	C=4, D=15	14	
RW-8	8.89	9.16	0.27	P=1, D=10	11	
RW-9	8.34	9.41	1.07	P=7, D=15	Off	
MW-3	10.70	11.57	0.87		Off	

Depth to product in Convault 1.68 feet Depth to water in Convault 1.87 feet Volume of Product in Convault 50 gallons
Approximate total volume recovered 207 gallons
PID Readings on vapor: Inlet: 75 ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 5/9/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.66	11.65	0.99	P=7, D=10	14	
RW-4	10.01	10.24	0.23	P=1, D=10	13	
RW-5	--	--	--	Off	Off	
RW-6	8.39	9.18	0.79	C=3, D=15	13	
RW-7	7.77	7.80	0.03	C=4, D=15	14	
RW-8	8.88	9.19	0.31	P=1, D=10	11	
RW-9	8.37	9.40	1.03	P=7, D=15	Off	
MW-3	10.77	11.57	0.80		Off	

Depth to product in Convault 1.68 feet Depth to water in Convault 1.87 feet Volume of Product in Convault 50 gallons
Approximate total volume recovered 207 gallons
PID Readings on vapor: Inlet: 75 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 5/16/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.66	11.65	0.99	P=7, D=10	14	
RW-4	10.10	10.22	0.12	P=1, D=10	13	
RW-5	--	--	--	Off	Off	
RW-6	8.41	9.17	0.76	C=3, D=15	13	
RW-7	7.78	7.83	0.05	C=4, D=15	14	
RW-8	8.86	9.15	0.29	P=1, D=10	11	
RW-9	8.35	9.46	1.11	P=7, D=15	Off	
MW-3	10.79	11.61	0.82		Off	

Depth to product in Convault 1.65 feet Depth to water in Convault 1.82 feet Volume of Product in Convault 44 gallons
Approximate total volume recovered 215 gallons
PID Readings on vapor: Inlet: 77 ppmv Midpoint: 0 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 5/23/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.64	11.62	0.98	P=7, D=10	14	
RW-4	10.13	10.19	0.06	P=1, D=10	13	
RW-5	--	--	--	Off	Off	
RW-6	8.39	9.20	0.81	C=3, D=15	13	
RW-7	7.81	7.87	0.06	C=4, D=15	14	
RW-8	8.89	9.18	0.29	P=1, D=10	11	
RW-9	8.33	9.43	1.10	P=7, D=15	Off	
MW-3	10.80	11.69	0.89		Off	

Depth to product in Convault 1.60 feet Depth to water in Convault 1.81 feet Volume of Product in Convault 55 gallons
Approximate total volume recovered 228 gallons
PID Readings on vapor: Inlet: 86 ppmv Midpoint: 0 ppmv Final: 0 ppmv

Site Visit Date: 5/30/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.96	11.00	0.04	P=7, D=10	10	
RW-4	10.67	11.19	0.52	P=2, D=10	12	
RW-5	--	--	--	Off	Off	
RW-6	8.71	10.29	1.58	C=2, D=15	11	
RW-7	8.10	9.33	1.23	P=1, D=10	11	
RW-8	9.30	10.55	1.25	P=1, D=10	12	
RW-9	9.89	11.17	1.28	P=5, D=10	10	
MW-3	10.85	11.77	0.92		Off	

Depth to product in Convault 2.30 feet Depth to water in Convault 2.32 feet Volume of Product in Convault 5 gallons
Approximate total volume recovered 45 gallons Convault emptied.
PID Readings on vapor: Inlet: 69 ppmv Midpoint: 0.2 ppmv Final: 0 ppmv Flowrate: 46 CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 6/6/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	11.11	11.31	0.20	P=7, D=10	12	
RW-4	10.71	11.50	0.79	P=2, D=10	11	
RW-5	--	--	--	Off	Off	
RW-6	8.55	10.25	1.70	C=2, D=10	12	
RW-7	8.17	9.38	1.21	C=3, D=10	13	
RW-8	9.29	10.81	1.52	P=1, D=10	12	
RW-9	9.90	11.10	1.20	P=5, D=10	12	
MW-3	10.81	11.65	0.84		Off	

Depth to product in Convault 2.33 feet Depth to water in Convault 2.35 feet Volume of Product in Convault 5 gallons
Approximate total volume recovered 37 gallons
PID Readings on vapor: Inlet: 65 ppmv Midpoint: 0.2 ppmv Final: 0 ppmv Flowrate: 44 CFM

Site Visit Date: 6/13/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.95	10.99	0.04	P=7, D=10	12	
RW-4	10.69	11.15	0.46	P=2, D=10	12	
RW-5	--	--	--	Off	Off	
RW-6	8.58	10.22	1.64	C=2, D=10	11	
RW-7	8.15	9.35	1.20	P=1, D=10	11	
RW-8	9.27	10.50	1.23	P=1, D=10	12	
RW-9	9.89	11.15	1.26	P=5, D=10	12	
MW-3	--	--	--		Off	

Depth to product in Convault 2.34 feet Depth to water in Convault 2.36 feet Volume of Product in Convault 5 gallons
Approximate total volume recovered 34 gallons
PID Readings on vapor: Inlet: 66 ppmv Midpoint: 0.2 ppmv Final: 0 ppmv Flowrate: 43 CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Site Visit Date: 6/20/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	11.14	11.31	0.17	P=7, D=10	13	
RW-4	10.23	11.07	0.84	P=2, D=10	11	
RW-5	--	--	--	Off	Off	Truck parked on top. No one available to move it.
RW-6	8.57	10.23	1.66	C=2, D=10	10	
RW-7	8.20	9.40	1.20	C=3, D=10	13	
RW-8	9.25	10.77	1.52	P=1, D=10	12	
RW-9	9.88	11.09	1.21	P=5, D=10	Off	
MW-3	--	--	--		Off	Street cleaning vehicle parked on top. No one available to move [it].

Depth to product in Convault 2.40 feet Depth to water in Convault 2.44 feet Volume of Product in Convault 10 gallons
Approximate total volume recovered 18 gallons
PID Readings on vapor: Inlet: 63 ppmv Midpoint: 0.4 ppmv Final: 0 ppmv Flowrate: 44 CFM

Site Visit Date: 6/27/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.55	11.40	0.85	P=7, D=10	10	
RW-4	10.10	11.94	1.84	P=1, D=10	14	
RW-5	--	--	--	Off	Off	Truck is once again parked on top of location. No one available to remove truck.
RW-6	8.40	9.56	1.16	C=3, D=15	10	
RW-7	7.85	8.00	0.15	C=4, D=15	14	
RW-8	9.08	9.20	0.12	P=1, D=10	11	
RW-9	8.40	9.55	1.15	P=7, D=15	10	
MW-3	10.80	11.62	0.82		Off	

Depth to product in Convault 2.42 feet Depth to water in Convault 2.45 feet Volume of Product in Convault 8 gallons
Approximate total volume recovered 13 gallons
PID Readings on vapor: Inlet: 62.5 ppmv Midpoint: 0.2 ppmv Final: 0 ppmv Flowrate: 44 CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - January through June 2008
Port of Oakland
651 and 555 Maritime Street
Oakland, California

Notes:

See Figure 2 for recovery well locations.
D = Duration (length of time in minutes the skimmer will run upon activation)
P = Period (P=1 would indicate skimmer activated every day; P=4 would be skimmer activated every fourth day)
C = Cycles (C=2 would indicate skimmer activated twice per day; C=4 would indicate skimmer activated four times per day)
CFM = cubic feet per minute
gal .= gallons
H_2O = water
lbs = pounds
PID = Photo-ionization detector (hydrocarbons in gas measurement)
ppmv = parts per million by volume
-- = not measured.
Sheen = less than 0.01 foot thickness of product.
Product purging in is conducted using a peristaltic pump.

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 7/3/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.90	10.95	0.05	P=7, D=10	10	
RW-4	10.70	11.22	0.52	P=2, D=10	11	
RW-5	--	--	--	--	--	Unable to check - truck parked on top.
RW-6	8.67	10.25	1.58	P=2, D=10	11	
RW-7	8.07	9.30	1.23	P=1, D=10	11	
RW-8	9.24	10.50	1.26	P=1, D=10	12	
RW-9	9.85	11.12	1.27	P=5, D=10	10	
MW-3	10.80	11.72	0.92		--	Removed approx 2 gallons.

Depth to product in Convault 2.35 feet Depth to water in Convault 2.37 feet Volume of Product in Convault 5 gallons
Approximate total volume recovered 32 gallons
PID Readings on vapor: Inlet: 69 ppmv Midpoint: 0.2 ppmv Final: 0 ppmv Flowrate: 45 CFM

Site Visit Date: 7/11/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.87	10.91	0.04	P=7, D=10	12	
RW-4	10.65	11.10	0.45	P=2, D=10	12	
RW-5	--	--	--	--	--	Unable to check - truck parked on top.
RW-6	8.68	10.30	1.62	C=2, D=10	11	
RW-7	8.25	9.45	1.20	P=1, D=10	11	
RW-8	9.30	10.53	1.23	P=1, D=10	12	
RW-9	9.80	11.05	1.25	P=5, D=10	12	
MW-3	--	--	--		--	Street sweeper parked on top.

Depth to product in Convault 2.10 feet Depth to water in Convault 2.15 feet Volume of Product in Convault 13 gallons
Approximate total volume recovered 97 gallons
PID Readings on vapor: Inlet: 65 ppmv Midpoint: 0.3 ppmv Final: 0 ppmv

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 7/18/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.90	11.17	0.27	P=7, D=10	12	
RW-4	10.60	10.85	0.25	P=2, D=10	11	
RW-5	--	--	--	--	--	Unable to check - truck parked on top.
RW-6	8.47	10.17	1.70	C=2, D=10	12	
RW-7	8.10	9.31	1.21	C=3, D=10	13	
RW-8	9.25	10.77	1.52	P=1, D=10	12	
RW-9	9.85	11.05	1.20	P=5, D=10	12	
MW-3	10.70	11.55	0.85		--	Removed aproximately 1 gallon.

Depth to product in Convault 2.27 feet Depth to water in Convault 2.30 feet Volume of Product in Convault 8 gallons
Approximate total volume recovered 52 gallons
PID Readings on vapor: Inlet: 66 ppmv Midpoint: 0.2 ppmv Final: 0 ppmv Flowrate: 44 CFM

Site Visit Date: 7/25/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.87	11.08	0.21	P=7, D=10	12	
RW-4	10.65	10.95	0.30	P=2, D=10	11	
RW-5	--	--	--	--	--	Unable to check - truck parked on top.
RW-6	8.50	10.20	1.70	C=2, D=10	12	
RW-7	8.30	9.51	1.21	C=3, D=10	13	
RW-8	9.30	10.80	1.50	P=1, D=10	12	
RW-9	9.90	11.10	1.20	P=5, D=10	12	
MW-3	--	--	--	--	--	Street sweeper parked on top.

Depth to product in Convault 2.30 feet Depth to water in Convault 2.32 feet Volume of Product in Convault 5 gallons
Approximate total volume recovered 45 gallons
PID Readings on vapor: Inlet: 68 ppmv Midpoint: 0.4 ppmv Final: 0 ppmv Flowrate: 44 CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 8/1/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.75	11.05	0.30	P=7, D=10	10	
RW-4	10.80	11.30	0.50	P=2, D=10	12	
RW-5	9.05	9.30	0.25	--	--	
RW-6	8.75	10.30	1.55	C=2, D=10	11	
RW-7	8.17	9.40	1.23	C=3, D=10	13	
RW-8	9.35	10.85	1.50	P=1, D=10	12	
RW-9	10.05	11.25	1.20	P=5, D=10	12	
MW-3	11.05	11.90	0.85	--	--	

Depth to product in Convault 2.50 feet Depth to water in Convault 2.55 feet Volume of Product in Convault -- gallons
Approximate total volume recovered -- gallons
PID Readings on vapor: Inlet: 72 ppmv Midpoint: 0.3 ppmv Final: 0 ppmv Flowrate: 45 CFM

Site Visit Date: 8/8/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.60	10.90	0.30	P=7, D=10	10	
RW-4	10.75	11.25	0.50	P=2, D=10	12	
RW-5	8.90	9.20	0.30	--	--	
RW-6	8.70	10.25	1.55	C=2, D=10	11	
RW-7	8.11	9.32	1.21	C=3, D=10	13	
RW-8	9.22	10.73	1.51	P=7, D=10	12	
RW-9	9.90	11.10	1.20	P=5, D=10	12	
MW-3	10.95	11.80	0.85	--	--	

Depth to product in Convault 2.20 feet Depth to water in Convault 2.50 feet Volume of Product in Convault 71 gallons
Approximate total volume recovered 71 gallons
PID Readings on vapor: Inlet: 68 ppmv Midpoint: 0.2 ppmv Final: 0 ppmv Flowrate: 44 CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 8/15/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.20	10.50	0.30	P=7, D=10	10	
RW-4	10.35	10.85	0.50	P=2, D=10	12	
RW-5	8.50	8.80	0.30	--	--	
RW-6	8.30	9.85	1.55	C=2, D=10	11	
RW-7	7.70	8.92	1.22	C=3, D=10	13	
RW-8	8.82	10.33	1.51	P=7, D=10	12	
RW-9	9.50	10.70	1.20	P=5, D=10	12	
MW-3	--	--	--	--	--	Street sweeper parked on top.

Depth to product in Convault		2.15	feet	Depth to water in Convault	2.45	feet		Volume of Product in Convault		78	gallons		
Approximate total volume recovered		84	gallons										
PID Readings on vapor:	Inlet:	74	ppmv	Midpoint:	0.4	ppmv	Final:	0	ppmv	Flowrate:	45	CFM	

Site Visit Date: 8/22/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.50	10.80	0.30	P=7, D=10	10	
RW-4	10.60	11.20	0.60	P=2, D=10	12	
RW-5	--	--	--	--	--	Unable to check - truck parked on top.
RW-6	8.65	10.20	1.55	C=2, D=10	11	
RW-7	8.15	9.34	1.19	C=3, D=10	13	
RW-8	9.25	10.75	1.50	P=7, D=10	12	
RW-9	9.95	11.15	1.20	P=5, D=10	12	
MW-3	--	--	--		--	Street sweeper parked on top.

Depth to product in Convault		2.17	feet	Depth to water in Convault	2.51	feet		Volume of Product in Convault		79	gallons		
Approximate total volume recovered		79	gallons										
PID Readings on vapor:	Inlet:	71	ppmv	Midpoint:	0.4	ppmv	Final:	0	ppmv	Flowrate:	44	CFM	

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 8/29/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.35	10.65	0.30	P=7, D=10	9	
RW-4	10.50	11.10	0.60	P=2, D=10	10	
RW-5	--	--	--	--	--	Truck parked on top.
RW-6	8.57	10.12	1.55	C=2, D=10	10	
RW-7	8.10	9.29	1.19	C=3, D=10	12	
RW-8	9.20	10.70	1.50	P=7, D=10	12	
RW-9	9.89	11.09	1.20	P=5, D=10	11	
MW-3	--	--	--	--	--	Street sweeper parked on top.

Depth to product in Convault		2.15	feet	Depth to water in Convault	2.50	feet		Volume of Product in Convault		84	gallons		
Approximate total volume recovered		84	gallons										
PID Readings on vapor:	Inlet:	73	ppmv	Midpoint:	0.4	ppmv	Final:	0	ppmv	Flowrate:	45	CFM	

Site Visit Date: 9/5/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.30	10.60	0.30	P=7, D=10	9	
RW-4	10.45	11.00	0.55	P=2, D=10	10	
RW-5	--	--	--	--	--	Truck parked on top.
RW-6	8.50	10.05	1.55	C=2, D=10	10	
RW-7	8.05	9.24	1.19	C=3, D=10	12	
RW-8	9.10	10.60	1.50	P=7, D=10	12	
RW-9	9.80	11.00	1.20	P=5, D=10	11	
MW-3	--	--	--	--	--	Street sweeper parked on top.

Depth to product in Convault		2.13	feet	Depth to water in Convault	2.47	feet		Volume of Product in Convault		89	gallons		
Approximate total volume recovered		89	gallons										
PID Readings on vapor:	Inlet:	70	ppmv	Midpoint:	0.4	ppmv	Final:	0	ppmv	Flowrate:	44	CFM	

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 9/12/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.35	10.65	0.30	P=7, D=10	9	
RW-4	10.47	11.05	0.58	P=2, D=10	10	
RW-5	8.80	9.00	0.20	--	--	
RW-6	8.55	10.10	1.55	C=2, D=10	10	
RW-7	8.10	9.29	1.19	C=3, D=10	12	
RW-8	9.15	10.65	1.50	P=7, D=10	12	
RW-9	9.85	11.05	1.20	P=5, D=10	11	
MW-3	10.90	11.75	0.85	--	--	

Depth to product in Convault			2.17	feet	Depth to water in Convault		2.45	feet		Volume of Product in Convault		73	gallons
Approximate total volume recovered			79	gallons									
PID Readings on vapor:	Inlet:	71	ppmv		Midpoint:	0.4	ppmv		Final:	0	ppmv	Flowrate:	44	CFM

Site Visit Date: 9/19/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.30	10.60	0.30	P=7, D=10	9	
RW-4	10.45	11.00	0.55	P=2, D=10	10	
RW-5	8.85	9.10	0.25	--	--	
RW-6	8.50	10.05	1.55	C=2, D=10	10	
RW-7	8.08	9.27	1.19	C=3, D=10	12	
RW-8	9.10	10.60	1.50	P=7, D=10	12	
RW-9	9.80	11.00	1.20	P=5, D=10	11	
MW-3	10.85	11.70	0.85	--	--	

Depth to product in Convault			2.19	feet	Depth to water in Convault		2.46	feet		Volume of Product in Convault		71	gallons
Approximate total volume recovered			73	gallons									
PID Readings on vapor:	Inlet:	70	ppmv		Midpoint:	0.3	ppmv		Final:	0	ppmv	Flowrate:	44	CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 9/26/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.50	11.07	0.57	P=7, D=10	9	
RW-4	10.40	11.05	0.65	P=7, D=10	10	
RW-5	8.90	9.15	0.25	--	--	
RW-6	8.60	10.15	1.55	C=2, D=10	10	
RW-7	8.10	9.30	1.20	C=3, D=10	12	
RW-8	9.20	10.70	1.50	P=5, D=10	12	
RW-9	9.90	11.10	1.20	P=5, D=10	11	
MW-3	10.92	11.83	0.91	--	--	

Depth to product in Convault 2.10 feet Depth to water in Convault 2.39 feet Volume of Product in Convault 76 gallons
Approximate total volume recovered 97 gallons
PID Readings on vapor: Inlet: 72 ppmv Midpoint: 0.4 ppmv Final: 0 ppmv Flowrate: 45 CFM

Site Visit Date: 10/3/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.55	11.15	0.60	P=7, D=10	9	
RW-4	10.50	11.20	0.70	P=7, D=10	10	
RW-5	8.95	9.20	0.25	--	--	
RW-6	8.65	10.20	1.55	C=2, D=10	10	
RW-7	8.20	9.40	1.20	C=3, D=10	12	
RW-8	9.25	10.75	1.50	P=7, D=10	12	
RW-9	9.85	11.05	1.20	P=5, D=10	11	
MW-3	10.95	11.85	0.90	--	--	

Depth to product in Convault 2.07 feet Depth to water in Convault 2.39 feet Volume of Product in Convault 84 gallons
Approximate total volume recovered 105 gallons
PID Readings on vapor: Inlet: 72 ppmv Midpoint: 0.4 ppmv Final: 0 ppmv Flowrate: 45 CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 10/10/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.40	11.00	0.60	P=7, D=10	9	
RW-4	10.45	11.15	0.70	P=7, D=10	10	
RW-5	8.90	9.10	0.20	--	--	
RW-6	8.60	10.10	1.50	C=2, D=10	10	
RW-7	8.10	9.30	1.20	C=3, D=10	12	
RW-8	9.10	10.50	1.40	P=5, D=10	11	
RW-9	9.80	11.00	1.20	P=5, D=10	11	
MW-3	10.90	11.80	0.90	--	--	

Depth to product in Convault -- feet Depth to water in Convault -- feet Volume of Product in Convault -- gallons
Approximate total volume recovered -- gallons
PID Readings on vapor: Inlet: -- ppmv Midpoint: -- ppmv Final: -- ppmv Flowrate: -- CFM

Site Visit Date: 10/17/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.60	11.20	0.60	P=7, D=10	9	
RW-4	10.55	11.25	0.70	P=7, D=10	10	
RW-5	9.00	9.30	0.30	--	--	
RW-6	8.70	10.25	1.55	C=2, D=10	10	
RW-7	8.25	9.45	1.20	C=3, D=10	12	
RW-8	9.30	10.80	1.50	P=7, D=10	11	
RW-9	9.90	10.10	0.20	P=5, D=10	11	
MW-3	11.00	11.90	0.90	--	--	

Depth to product in Convault -- feet Depth to water in Convault -- feet Volume of Product in Convault -- gallons
Approximate total volume recovered -- gallons
PID Readings on vapor: Inlet: -- ppmv Midpoint: -- ppmv Final: -- ppmv Flowrate: -- CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 10/24/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.30	11.00	0.70	P=7, D=10	9	
RW-4	10.55	11.25	0.70	P=7, D=10	10	
RW-5	--	--	--	--	--	Truck parked on top.
RW-6	8.50	10.05	1.55	C=2, D=10	10	
RW-7	8.05	9.25	1.20	C=3, D=10	12	
RW-8	9.10	10.60	1.50	P=7, D=10	11	
RW-9	9.70	10.90	1.20	P=5, D=10	11	
MW-3	--	--	--	--	--	Street cleaner parked on top.

Depth to product in Convault -- feet Depth to water in Convault -- feet Volume of Product in Convault -- gallons
Approximate total volume recovered -- gallons
PID Readings on vapor: Inlet: -- ppmv Midpoint: -- ppmv Final: -- ppmv Flowrate: -- CFM

Site Visit Date: 10/31/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	11.10	11.40	0.30	P=7, D=10	9	
RW-4	11.25	11.57	0.32	P=7, D=10	10	
RW-5	--	--	--	--	--	Truck parked on top.
RW-6	9.00	10.10	1.10	C=2, D=10	10	
RW-7	8.55	9.70	1.15	C=3, D=10	12	
RW-8	9.10	10.20	1.10	P=7, D=10	11	
RW-9	10.10	11.00	0.90	P=5, D=10	11	
MW-3	--	--	--	--	--	Street sweeper paprked on top.

Depth to product in Convault 2.30 feet Depth to water in Convault 2.50 feet Volume of Product in Convault 45 gallons
Approximate total volume recovered 45 gallons
PID Readings on vapor: Inlet: 69.5 ppmv Midpoint: 0.3 ppmv Final: 0 ppmv Flowrate: 44 CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 11/7/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.22	10.90	0.68	P=7, D=10	9	
RW-4	10.50	11.20	0.70	P=7, D=10	10	
RW-5	--	--	--	--	--	Truck parked on top.
RW-6	9.00	10.50	1.50	P=7, D=10	10	
RW-7	8.45	9.20	0.75	C=3, D=10	12	
RW-8	9.30	10.80	1.50	P=7, D=10	11	
RW-9	9.90	11.10	1.20	P=5, D=10	11	
MW-3	--	--	--	--	--	Street sweeper parked on top.

Depth to product in Convault 2.40 feet Depth to water in Convault 2.50 feet Volume of Product in Convault 18 gallons
Approximate total volume recovered 18 gallons
PID Readings on vapor: Inlet: 70 ppmv Midpoint: 0.3 ppmv Final: 0 ppmv Flowrate: 45 CFM

Site Visit Date: 11/14/2008

Recovery Well	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Cycles/Period and Duration	Vacuum (in. H_2O)	Comments
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.05	10.55	0.50	P=7, D=10	9	
RW-4	10.10	11.00	0.90	P=7, D=10	10	
RW-5	9.25	9.50	0.25	--	--	
RW-6	8.45	9.55	1.10	C=2, D=10	10	
RW-7	9.10	9.40	0.30	C=3, D=10	12	
RW-8	9.20	10.70	1.50	P=7, D=10	11	
RW-9	9.75	11.00	1.25	P=5, D=10	11	
MW-3	10.75	11.30	0.55	--	--	

Depth to product in Convault 2.25 feet Depth to water in Convault 2.45 feet Volume of Product in Convault 52 gallons
Approximate total volume recovered 58 gallons
PID Readings on vapor: Inlet: 68 ppmv Midpoint: 0.3 ppmv Final: 0 ppmv Flowrate: 44 CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 11/21/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.55	11.40	0.85	P=7, D=10	9	
RW-4	10.40	11.10	0.70	P=7, D=10	10	
RW-5	9.30	9.55	0.25	--	--	
RW-6	9.10	9.50	0.40	C=2, D=10	10	
RW-7	8.50	9.75	1.25	C=3, D=10	12	
RW-8	9.65	11.00	1.35	P=7, D=10	11	
RW-9	10.25	11.50	1.25	P=5, D=10	11	
MW-3	11.30	12.45	1.15	--	--	

Depth to product in Convault			2.25	feet	Depth to water in Convault		2.55	feet		Volume of Product in Convault			58	gallons
Approximate total volume recovered			58	gallons										
PID Readings on vapor:	Inlet:	66	ppmv		Midpoint:	0.3	ppmv		Final:	0	ppmv	Flowrate:	44	CFM

Site Visit Date: 11/28/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	11.20	12.00	0.80	P=7, D=10	9	
RW-4	11.05	11.70	0.65	P=7, D=10	10	
RW-5	10.65	11.20	0.55	--	--	
RW-6	10.10	11.00	0.90	C=2, D=10	10	
RW-7	10.25	11.30	1.05	C=3, D=10	12	
RW-8	10.15	10.45	0.30	P=7, D=10	11	
RW-9	9.75	10.50	0.75	P=5, D=10	11	
MW-3	10.65	11.30	0.65	--	--	

Depth to product in Convault			2.25	feet	Depth to water in Convault		2.40	feet		Volume of Product in Convault			39	gallons
Approximate total volume recovered			58	gallons										
PID Readings on vapor:	Inlet:	72	ppmv		Midpoint:	0.3	ppmv		Final:	0	ppmv	Flowrate:	45	CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 12/5/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.91	11.06	0.15	P=7, D=10	9	
RW-4	10.15	10.46	0.31	P=1, D=10	10	
RW-5	8.65	8.76	0.11	--	--	
RW-6	9.25	9.39	0.14	C=2, D=10	10	
RW-7	8.40	8.70	0.30	C=3, D=10	12	
RW-8	9.90	10.10	0.20	P=1, D=10	11	
RW-9	10.70	10.80	0.10	P=5, D=10	11	
MW-3	10.75	11.80	1.05	--	--	

Depth to product in Convault	2.20	feet	Depth to water in Convault	2.35	feet	Volume of Product in Convault	39	gallons				
Approximate total volume recovered	71	gallons										
PID Readings on vapor: Inlet:	70	ppmv	Midpoint:	0.3	ppmv	Final:	0	ppmv	Flowrate:	44	CFM	

Site Visit Date: 12/12/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	11.29	11.45	0.16	P=7, D=10	9	
RW-4	10.30	10.60	0.30	P=1, D=10	10	
RW-5	8.90	9.10	0.20	--	--	
RW-6	9.25	9.40	0.15	C=2, D=10	10	
RW-7	8.70	8.85	0.15	C=3, D=10	12	
RW-8	9.75	10.20	0.45	P=1, D=10	11	
RW-9	10.60	10.80	0.20	P=5, D=10	11	
MW-3	11.00	12.20	1.20	--	--	

Depth to product in Convault	2.10	feet	Depth to water in Convault	2.30	feet	Volume of Product in Convault	52	gallons				
Approximate total volume recovered	97	gallons										
PID Readings on vapor: Inlet:	69	ppmv	Midpoint:	0.3	ppmv	Final:	0	ppmv	Flowrate:	45	CFM	

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Site Visit Date: 12/19/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.90	11.20	0.30	P=7, D=10	9	
RW-4	10.10	10.20	0.10	P=1, D=10	10	
RW-5	8.60	8.90	0.30	--	--	
RW-6	9.20	9.40	0.20	C=2, D=10	10	
RW-7	8.50	8.70	0.20	C=3, D=10	12	
RW-8	9.65	10.00	0.35	P=1, D=10	11	
RW-9	10.50	10.85	0.35	P=5, D=10	11	
MW-3	10.70	11.65	0.95	--	--	

Depth to product in Convault		2.12	feet	Depth to water in Convault	2.27	feet	Volume of Product in Convault	39	gallons			
Approximate total volume recovered		92	gallons									
PID Readings on vapor:	Inlet:	72	ppmv	Midpoint:	0.4	ppmv	Final:	0	ppmv	Flowrate:	45	CFM

Site Visit Date: 12/26/2008						
Recovery Well	**Depth to Product** (feet)	**Depth to Water** (feet)	**Product Thickness** (feet)	**Cycles/Period and Duration**	**Vacuum** (in. H_2O)	**Comments**
RW-1	--	--	--		Off	
RW-2	--	--	--		Off	
RW-3	10.90	11.20	0.30	P=7, D=10	9	
RW-4	10.10	10.15	0.05	P=1, D=10	10	
RW-5	8.60	8.77	0.17	--	--	
RW-6	9.25	9.32	0.07	C=2, D=10	10	
RW-7	8.50	9.00	0.50	C=3, D=10	12	
RW-8	9.60	9.83	0.23	P=1, D=10	11	
RW-9	10.35	11.15	0.80	P=5, D=10	11	
MW-3	10.80	11.70	0.90	--	--	

Depth to product in Convault		2.10	feet	Depth to water in Convault	2.20	feet	Volume of Product in Convault	26	gallons			
Approximate total volume recovered		97	gallons									
PID Readings on vapor:	Inlet:	70	ppmv	Midpoint:	0.3	ppmv	Final:	0	ppmv	Flowrate:	44	CFM

TABLE 3: Product Thickness Measurements and
Operations and Maintenance Activities - July through December 2008
Port of Oakland
651 Maritime Street
Oakland, California

Notes:

See Figure 2 for recovery well locations.
D = Duration (length of time in minutes the skimmer will run upon activation)
P = Period (P=1 would indicate skimmer activated every day; P=4 would be skimmer activated every fourth day)
C = Cycles (C=2 would indicate skimmer activated twice per day; C=4 would indicate skimmer activated four times per day)
CFM = cubic feet per minute
gal .= gallons
H_2O = water
lbs = pounds
PID = Photo-ionization detector (hydrocarbons in gas measurement)
ppmv = parts per million by volume
-- = not measured.
Sheen = less than 0.01 foot thickness of product.
Product purging in is conducted using a peristaltic pump.

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 01/08/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01	0:00	
RW-2	NP	9.38	0.00					NA		
RW-3	11.17	11.67	0.50	11.0	Off	P=7;D=10	1/2/09 18:01	8/3/07 18:01	24:20	Purged 3 gal. Replaced filter on skimmer.
RW-4	10.24	10.98	0.74	10.0	Off	P=1;D=10	1/7/09 18:01	7/15/07 18:01	90:30	Purged 1 gallon.
RW-5	8.60	10.24	1.64		Off	Off		8/24/07 18:07	0:00	Purged 2 gal.
RW-6	9.12	10.21	1.09	9.0	Off	C=3;D=15	1/8/09 2:01	9/14/07 18:01	326:10	Purged 3.5 gal. Lowered pump.
RW-7	8.25	11.07	2.82	8.0	Off	C=4;D=15	1/8/09 6:30	9/14/07 18:30	426:90	Purged 5 gal. Lowered pump.
RW-8	9.41	11.94	2.53	9.0	Off	P=1;D=10	1/7/09 18:01	8/10/07 18:01	102:10	Purged 4 gal.
RW-9	9.62	16.40	6.78	11.0	Off	P=7;D=15	1/2/09 18:01	11/28/07 18:01	16:30	Purged 12 gal. Lowered pump.
MW-3	10.98	12.38	1.40		NA	NA	NA	NA	NA	Purge 20 gal of product.

Depth to product in Convault	2.17	ft
Depth to interface in Convault	2.41	ft
Approximate total liquid volume recovered	79	gal
Approximate product volume recovered	63	gal

Site Visit Date: 01/16/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01	0:00	
RW-2	NP	9.79	0.00		Off	Off		NA		
RW-3	11.38	11.43	0.05	11.0	Off	P=7;D=10		8/3/07 18:01	24:20	
RW-4	10.41	11.55	1.14	10.0	Off	P=1;D=10		7/15/07 18:01	90:50	
RW-5	8.84	9.03	0.19		Off	Off		8/24/07 18:07	0:00	
RW-6	9.09	10.96	1.87	9.0	Off	C=3;D=15		9/14/07 18:01	362:25	
RW-7	8.31	10.99	2.68	8.0	Off	C=4;D=15		9/14/07 18:30	426:24	
RW-8	9.55	11.55	2.00	9.0	Off	P=1;D=10		8/10/07 18:01	102:10	
RW-9	10.15	11.54	1.39	12.0	Off	P=7;D=15		11/28/07 18:01	16:30	
MW-3	11.06	12.78	1.72		NA	NA		NA		

Depth to product in Convault	1.90	ft
Depth to interface in Convault	2.32	ft
Approximate total liquid volume recovered	149	gal
Approximate product volume recovered	110	gal

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 01/20/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	--	--	--		Off	P=14;D=10		1/21/09 18:00		
RW-4	--	--	--		Off	P=7;D=15		1/21/09 18:00		Steam cleaned skimmer and replaced filter.
RW-5	--	--	--		Off	Off		8/24/07 18:07		
RW-6	--	--	--		Off	P=7;D=15		1/21/09 18:00		
RW-7	--	--	--		Off	P=7;D=20		1/21/09 18:00		
RW-8	--	--	--		Off	P=7;D=15		1/21/09 18:00		
RW-9	--	--	--		Off	P=7;D=15		1/21/09 18:00		
MW-3	--	--	--		NA	NA		NA		
Depth to product in Convault				NM	ft					
Depth to interface in Convault				NM	ft					
Approximate total liquid volume recovered				NM	gal					
Approximate product volume recovered				NM	gal					

Site Visit Date: 01/26/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	11.18	11.31	0.13	11.0	Off	P=14;D=10	1/2/09 18:01	1/21/09 18:00	24:30	
RW-4	10.30	10.92	0.62	10.0	Off	P=7;D=15	1/7/09 18:01	1/21/09 18:00	90:45	
RW-5	--	--	--		Off	Off		8/24/07 18:07		
RW-6	8.93	10.48	1.55	9.0	Off	P=7;D=15	1/8/09 2:01	1/21/09 18:00	362:40	
RW-7	8.27	10.80	2.53	8.0	Off	P=7;D=20	1/8/09 6:30	1/21/09 18:00	426:44	
RW-8	9.34	10.62	1.28	9.0	Off	P=7;D=15	1/7/09 18:01	1/21/09 18:00	102:25	
RW-9	9.98	11.01	1.03	12.0	Off	P=7;D=15	1/2/09 18:01	1/21/09 18:00	16:45	
MW-3	11.04	12.94	1.90		NA	NA		NA		Removed 5 gal of product.
Depth to product in Convault				1.88	ft					
Depth to interface in Convault				2.48	ft					Air Dehumidifier attached to the compressor leaking air.
Approximate total liquid volume recovered				154	gal					
Approximate product volume recovered				157	gal					

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 02/04/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	11.20	11.32	0.12	11.0	Off	P=14;D=10	1/21/09 18:00	1/21/09 18:00	24:30	
RW-4	10.29	10.83	0.54	10.0	Off	P=7;D=15	1/28/09 18:00	1/21/09 18:00	91:00	
RW-5	--	--	--		Off	Off		8/24/07 18:07		
RW-6	9.00	10.98	1.98	9.0	Off	P=1;D=10	1/28/09 18:00	1/21/09 18:00	362:55	
RW-7	8.31	10.92	2.61	8.0	Off	P=1;D=10	1/28/09 18:00	1/21/09 18:00	427:40	
RW-8	9.30	11.16	1.86	9.0	Off	P=1;D=10	1/28/09 18:00	1/21/09 18:00	102:40	
RW-9	9.88	11.70	1.82	12.0	Off	P=7;D=15	1/28/09 18:00	1/21/09 18:00	17:00	Skimmer pumping water, changed out skimmer.
MW-3	11.07	12.51	1.44		NA	NA		NA		Removed 3 gal of product.

Depth to product in Convault	1.84	ft	
Depth to interface in Convault	2.48	ft	Ingersoll-Rand tech on-site to repair air dryer.
Approximate total liquid volume recovered	165	gal	
Approximate product volume recovered	168	gal	

Site Visit Date: 02/10/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	11.39	11.49	0.10	11.0	Off	P=14;D=10	2/4/09 18:00	1/21/09 18:00	24:40	
RW-4	10.50	11.95	1.45	10.0	Off	P=7;D=15	2/4/09 18:00	1/21/09 18:00	91:15	
RW-5	--	--	--		Off	Off		8/24/07 18:07		
RW-6	9.12	9.68	0.56	9.0	Off	P=1;D=10	2/9/09 18:00	1/21/09 18:00	363:55	
RW-7	8.40	9.84	1.44	8.0	Off	P=1;D=10	2/9/09 18:00	1/21/09 18:00	20:40	
RW-8	9.48	9.95	0.47	9.0	Off	P=1;D=10	2/9/09 18:00	1/21/09 18:00	103:40	
RW-9	10.00	11.06	1.06	10.5	Off	P=7;D=15	2/4/09 18:00	1/21/09 18:00	17:15	Adjusted tag on skimmer line to read correct depth to pump inlet.
MW-3	11.17	13.22	2.05		NA	NA		NA		Removed 9 gal of product.

Depth to product in Convault	1.71	ft	
Depth to interface in Convault	2.37	ft	Grease compressor fittings.
Approximate total liquid volume recovered	199	gal	
Approximate product volume recovered	173	gal	

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 02/24/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	9.32	12.30	2.98	11.0	Off	Off		1/21/09 18:00		
RW-4	8.97	10.35	1.38	9.5	Off	Off		1/21/09 18:00		
RW-5	--	--	--		Off	Off		8/24/07 18:07		Vault covered by truck.
RW-6	8.75	10.02	1.27	9.0	Off	Off		1/21/09 18:00		
RW-7	8.08	8.68	0.60	9.0	Off	Off		1/21/09 18:00		
RW-8	9.10	9.70	0.60	9.0	Off	Off		1/21/09 18:00		
RW-9	9.60	10.69	1.09	10.5	Off	Off		1/21/09 18:00		
MW-3	9.38	10.34	0.96		NA	NA		NA		Removed 2.5 gal of product.

Depth to product in Convault	1.60	ft	Turned off system 2/17/09 due to rain and potential rapid groundwater level rise and to evaluate product recovery.
Depth to interface in Convault	2.30	ft	
Approximate total liquid volume recovered	228	gal	
Approximate product volume recovered	183	gal	

Site Visit Date: 02/25/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	9.60	9.78	0.18	11.0	Off	Off		1/21/09 18:00		Purged RW-3 for 3/4 of an hour, then measured product/water level.
RW-4	--	--	--	9.5	Off	Off		1/21/09 18:00		
RW-5	--	--	--		Off	Off		8/24/07 18:07		
RW-6	--	--	--	9.0	Off	Off		1/21/09 18:00		Skimmer pumping water, changed out skimmer, purged for 10 minutes.
RW-7	--	--	--	9.0	Off	Off		1/21/09 18:00		
RW-8	--	--	--	9.0	Off	Off		1/21/09 18:00		
RW-9	--	--	--	10.5	Off	Off		1/21/09 18:00		
MW-3	--	--	--		NA	NA		NA		

Depth to product in Convault	1.59	ft	Turned off system 2/17/09 due to rain and potential rapid groundwater level rise and to evaluate product recovery.
Depth to interface in Convault	2.25	ft	
Approximate total liquid volume recovered	230	gal	
Approximate product volume recovered	173	gal	

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 03/04/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	7.65	7.67	0.02		Off	Off		3/29/07 14:01		
RW-2	NP	5.96	0.00		Off	Off		NA		
RW-3	9.19	12.14	2.95	10.0	Off	Off		1/21/09 18:00		Purged well for one hour, product thickness reduced to 0.7 ft.
RW-4	8.93	9.03	0.10	9.5	Off	Off		1/21/09 18:00		
RW-5	8.00	8.61	0.61		Off	Off		8/24/07 18:07		
RW-6	8.69	9.45	0.76	9.0	Off	Off		1/21/09 18:00		
RW-7	8.03	8.22	0.19	9.0	Off	Off		1/21/09 18:00		
RW-8	9.08	9.46	0.38	9.0	Off	Off		1/21/09 18:00		
RW-9	9.50	10.34	0.84	10.5	Off	Off		1/21/09 18:00		
MW-3	9.31	9.93	0.62		NA	NA		NA		Removed 1.5 gal of product.
Depth to product in Convault				1.60	ft					
Depth to interface in Convault				2.31	ft					
Approximate total liquid volume recovered				228	gal					
Approximate product volume recovered				186	gal					

Site Visit Date: 03/13/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	NP	8.30	0.00		Off	Off		NA		
RW-3	9.75	11.79	2.04	10.0	Off	Off		1/21/09 18:00		
RW-4	9.25	9.32	0.07	10.0	Off	Off		1/21/09 18:00		
RW-5	8.15	8.72	0.57		Off	Off		8/24/07 18:07		
RW-6	8.72	9.57	0.85	10.0	Off	Off		1/21/09 18:00		
RW-7	8.12	8.31	0.19	9.0	Off	Off		1/21/09 18:00		
RW-8	9.04	9.45	0.41	9.0	Off	Off		1/21/09 18:00		
RW-9	9.41	10.25	0.84	10.5	Off	Off		1/21/09 18:00		
MW-3	9.88	10.79	0.91		NA	NA		NA		Removed 1.25 gal of product.
Depth to product in Convault				1.58	ft					
Depth to interface in Convault				2.26	ft					System off.
Approximate total liquid volume recovered				233	gal					
Approximate product volume recovered				178	gal					

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 03/18/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	9.90	11.92	2.02	10.0	Off	P=7;D=15	1/21/09 18:00	1/21/09 18:00	24:20	Skimmer pumping water, changed out skimmer.
RW-4	9.40	9.50	0.10	10.0	Off	Off	1/28/09 18:00	1/21/09 18:00	90:30	
RW-5	--	--	--		Off	Off		8/24/07 18:07		
RW-6	8.73	9.59	0.86	9.0	10	P=7;D=15	1/28/09 18:00	1/21/09 18:00	326:10	
RW-7	8.15	8.32	0.17	8.0	10	P=7;D=15	1/28/09 18:00	1/21/09 18:00	426:90	Replaced filter and hose to float.
RW-8	9.06	9.46	0.40	8.0	12	P=7;D=15	1/28/09 18:00	1/21/09 18:00	102:10	Replaced filter and hose to float.
RW-9	9.41	10.28	0.87	10.5	Off	P=7;D=15	1/28/09 18:00	1/21/09 18:00	16:30	
MW-3	10.05	10.78	0.73		NA	NA		NA		Removed 4 gal of product.

Depth to product in Convault	1.56	ft	Restarted system and applied vacuum to RW-6, RW-7, and RW-8.
Depth to interface in Convault	2.28	ft	
Approximate total liquid volume recovered	238	gal	
Approximate product volume recovered	188	gal	

Site Visit Date: 03/26/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	10.30	10.92	0.62	10.0	Off	P=7;D=15	3/25/09 18:00	1/21/09 18:00	24:20	
RW-4	9.52	9.53	0.01	10.0	Off	Off		1/21/09 18:00	90:30	
RW-5	8.22	8.72	0.50		Off	Off		8/24/07 18:07		
RW-6	8.39	9.45	1.06	8.0	7	P=7;D=15	3/25/09 18:00	1/21/09 18:00	326:10	
RW-7	7.38	7.54	0.16	8.0	12 → 10	P=7;D=15	3/25/09 18:00	1/21/09 18:00	426:90	Adjust vacuum at well head.
RW-8	9.25	9.60	0.35	8.0	1 → 8	P=7;D=15	3/25/09 18:00	1/21/09 18:00	102:10	Adjust vacuum at well head.
RW-9	9.44	9.70	0.26	10.5	Off	P=7;D=15	3/25/09 18:00	1/21/09 18:00	16:30	
MW-3	10.22	10.88	0.66		NA	NA		NA		Removed 2 gal of product.

Depth to product in Convault	1.53	ft	Removed ORC sock from MW-4, DO reading 16.02 mg/L.
Depth to interface in Convault	2.28	ft	
Approximate total liquid volume recovered	246	gal	
Approximate product volume recovered	196	gal	

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 04/01/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	NP	8.03	0.00		Off	Off		3/29/07 14:01		
RW-2	NP	9.35	0.00		Off	Off		NA		
RW-3	10.35	11.00	0.65	10.0	Off	P=7;D=15	3/25/09 18:00	1/21/09 18:00	24:20	
RW-4	9.66	9.72	0.06	10.0	Off	Off	3/11/09 18:00	1/21/09 18:00	90:30	
RW-5	--	--	--		Off	Off		8/24/07 18:07		Vault covered by truck.
RW-6	8.38	9.46	1.08	8.0	7	P=7;D=15	3/25/09 18:00	1/21/09 18:00	326:10	
RW-7	7.75	7.90	0.15	8.0	6	P=7;D=15	3/25/09 18:00	1/21/09 18:00	426:90	
RW-8	9.18	9.58	0.40	9.0	2 → 3	P=7;D=15	3/25/09 18:00	1/21/09 18:00	102:10	
RW-9	9.48	9.75	0.27	10.5	10.5	P=7;D=15	3/25/09 18:00	1/21/09 18:00	16:30	
MW-3	10.38	11.10	0.72		NA	NA		NA		Removed 1.2 gal of product.

Depth to product in Convault	1.52	ft	
Depth to interface in Convault	2.28	ft	Shut off vacuum system due to breakthrough above 10 ppm in first vessel.
Approximate total liquid volume recovered	249	gal	
Approximate product volume recovered	199	gal	

Site Visit Date: 04/22/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	10.75	11.32	0.57	10.5	Off	P=7;D=15	4/15/09 18:00	1/21/09 18:00	25:55	Lower pump.
RW-4	9.83	9.86	0.03	10.0	Off	Off		1/21/09 18:00	91:30	
RW-5	8.48	8.97	0.49		Off	P=7;D=15	4/15/09 18:00	8/24/07 18:07		
RW-6	8.97	10.03	1.06	9.0	Off	P=7;D=15	4/15/09 18:00	1/21/09 18:00	366:20	Lower pump.
RW-7	8.29	8.53	0.24	8.0	Off	P=7;D=15	4/15/09 18:00	1/21/09 18:00	430:26	
RW-8	9.47	10.00	0.53	9.0	Off	P=7;D=15	4/15/09 18:00	1/21/09 18:00	106:50	
RW-9	9.87	10.51	0.64	10.5	Off	P=7;D=15	4/15/09 18:00	1/21/09 18:00	18:45	
MW-3	10.56	11.72	1.16		NA	NA		NA		Removed 2 gal of product.

Depth to product in Convault	1.51	ft	
Depth to interface in Convault	--	ft	
Approximate total liquid volume recovered	251	gal	
Approximate product volume recovered	--	gal	

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 05/04/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	10.82	11.41	0.59	11.0	Off	P=7;D=15	4/29/09 18:00	1/21/09 18:00		
RW-4	9.83	11.44	1.61	10.5	Off	Off		1/21/09 18:00		
RW-5	8.45	8.94	0.49		Off	P=7;D=15		8/24/07 18:07		
RW-6	8.45	10.06	1.61	9.0	6 → 10	P=7;D=15	4/29/09 18:00	1/21/09 18:00		
RW-7	7.20	7.94	0.74	8.0	16 → 10	P=7;D=15	4/29/09 18:00	1/21/09 18:00		
RW-8	9.23	9.93	0.70	9.0	3 → 10	P=7;D=15	4/29/09 18:00	1/21/09 18:00		
RW-9	9.87	10.64	0.77	10.0	Off	P=7;D=15	4/29/09 18:00	1/21/09 18:00		
MW-3	10.67	12.00	1.33		NA	NA		NA		Removed 2 gal of product.

Depth to product in Convault	1.50	ft
Depth to interface in Convault	--	ft
Approximate total liquid volume recovered	254	gal
Approximate product volume recovered	--	gal

Site Visit Date: 05/15/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	10.75	11.32	0.57	11.0	Off	P=7;D=15	5/13/09 18:00	1/21/09 18:00	26:55	
RW-4	9.83	9.86	0.03	10.5	Off	Off		1/21/09 18:00	92:00	
RW-5	8.48	8.97	0.49		Off	P=7;D=15		8/24/07 18:07		
RW-6	8.97	10.03	1.06	9.0	7	P=7;D=15	5/13/09 18:00	1/21/09 18:00	367:20	
RW-7	8.29	8.53	0.24	8.0	8	P=7;D=15	5/13/09 18:00	1/21/09 18:00	431:29	
RW-8	9.47	10.00	0.53	9.0	7	P=7;D=15	5/13/09 18:00	1/21/09 18:00	107:05	
RW-9	9.87	10.51	0.64	10.0	Off	P=7;D=15	5/13/09 18:00	1/21/09 18:00	19:45	
MW-3	10.56	11.72	1.16		NA	NA		NA		Removed 3 gal of product.

Depth to product in Convault	1.46	ft
Depth to interface in Convault	2.19	ft
Approximate total liquid volume recovered	264	gal
Approximate product volume recovered	191	gal

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 05/20/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	NP	9.58	0.00		Off	Off		NA		
RW-3	10.94	11.41	0.47	11.0	Off	P=7;D=15	5/13/09 18:00	1/21/09 18:00	26:55	
RW-4	10.05	10.38	0.33	10.5	Off	Off		1/21/09 18:00	92:00	
RW-5	--	--	--		Off	P=7;D=15		8/24/07 18:07		Truck parked on top of vault.
RW-6	8.50	10.36	1.86	9.0	6	P=7;D=15	5/13/09 18:00	1/21/09 18:00	367:20	
RW-7	7.98	8.94	0.96	8.0	4 → 6	P=7;D=15	5/13/09 18:00	1/21/09 18:00	431:29	
RW-8	9.19	10.17	0.98	9.0	2 → 8	P=7;D=15	5/13/09 18:00	1/21/09 18:00	107:05	
RW-9	9.90	10.73	0.83	10.0	Off	P=7;D=15	5/13/09 18:00	1/21/09 18:00	19:45	
MW-3	10.72	12.00	1.28		NA	NA		NA		Removed 1 gallon of product.

Depth to product in Convault	1.43	ft
Depth to interface in Convault	2.17	ft
Approximate total liquid volume recovered	272	gal
Approximate product volume recovered	194	gal

Site Visit Date: 05/27/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	10.95	11.33	0.38	11.0	Off	P=7;D=15	5/20/09 18:00	1/21/09 18:00	27:10	
RW-4	10.03	10.54	0.51	10.5	Off	Off		1/21/09 18:00	92:15	
RW-5	--	--	--		Off	P=7;D=15		8/24/07 18:07		Truck parked on top of vault.
RW-6	8.52	10.41	1.89	9.0	6.5	P=7;D=15	5/20/09 18:00	1/21/09 18:00	367:35	
RW-7	7.82	8.99	1.17	8.0	6.2	P=7;D=15	5/20/09 18:00	1/21/09 18:00	431:44	
RW-8	8.59	9.71	1.12	9.0	8.0	P=7;D=15	5/20/09 18:00	1/21/09 18:00	107:20	
RW-9	9.92	10.81	0.89	10.0	Off	P=7;D=15	5/20/09 18:00	1/21/09 18:00	20:00	
MW-3	10.70	12.00	1.30		NA	NA		NA		Removed 1.5 gallons of product.

Depth to product in Convault	1.39	ft
Depth to interface in Convault	2.10	ft
Approximate total liquid volume recovered	283	gal
Approximate product volume recovered	186	gal

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 06/03/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	10.85	11.05	0.20	11.0	Off	P=7;D=15	5/27/09 18:00	1/21/09 18:00	27:25	
RW-4	10.04	10.69	0.65	10.5	Off	Off		1/21/09 18:00	92:30	
RW-5	--	--	--		Off	P=7;D=15		8/24/07 18:07		Truck parked on top of vault.
RW-6	8.65	10.53	1.88	9.0	6	P=7;D=15	5/27/09 18:00	1/21/09 18:00	367:50	
RW-7	7.89	9.26	1.37	8.0	5	P=7;D=15	5/27/09 18:00	1/21/09 18:00	431:59	
RW-8	9.95	10.31	0.36	9.0	2	P=7;D=15	5/27/09 18:00	1/21/09 18:00	107:35	
RW-9	9.65	10.73	1.08	10.0	Off	P=7;D=15	5/27/09 18:00	1/21/09 18:00	20:15	
MW-3	10.75	11.80	1.05		NA	NA		NA		Removed 1 gallon of product.
Depth to product in Convault				1.30	ft					
Depth to interface in Convault				2.07	ft					
Approximate total liquid volume recovered				306	gal					
Approximate product volume recovered				202	gal					

Site Visit Date: 06/10/09										
Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	10.90	11.05	0.15	11.0	Off	P=7;D=15	6/3/09 18:00	1/21/09 18:00	27:40	
RW-4	10.08	10.96	0.88	10.5	Off	Off		1/21/09 18:00	92:45	
RW-5	--	--	--		Off	P=7;D=15		8/24/07 18:07		Truck parked on top of vault.
RW-6	8.63	10.55	1.47	9.0	6.0	P=7;D=15	6/3/09 18:00	1/21/09 18:00	368:05	
RW-7	7.92	9.39	1.47	8.0	4.8	P=7;D=15	6/3/09 18:00	1/21/09 18:00	431:14	
RW-8	9.45	10.49	1.04	9.0	1.4	P=7;D=15	6/3/09 18:00	1/21/09 18:00	107:50	
RW-9	9.97	10.98	1.01	10.0	Off	P=7;D=15	6/3/09 18:00	1/21/09 18:00	20:30	
MW-3	10.74	12.14	1.40		NA	NA		NA		Removed 1 gallon of product.
Depth to product in Convault				1.29	ft					
Depth to interface in Convault				2.06	ft					
Approximate total liquid volume recovered				309	gal					
Approximate product volume recovered				202	gal					

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Site Visit Date: 06/17/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	10.93	11.02	0.09	11.0	Off	P=7;D=15	6/10/09 18:00	1/21/09 18:00	27:55	
RW-4	10.07	11.00	0.93	10.5	Off	Off		1/21/09 18:00	93:00	
RW-5	--	--	--		Off	P=7;D=15		8/24/07 18:07		Truck parked on top of vault.
RW-6	8.63	10.55	1.47	9.0	5.4	P=7;D=15	6/10/09 18:00	1/21/09 18:00	368:20	
RW-7	7.95	9.41	1.46	8.0	4.2	P=7;D=15	6/10/09 18:00	1/21/09 18:00	432:29	
RW-8	9.19	10.28	1.09	9.0	1.5	P=7;D=15	6/10/09 18:00	1/21/09 18:00	108:05	Increased vacuum on well to 1.5 in H2O
RW-9	9.96	11.17	1.21	10.0	Off	P=7;D=15	6/10/09 18:00	1/21/09 18:00	20:45	
MW-3	10.79	12.30	1.51		NA	NA		NA		Removed 1 gallon of product.

Depth to product in Convault	1.25	ft
Depth to interface in Convault	2.03	ft
Approximate total liquid volume recovered	319	gal
Approximate product volume recovered	204	gal

Site Visit Date: 06/24/09

Recovery Well	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth of Pump (ft)	Vacuum (in/H_2O)	Cycles/Period and Duration	Last Run	Start Time	Total Time (hr:min)	Comments
RW-1	--	--	--		Off	Off		3/29/07 14:01		
RW-2	--	--	--		Off	Off		NA		
RW-3	10.96	11.07	0.11	11.0	Off	P=7;D=15	6/17/09 18:00	1/21/09 18:00	28:10	
RW-4	10.15	11.12	0.97	10.5	Off	Off		1/21/09 18:00	93:15	
RW-5	--	--	--		Off	P=7;D=15		8/24/07 18:07		Truck parked on top of vault.
RW-6	8.60	10.59	1.47	9.0	5.4	P=7;D=15	6/17/09 18:00	1/21/09 18:00	368:55	
RW-7	7.75	9.64	1.89	8.0	6.4	P=7;D=15	6/17/09 18:00	1/21/09 18:00	432:44	
RW-8	9.16	10.37	1.21	9.0	5.0	P=7;D=15	6/17/09 18:00	1/21/09 18:00	108:20	
RW-9	--	--	--	10.0	Off	P=7;D=15	6/17/09 18:00	1/21/09 18:00	21:00	Unable to measure product/water levels due to equipment placed on well
MW-3	10.80	12.39	1.59		NA	NA		NA		Removed 1.5 gallons of product.

Depth to product in Convault	1.22	ft
Depth to interface in Convault	2.03	ft
Approximate total liquid volume recovered	327	gal
Approximate product volume recovered	212	gal

TABLE 3. Free Product Removal System Operation and Maintenance Records Summary
January 8 through June 30, 2009
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Notes:
NP = no product
ft = ft
-- = not measured
gal = gallons
in/H2O = inches of water
hr:min = hours:minutes

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through June 30, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
RW-1						
Well inaccessible; product and water levels not measured						
RW-2						
Well inaccessible; product and water levels not measured						
RW-3						
	7/1/2009	15.56	10.94	11.05	0.11	4.51
	7/8/2009	15.56	10.96	11.05	0.09	4.51
	7/15/2009	15.56	11.10	11.26	0.16	4.30
	7/22/2009	15.56	11.04	11.10	0.06	4.46
	7/29/2009	15.56	11.01	11.06	0.05	4.50
	8/5/2009	15.56	11.10	11.14	0.04	4.42
	8/12/2009	15.56	11.11	11.15	0.04	4.41
	8/19/2009	15.56	11.11	11.13	0.02	4.43
	8/26/2009	15.56	11.23	11.25	0.02	4.31
	9/2/2009	15.56	11.20	11.22	0.02	4.34
	9/16/2009	15.56	11.27	11.29	0.02	4.27
	9/23/2009	15.56	11.25	11.28	0.03	4.28
	9/30/2009	15.56	11.30	11.35	0.05	4.21
	10/7/2009	15.56	11.31	11.33	0.02	4.23
	10/14/2009	15.56	10.90	11.64	0.74	3.92
	10/21/2009	15.56	10.74	11.34	0.60	4.22
	10/28/2009	15.56	10.78	11.22	0.44	4.34
	11/4/2009	15.56	10.83	11.24	0.41	4.32
	11/18/2009	15.56	11.12	11.43	0.31	4.13
	11/25/2009	15.56	11.16	11.49	0.33	4.07
	12/1/2009	15.56	11.11	11.51	0.40	4.05
	12/9/2009	15.56	11.28	11.78	0.50	3.78
	12/16/2009	15.56	10.81	11.79	0.98	3.77
	12/23/2009	15.56	10.86	11.36	0.50	4.20
	12/30/2009	15.56	10.85	11.23	0.38	4.33
RW-4						
	7/1/2009	14.92	10.10	11.32	1.22	3.60
	7/8/2009	14.92	10.11	11.29	1.18	3.63
	7/15/2009	14.92	10.21	10.37	0.16	4.55
	7/22/2009	14.92	10.18	11.39	1.21	3.53
	7/29/2009	14.92	10.24	10.83	0.59	4.09
	8/5/2009	14.92	10.31	10.88	0.57	4.04
	8/12/2009	14.92	10.28	11.27	0.99	3.65
	8/19/2009	14.92	10.27	11.33	1.06	3.59
	8/26/2009	14.92	10.39	11.18	0.79	3.74
	9/2/2009	14.92	10.35	11.22	0.87	3.70
	9/16/2009	14.92	10.50	10.98	0.48	3.94
	9/23/2009	14.92	10.45	11.09	0.64	3.83
	9/30/2009	14.92	10.52	11.34	0.82	3.58
	10/7/2009	14.92	10.44	11.65	1.21	3.27
	10/14/2009	14.92	10.36	11.22	0.86	3.70

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through June 30, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
	10/21/2009	14.92	10.03	10.43	0.40	4.49
	10/28/2009	14.92	10.02	10.56	0.54	4.36
	11/4/2009	14.92	10.06	10.78	0.72	4.14
	11/18/2009	14.92	10.29	11.25	0.96	3.67
	11/25/2009	14.92	10.32	11.48	1.16	3.44
	12/1/2009	14.92	10.22	11.52	1.30	3.40
	12/9/2009	14.92	10.45	10.75	0.30	4.17
	12/16/2009	14.92	10.14	10.53	0.39	4.39
	12/23/2009	14.92	10.13	10.51	0.38	4.41
	12/30/2009	14.92	10.18	10.62	0.44	4.30
RW-5						
Well inaccessible; product and water levels not measured						
RW-6						
	7/1/2009	15.75	8.64	10.62	1.98	5.13
	7/8/2009	15.75	8.58	10.67	2.09	5.08
	7/15/2009	15.75	8.70	10.80	2.10	4.95
	7/22/2009	15.75	8.75	10.90	2.15	4.85
	7/29/2009	15.75	8.77	10.95	2.18	4.80
	8/5/2009	15.75	8.73	10.93	2.20	4.82
	8/12/2009	15.75	8.75	10.96	2.21	4.79
	8/19/2009	15.75	8.81	11.08	2.27	4.67
	8/26/2009	15.75	8.86	11.11	2.25	4.64
	9/2/2009	15.75	8.80	11.13	2.33	4.62
	9/16/2009	15.75	8.81	11.19	2.38	4.56
	9/23/2009	15.75	8.88	11.27	2.39	4.48
	9/30/2009	15.75	8.70	10.23	1.53	5.52
	10/7/2009	15.75	8.91	11.45	2.54	4.30
	10/14/2009	15.75	8.55	11.25	2.70	4.50
	10/21/2009	15.75	8.85	11.09	2.24	4.66
	10/28/2009	15.75	8.87	10.87	2.00	4.88
	11/4/2009	15.75	8.93	10.92	1.99	4.83
	11/18/2009	15.75	9.04	11.12	2.08	4.63
	11/25/2009	15.75	9.08	11.16	2.08	4.59
	12/1/2009	15.75	9.08	11.15	2.07	4.60

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through June 30, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
RW-6 (cont)	12/9/2009	15.75	9.15	10.90	1.75	4.85
	12/16/2009	15.75	8.97	10.85	1.88	4.90
	12/23/2009	15.75	8.69	10.84	2.15	4.91
	12/30/2009	15.75	8.72	10.74	2.02	5.01
RW-7						
	7/1/2009	15.02	8.02	9.88	1.86	5.14
	7/8/2009	15.02	7.98	9.90	1.92	5.12
	7/15/2009	15.02	8.10	10.07	1.97	4.95
	7/22/2009	15.02	7.95	10.10	2.15	4.92
	7/29/2009	15.02	8.29	10.16	1.87	4.86
	8/5/2009	15.02	8.26	10.26	2.00	4.76
	8/12/2009	15.02	8.20	10.27	2.07	4.75
	8/19/2009	15.02	7.98	10.39	2.41	4.63
	8/26/2009	15.02	7.75	10.52	2.77	4.50
	9/2/2009	15.02	8.08	10.55	2.47	4.47
	9/16/2009	15.02	7.74	10.81	3.07	4.21
	9/23/2009	15.02	8.19	10.61	2.42	4.41
	9/30/2009	15.02	7.95	10.78	2.83	4.24
	10/7/2009	15.02	7.95	11.00	3.05	4.02
	10/14/2009	15.02	7.78	11.25	3.47	3.77
	10/21/2009	15.02	8.02	10.45	2.43	4.57
	10/28/2009	15.02	8.09	10.20	2.11	4.82
	11/4/2009	15.02	8.02	10.51	2.49	4.51
	11/18/2009	15.02	7.74	10.71	2.97	4.31
	11/25/2009	15.02	8.15	10.78	2.63	4.24
	12/1/2009	15.02	7.76	10.80	3.04	4.22
	12/9/2009	15.02	7.96	10.82	2.86	4.20
	12/16/2009	15.02	7.85	10.11	2.26	4.91
	12/23/2009	15.02	8.02	10.33	2.31	4.69
	12/30/2009	15.02	8.01	10.23	2.22	4.79
RW-8						
	7/1/2009	15.91	9.14	10.55	1.41	5.36
	7/8/2009	15.91	9.16	10.63	1.47	5.28
	7/15/2009	15.91	9.21	10.74	1.53	5.17
	7/22/2009	15.91	9.20	10.70	1.50	5.21
	7/29/2009	15.91	9.22	10.85	1.63	5.06
	8/5/2009	15.91	9.60	10.90	1.30	5.01
	8/12/2009	15.91	9.32	10.93	1.61	4.98
	8/19/2009	15.91	9.38	10.93	1.55	4.98
	8/26/2009	15.91	9.39	11.02	1.63	4.89
	9/2/2009	15.91	9.41	11.12	1.71	4.79
	9/16/2009	15.91	9.42	11.24	1.82	4.67
	9/23/2009	15.91	9.49	11.26	1.77	4.65
	9/30/2009	15.91	9.48	11.12	1.64	4.79
	10/7/2009	15.91	9.52	11.33	1.81	4.58
RW-8 (cont)	10/14/2009	15.91	9.08	10.84	1.76	5.07

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through June 30, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
	10/21/2009	15.91	9.60	11.07	1.47	4.84
	10/28/2009	15.91	9.52	10.38	0.86	5.53
	11/4/2009	15.91	9.54	10.41	0.87	5.50
	11/18/2009	15.91	9.49	10.85	1.36	5.06
	11/25/2009	15.91	9.55	10.72	1.17	5.19
	12/1/2009	15.91	9.61	10.58	0.97	5.33
	12/9/2009	15.91	9.65	10.50	0.85	5.41
	12/16/2009	15.91	9.60	10.29	0.69	5.62
	12/23/2009	15.91	9.45	10.25	0.80	5.66
	12/30/2009	15.91	9.46	10.31	0.85	5.60
RW-9						
	7/8/2009	16.57	10.09	11.11	1.02	5.46
	7/15/2009	16.57	10.83	10.89	0.06	5.68
	7/22/2009	16.57	9.86	10.78	0.92	5.79
	7/29/2009	16.57	9.90	10.79	0.89	5.78
	8/5/2009	16.57	9.95	10.59	0.64	5.98
	8/12/2009	16.57	9.99	10.40	0.41	6.17
	8/19/2009	16.57	9.98	10.51	0.53	6.06
	8/26/2009	16.57	10.02	10.66	0.64	5.91
	9/2/2009	16.57	10.02	10.73	0.71	5.84
	9/16/2009	16.57	10.06	10.60	0.54	5.97
	9/23/2009	16.57	10.08	10.60	0.52	5.97
	9/30/2009	16.57	10.11	10.60	0.49	5.97
	10/7/2009	16.57	10.13	10.65	0.52	5.92
	10/14/2009	16.57	10.11	10.58	0.47	5.99
	10/21/2009	16.57	9.92	10.37	0.45	6.20
	10/28/2009	16.57	9.89	10.36	0.47	6.21
	11/4/2009	16.57	9.91	10.50	0.59	6.07
	11/18/2009	16.57	10.00	10.56	0.56	6.01
	11/25/2009	16.57	10.04	10.56	0.52	6.01
	12/1/2009	16.57	10.06	10.55	0.49	6.02
	12/9/2009	16.57	10.18	10.39	0.21	6.18
	12/16/2009	16.57	9.98	10.22	0.24	6.35
	12/23/2009	16.57	10.15	10.48	0.33	6.09
	12/30/2009	16.57	10.13	10.50	0.37	6.07

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through June 30, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-3						
	7/8/2009	15.66	10.80	12.39	1.59	3.27
	7/15/2009	15.66	10.85	12.41	1.56	3.25
	7/22/2009	15.66	10.86	12.68	1.82	2.98
	7/29/2009	15.66	10.89	12.65	1.76	3.01
	8/5/2009	15.66	10.87	12.54	1.67	3.12
	8/12/2009	15.66	10.93	12.69	1.76	2.97
	8/19/2009	15.66	10.97	12.84	1.87	2.82
	8/26/2009	15.66	10.96	12.75	1.79	2.91
	9/2/2009	15.66	10.99	12.94	1.95	2.72
	9/16/2009	15.66	11.00	12.94	1.94	2.72
	9/23/2009	15.66	11.10	13.16	2.06	2.5
	9/30/2009	15.66	11.08	13.07	1.99	2.59
	10/7/2009	15.66	11.06	13.15	2.09	2.51
	10/14/2009	15.66	11.13	13.16	2.03	2.50
	10/21/2009	15.66	10.66	12.00	1.34	3.66
	10/28/2009	15.66	10.74	11.64	0.90	4.02
	11/4/2009	15.66	10.72	11.74	1.02	3.92
	11/18/2009	15.66	10.75	11.82	1.07	3.84
	11/25/2009	15.66	11.24	11.40	0.16	4.26
	12/1/2009	15.66	11.01	12.64	1.63	3.02
	12/9/2009	15.66	11.03	12.47	1.44	3.19
	12/16/2009	15.66	11.05	12.81	1.76	2.85
	12/23/2009	15.66	10.69	11.71	1.02	3.95
	12/30/2009	15.66	10.75	11.67	0.92	3.99

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through December 29, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
RW-1						
Well inaccessible; product and water levels not measured						
RW-2						
	03/31/10	15.56	7.53 [3]	7.53	0.00	8.03
	06/17/10	15.56	NP	9.54	0.00	6.02
RW-3						
	01/06/10	15.56	10.85	11.13	0.28	4.43
	01/13/10	15.56	10.89	11.11	0.22	4.45
	01/20/10	15.56	9.36	10.65	1.29	4.91
	01/27/10	15.56	9.26	13.03	3.77	2.53
	02/03/10	15.56	9.51	12.20	2.69	3.36
	02/10/10	15.56	9.44	13.11	3.67	2.45
	02/17/10	15.56	9.75	12.29	2.54	3.27
	02/24/10	15.56	8.98	14.08	5.10	1.48
	03/02/10	15.56	8.92	12.78	3.86	2.78
	03/10/10	15.56	9.54	11.53	1.99	4.03
	03/17/10	15.56	9.57	12.40	2.83	3.16
	03/24/10	15.56	9.88	11.15	1.27	4.41
	03/31/10	15.56	NM	NM	NM	NM
	04/07/10	15.56	9.74	13.21	3.47	2.35
	04/14/10	15.56	9.43	13.38	3.95	2.18
	04/21/10	15.56	9.21	13.32	4.11	2.24
	04/28/10	15.56	9.73	11.98	2.25	3.58
	05/05/10	15.56	10.07	10.90	0.83	4.66
	05/12/10	15.56	10.22	10.65	0.43	4.91
	05/19/10	15.56	10.42	10.84	0.42	4.72
	05/26/10	15.56	10.38	10.63	0.25	4.93
	06/02/10	15.56	10.28	11.79	1.51	3.77
	06/09/10	15.56	10.41	11.65	1.24	3.91
	06/17/10	15.56	10.42	12.11	1.69	3.45
	06/23/10	15.56	10.46	11.63	1.17	3.93
	06/30/10	15.56	10.51	11.64	1.13	3.92
	07/07/10	15.56	10.51	11.78	1.27	3.78
	07/14/10	15.56	10.55	11.85	1.30	3.71
	07/21/10	15.56	10.60	11.44	0.84	4.12
	07/28/10	15.56	10.74	11.33	0.59	4.23
	08/11/10	15.56	10.81	11.19	0.38	4.37
	08/25/10	15.56	10.81	11.09	0.28	4.47
	09/01/10	15.56	10.89	11.08	0.19	4.48
	09/22/10	15.56	10.96	11.21	0.25	4.35
	10/06/10	15.56	11.12	11.30	0.18	4.26
	10/20/10	15.56	11.14	11.30	0.16	4.26
	11/03/10	15.56	10.99	11.72	0.73	3.84
	11/17/10	15.56	10.86	11.80	0.94	3.76

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through December 29, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
RW-3 (cont)	12/01/10	15.56	10.57	11.63	1.06	3.93
	12/15/10	15.56	10.14	11.34	1.20	4.22
	12/29/10	15.56	8.81	10.29	1.48	5.27
RW-4						
	01/06/10	14.92	10.09	10.69	0.60	4.23
	01/13/10	14.92	10.16	10.81	0.65	4.11
	01/20/10	14.92	9.13	9.86	0.73	5.06
	01/27/10	14.92	9.00	9.33	0.33	5.59
	02/03/10	14.92	9.12	9.33	0.21	5.59
	02/10/10	14.92	9.19	9.40	0.21	5.52
	02/17/10	14.92	9.30	10.01	0.71	4.91
	02/24/10	14.92	9.06	9.25	0.19	5.67
	03/10/10	14.92	8.97	9.14	0.17	5.78
	03/17/10	14.92	9.07	9.23	0.16	5.69
	03/24/10	14.92	9.25	9.41	0.16	5.51
	03/31/10	14.92	9.31	9.46	0.15	5.46
	04/07/10	14.92	9.36	9.51	0.15	5.41
	04/14/10	14.92	9.09	9.29	0.20	5.63
	04/21/10	14.92	8.95	9.14	0.19	5.78
	04/28/10	14.92	9.21	9.42	0.21	5.50
	05/05/10	14.92	9.37	9.69	0.32	5.23
	05/12/10	14.92	9.52	9.75	0.23	5.17
	05/19/10	14.92	9.66	9.91	0.25	5.01
	05/26/10	14.92	9.65	9.92	0.27	5.00
	06/02/10	14.92	9.69	9.82	0.13	5.10
	06/09/10	14.92	9.80	10.00	0.20	4.92
	06/17/10	14.92	9.82	10.14	0.32	4.78
	06/23/10	14.92	9.88	10.09	0.21	4.83
	06/30/10	14.92	9.89	10.16	0.27	4.76
	07/07/10	14.92	9.92	10.20	0.28	4.72
	07/14/10	14.92	9.94	10.29	0.35	4.63
	07/21/10	14.92	9.94	10.27	0.33	4.65
	07/28/10	14.92	10.04	10.38	0.34	4.54
	08/11/10	14.92	10.08	10.56	0.48	4.36
	08/25/10	14.92	10.05	10.77	0.72	4.15
	09/01/10	14.92	10.11	10.89	0.78	4.03
	09/22/10	14.92	10.17	11.31	1.14	3.61
	10/06/10	14.92	10.32	11.36	1.04	3.56
	10/20/10	14.92	10.31	11.42	1.11	3.50
	11/03/10	14.92	10.38	10.44	0.06	4.48
	11/17/10	14.92	10.28	10.59	0.31	4.33
	12/01/10	14.92	9.85	10.32	0.47	4.60
	12/15/10	14.92	9.42	10.50	1.08	4.42
	12/29/10	14.92	8.65	8.70	0.05	6.22

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through December 29, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
RW-5						
	01/20/10	14.79	7.54	9.37	1.83	5.42
	01/27/10	14.79	8.11	8.54	0.43	6.25
	02/03/10	14.79	6.60 [3]	6.60	0.00	8.19
	02/10/10	14.79	6.52 [3]	6.52	0.00	8.27
	06/17/10	14.79	6.70 [3]	6.70	0.00	8.09
	06/23/10	14.79	7.85 [3]	7.85	0.00	6.94
	07/14/10	14.79	7.84 [3]	7.84	0.00	6.95
	07/21/10	14.79	6.60 [3]	6.60	0.00	8.19
	08/25/10	14.79	6.89	9.23	2.34	5.56
	09/22/10	14.79	6.44	10.85	4.41	3.94
	10/20/10	14.79	6.42	13.13	6.71	1.66
	11/03/10	14.79	6.41	9.54	3.13	5.25
	12/01/10	14.79	6.41	9.57	3.16	5.22
	12/15/10	14.79	7.65	8.74	1.09	6.05
RW-6						
	01/06/10	15.75	8.70	10.74	2.04	5.01
	01/13/10	15.75	8.86	10.79	1.93	4.96
	01/20/10	15.75	8.58	10.58	2.00	5.17
	01/27/10	15.75	8.54	10.14	1.60	5.61
	02/03/10	15.75	8.55	9.81	1.26	5.94
	02/10/10	15.75	9.41	9.82	0.41	5.93
	02/17/10	15.75	8.62	9.44	0.82	6.31
	02/24/10	15.75	8.59	9.37	0.78	6.38
	03/10/10	15.75	8.53	9.14	0.61	6.61
	03/17/10	15.75	8.56	8.84	0.28	6.91
	03/24/10	15.75	8.68	8.91	0.23	6.84
	03/31/10	15.75	8.69	9.11	0.42	6.64
	04/07/10	15.75	8.59	9.21	0.62	6.54
	04/14/10	15.75	8.40	9.11	0.71	6.64
	04/21/10	15.75	8.39	8.92	0.53	6.83
	04/28/10	15.75	8.61	8.96	0.35	6.79
	05/05/10	15.75	8.62	8.94	0.32	6.81
	05/12/10	15.75	8.65	9.09	0.44	6.66
	05/19/10	15.75	8.64	9.35	0.71	6.40
	05/26/10	15.75	8.63	9.51	0.88	6.24
	06/02/10	15.75	8.56	9.55	0.99	6.20
	06/09/10	15.75	8.62	9.52	0.90	6.23
	06/17/10	15.75	8.65	9.62	0.97	6.13
	06/23/10	15.75	8.70	9.60	0.90	6.15
	06/30/10	15.75	8.55	9.65	1.10	6.10
	07/07/10	15.75	8.58	9.80	1.22	5.95
	07/14/10	15.75	8.59	9.88	1.29	5.87
	07/21/10	15.75	8.68	9.97	1.29	5.78

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through December 29, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
RW-6 (cont)	07/28/10	15.75	8.74	10.04	1.30	5.71
	08/11/10	15.75	8.78	10.14	1.36	5.61
	08/25/10	15.75	8.81	10.29	1.48	5.46
	09/01/10	15.75	8.81	10.42	1.61	5.33
	09/22/10	15.75	8.88	10.50	1.62	5.25
	10/06/10	15.75	8.93	10.64	1.71	5.11
	10/22/10	15.75	8.95	10.75	1.80	5.00
	11/03/10	15.75	8.84	10.61	1.77	5.14
	11/17/10	15.75	8.48	10.78	2.30	4.97
	12/01/10	15.75	8.55	10.42	1.87	5.33
	12/15/10	15.75	8.30	10.23	1.93	5.52
	12/29/10	15.75	7.85	9.79	1.94	5.96
RW-7						
	01/06/10	15.02	8.09	10.29	2.20	4.73
	01/13/10	15.02	8.00	10.56	2.56	4.46
	01/20/10	15.02	7.25	10.10	2.85	4.92
	01/27/10	15.02	7.71	9.14	1.43	5.88
	02/03/10	15.02	7.85	8.33	0.48	6.69
	02/10/10	15.02	7.89	8.45	0.56	6.57
	02/17/10	15.02	7.81	8.39	0.58	6.63
	02/24/10	15.02	7.15	8.30	1.15	6.72
	03/10/10	15.02	7.64	8.81	1.17	6.21
	03/17/10	15.02	7.79	8.05	0.26	6.97
	03/24/10	15.02	7.90	8.08	0.18	6.94
	03/31/10	15.02	7.96	8.15	0.19	6.87
	04/07/10	15.02	7.85	8.07	0.22	6.95
	04/14/10	15.02	7.78	7.99	0.21	7.03
	04/21/10	15.02	7.78	8.02	0.24	7.00
	04/28/10	15.02	7.85	8.20	0.35	6.82
	05/05/10	15.02	7.95	8.23	0.28	6.79
	05/12/10	15.02	7.60	7.92	0.32	7.10
	05/19/10	15.02	7.79	8.08	0.29	6.94
	05/26/10	15.02	7.66	7.98	0.32	7.04
	06/02/10	15.02	7.92	8.30	0.38	6.72
	06/09/10	15.02	8.01	8.45	0.44	6.57
	06/17/10	15.02	7.96	8.60	0.64	6.42
	06/23/10	15.02	8.04	8.83	0.79	6.19
	06/30/10	15.02	7.71	8.89	1.18	6.13
	07/07/10	15.02	7.83	8.98	1.15	6.04
	07/14/10	15.02	7.86	9.09	1.23	5.93
	07/21/10	15.02	7.63	9.13	1.50	5.89
	07/28/10	15.02	7.90	9.35	1.45	5.67
	08/11/10	15.02	7.87	9.59	1.72	5.43
	08/25/10	15.02	7.97	9.85	1.88	5.17

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through December 29, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
RW-7 (cont)	09/01/10	15.02	7.75	9.88	2.13	5.14
	09/22/10	15.02	7.77	10.09	2.32	4.93
	10/06/10	15.02	8.08	10.14	2.06	4.88
	10/20/10	15.02	8.00	10.21	2.21	4.81
	11/03/10	15.02	7.65	9.48	1.83	5.54
	11/17/10	15.02	7.20	10.48	3.28	4.54
	12/01/10	15.02	6.54	10.50	3.96	4.52
	12/15/10	15.02	7.70	9.76	2.06	5.26
	12/29/10	15.02	7.73	9.09	1.36	5.93
RW-8						
	01/06/10	15.91	9.46	10.30	0.84	5.61
	01/13/10	15.91	9.52	10.33	0.81	5.58
	01/20/10	15.91	9.35	9.90	0.55	6.01
	01/27/10	15.91	9.06	9.65	0.59	6.26
	02/03/10	15.91	9.26	9.84	0.58	6.07
	02/10/10	15.91	9.23	9.74	0.51	6.17
	02/17/10	15.91	9.12	9.56	0.44	6.35
	02/24/10	15.91	9.18	9.58	0.40	6.33
	03/10/10	15.91	9.10	9.41	0.31	6.50
	03/17/10	15.91	8.95	9.07	0.12	6.84
	03/24/10	15.91	9.12	9.19	0.07	6.72
	03/31/10	15.91	9.11	9.18	0.07	6.73
	04/07/10	15.91	9.10	9.15	0.05	6.76
	04/14/10	15.91	9.11	9.23	0.12	6.68
	04/21/10	15.91	9.07	9.24	0.17	6.67
	04/28/10	15.91	9.12	9.45	0.33	6.46
	05/05/10	15.91	9.14	9.33	0.19	6.58
	05/12/10	15.91	8.74	8.76	0.02	7.15
	05/19/10	15.91	9.23	9.31	0.08	6.60
	05/26/10	15.91	8.71	8.83	0.12	7.08
	06/02/10	15.91	9.13	10.25	1.12	5.66
	06/09/10	15.91	9.16	9.25	0.09	6.66
	06/17/10	15.91	9.13	9.24	0.11	6.67
	06/23/10	15.91	9.19	9.36	0.17	6.55
	06/30/10	15.91	9.20	9.41	0.21	6.50
	07/07/10	15.91	9.27	9.54	0.27	6.37
	07/14/10	15.91	9.23	9.53	0.30	6.38
	07/21/10	15.91	9.14	9.46	0.32	6.45
	07/28/10	15.91	9.12	9.51	0.39	6.40
	08/11/10	15.91	9.20	9.76	0.56	6.15
	08/25/10	15.91	9.25	10.05	0.80	5.86
	09/01/10	15.91	9.23	10.21	0.98	5.70
	09/22/10	15.91	9.41	10.44	1.03	5.47
	10/06/10	15.91	9.47	10.63	1.16	5.28
	10/20/10	15.91	9.47	10.84	1.37	5.07
	11/03/10	15.91	9.53	10.49	0.96	5.42

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through December 29, 2010
Port of Oakland's Harbor Facilities Complex Site
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Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
RW-8 (cont)	11/17/10	15.91	9.27	10.17	0.90	5.74
	12/01/10	15.91	9.25	10.26	1.01	5.65
	12/15/10	15.91	9.25	9.93	0.68	5.98
	12/29/10	15.91	8.41	9.22	0.81	6.69
RW-9						
	01/06/10	16.57	10.09	10.50	0.41	6.07
	01/13/10	16.57	10.70	11.29	0.59	5.28
	01/20/10	16.57	9.71	10.20	0.49	6.37
	01/27/10	16.57	9.54	9.87	0.33	6.70
	02/03/10	16.57	9.46	9.52	0.06	7.05
	02/10/10	16.57	9.52	9.59	0.07	6.98
	02/17/10	16.57	9.46	9.52	0.06	7.05
	02/24/10	16.57	9.47	9.52	0.05	7.05
	03/10/10	16.57	9.35	9.44	0.09	7.13
	03/17/10	16.57	9.32	9.39	0.07	7.18
	03/24/10	16.57	9.59	9.62	0.03	6.95
	03/31/10	16.57	9.35	9.38	0.03	7.19
	04/07/10	16.57	9.35	9.36	0.01	7.21
	04/14/10	16.57	9.32	9.35	0.03	7.22
	04/21/10	16.57	9.30	9.32	0.02	7.25
	04/28/10	16.57	9.29	9.36	0.07	7.21
	05/05/10	16.57	9.57	9.63	0.06	6.94
	05/12/10	16.57	9.34	9.39	0.05	7.18
	05/19/10	16.57	9.39	9.45	0.06	7.12
	05/26/10	16.57	9.41	9.50	0.09	7.07
	06/02/10	16.57	9.44	9.59	0.15	6.98
	06/09/10	16.57	9.49	9.56	0.07	7.01
	06/17/10	16.57	9.52	9.61	0.09	6.96
	06/23/10	16.57	9.55	9.60	0.05	6.97
	06/30/10	16.57	9.59	9.63	0.04	6.94
	07/07/10	16.57	9.62	9.67	0.05	6.90
	07/14/10	NM - inaccessible				
	07/21/10	NM - inaccessible				
	07/28/10	16.57	9.73	9.79	0.06	6.78
	08/11/10	16.57	9.78	10.02	0.24	6.55
	08/25/10	16.57	9.74	10.40	0.66	6.17
	09/01/10	16.57	9.82	10.15	0.33	6.42
	09/22/10	16.57	9.89	10.19	0.30	6.38
	10/06/10	16.57	9.94	10.26	0.32	6.31
	10/20/10	16.57	9.97	10.27	0.30	6.30
	11/03/10	16.57	9.86	10.16	0.30	6.41
	12/01/10	16.57	9.67	9.89	0.22	6.68
	12/15/10	16.57	9.56	9.76	0.20	6.81
	12/29/10	16.57	9.34	9.53	0.19	7.04

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through December 29, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-3						
	01/06/10	15.66	10.78	11.85	1.07	3.81
	01/13/10	15.66	10.70	11.29	0.59	4.37
	01/20/10	15.66	9.31	10.00	0.69	5.66
	01/27/10	15.66	9.44	10.34	0.90	5.32
	02/03/10	15.66	9.71	10.47	0.76	5.19
	02/10/10	15.66	9.62	10.41	0.79	5.25
	02/17/10	15.66	9.95	10.74	0.79	4.92
	02/24/10	15.66	9.11	10.56	1.45	5.1
	03/10/10	15.66	9.58	10.51	0.93	5.15
	03/17/10	15.66	9.72	10.49	0.77	5.17
	03/24/10	15.66	9.91	10.55	0.64	5.11
	03/31/10	15.66	9.97	10.50	0.53	5.16
	04/07/10	15.66	10.02	10.75	0.73	4.91
	04/14/10	15.66	9.65	10.72	1.07	4.94
	04/21/10	15.66	9.34	10.73	1.39	4.93
	04/28/10	15.66	9.82	10.68	0.86	4.98
	05/05/10	15.66	10.02	10.99	0.97	4.67
	05/12/10	15.66	10.12	11.25	1.13	4.41
	05/19/10	15.66	10.22	11.50	1.28	4.16
	05/26/10	15.66	10.23	11.80	1.57	3.86
	06/02/10	15.66	10.23	11.81	1.58	3.85
	06/09/10	15.66	10.32	12.21	1.89	3.45
	06/17/10	15.66	10.34	12.18	1.84	3.48
	06/23/10	15.66	10.39	12.29	1.90	3.37
	06/30/10	15.66	10.40	12.42	2.02	3.24
	07/07/10	15.66	10.45	12.42	1.97	3.24
	07/14/10	15.66	10.48	12.55	2.07	3.11
	07/21/10	15.66	10.47	12.26	1.79	3.40
	07/28/10	15.66	10.54	12.55	2.01	3.11
	08/04/10	15.66	10.59	12.50	1.91	3.16
	08/11/10	15.66	10.60	12.60	2.00	3.06
	08/18/10	15.66	10.64	12.67	2.03	2.99
	08/25/10	15.66	10.65	12.43	1.78	3.23
	09/01/10	15.66	10.74	12.56	1.82	3.10
	09/07/10	15.66	10.71	12.58	1.87	3.08
	09/14/10	15.66	10.80	12.77	1.97	2.89
	09/22/10	15.66	10.80	12.71	1.91	2.95
	09/29/10	15.66	10.82	12.66	1.84	3.00
	10/06/10	15.66	10.91	13.11	2.20	2.55
	10/20/10	15.66	10.94	12.84	1.90	2.82
	10/27/10	15.66	10.87	12.59	1.72	3.07
	11/03/10	15.66	10.93	12.68	1.75	2.98

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through December 29, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-3 (cont)	11/10/10	15.66	10.80	11.66	0.86	4.00
	11/17/10	15.66	10.82	11.85	1.03	3.81
	11/24/10	15.66	10.51	11.03	0.52	4.63
	12/01/10	15.66	10.65	11.56	0.91	4.10
	12/15/10	15.66	10.13	10.74	0.61	4.92
	12/22/10	15.66	NM	NM	NM	NM
	12/29/10	15.66	9.05 [3]	9.05	0.00	6.61
Convault						
	01/06/10	NA	1.99	2.41	0.42	NA
	01/13/10	NA	1.95	2.35	0.40	NA
	01/20/10	NA	1.94	2.34	0.40	NA
	01/27/10	NA	1.90	2.34	0.44	NA
	02/03/10	NA	1.86	2.33	0.47	NA
	02/10/10	NA	1.85	2.33	0.48	NA
	02/17/10	NA	1.81	2.38	0.57	NA
	02/24/10	NA	1.81	2.30	0.49	NA
	03/10/10	NA	1.71	2.23	0.52	NA
	03/17/10	NA	1.70	2.25	0.55	NA
	03/24/10	NA	1.69	2.04	0.35	NA
	03/31/10	NA	NM	NM	NM	NA
	04/07/10	NA	1.68	2.26	0.58	NA
	04/14/10	NA	1.68	2.30	0.62	NA
	04/21/10	NA	1.64	2.28	0.64	NA
	04/28/10	NA	1.65	2.23	0.58	NA
	05/05/10	NA	1.62	2.24	0.62	NA
	05/12/10	NA	1.62	2.23	0.61	NA
	05/19/10	NA	1.61	2.24	0.63	NA
	05/26/10	NA	1.60	2.28	0.68	NA
	06/02/10	NA	1.60	2.42	0.82	NA
	06/09/10	NA	1.59	2.23	0.64	NA
	06/17/10	NA	1.58	2.25	0.67	NA
	06/23/10	NA	1.55	2.24	0.69	NA
	06/30/10	NA	1.46	2.22	0.76	NA
	07/07/10	NA	1.47	2.23	0.76	NA
	07/14/10	NA	1.39 [4]	2.14	0.75	NA
	07/21/10	NA	1.32	2.15	0.83	NA
	07/28/10	NA	1.24	2.10	0.86	NA
	08/11/10	NA	1.16	2.11	0.95	NA
	08/25/10	NA	1.01	2.08	1.07	NA
	09/01/10	NA	0.96	2.02	1.06	NA
	09/07/10	NA	0.85	2.01	1.16	NA
	09/22/10	NA	empty	empty	0.00	NA

TABLE 3. Free Product Recovery System Groundwater Elevation and Free Product Data
January 1, 2010 Through December 29, 2010
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Recovery Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
Convault	09/29/10	NA	2.40	2.49	0.09	NA
(cont)	10/06/10	NA	2.36	2.50	0.14	NA
	10/20/10	NA	2.29	2.50	0.21	NA
	11/03/10	NA	2.15	2.45	0.30	NA
	11/17/10	NA	2.08	2.42	0.34	NA
	12/01/10	NA	1.96	2.47	0.51	NA
	12/15/10	NA	1.90	2.35	0.45	NA
	12/29/10	NA	1.80	2.33	0.53	NA

Notes:
NP = no product detected with the interface probe
btc = below top of the well casing
NA = not available
NM = not measured

[1] Wells were resurveyed on January 24, 2009. Elevation data is relative to North American Vertical Datum of 1988 (NAVD 88).
[2] All measurements made before the system ran on given day unless otherwise noted.
[3] Product not measureable, but visible evidence of product on interface probe.
[4] Measured after approximately four gallons of product were removed from MW-3.

Table 1
Groundwater Elevations/Product Removal Data
Port of Oakland
2277 Seventh Street, Oakland, California
(Page 1 of 3)

Well	Date	Top of Casing Elevation[1] (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation[2] (feet)	Estimated Product Removed (gallons)	Product Removal Method
MW-1	3/29/95	14.14	7.50	7.67	0.17	6.61		
	9/6/95		8.68	9.45	0.77	5.31		
	9/28/95		8.74	9.85	1.11	5.18		
	12/27/95		8.51	9.04	0.53	5.52		
	1/8/96		8.67	9.15	0.48	5.37		
	4/4/96		8.25	8.50	0.25	5.84		
	7/10/96		8.70	9.52	0.82	5.28		
	12/3/96		---	---	---	---	0.1	passive skimmer
	12/13/96		---	---	---	---	0.23	passive skimmer
	1/6/97		---	---	---	---	0.08	passive skimmer
MW-2	5/27/94	14.36		8.01		6.35		
	3/29/95			7.47		6.89		
	9/6/95			9.04		5.32		
	9/28/95			7.47		6.89		
	12/27/95			8.95		5.41		
	1/8/96			8.95		5.41		
	4/4/96			8.46		5.90		
	7/10/96			9.03		5.33		
	12/3/96			9.54		4.82		
MW-3	3/29/95	14.22	6.66	9.59	2.93	6.97		
	9/6/95		8.48	13.70	5.22	4.70		
	9/28/95		7.80	13.60	5.80	5.26		
	12/27/95		8.01	12.71	4.70	5.27		
	1/8/96		8.16	13.10	4.94	5.07		
	4/4/96		7.10	11.50	4.40	6.24		
	7/10/96		7.94	13.28	5.34	5.21		
	10/3/96		8.62	14.45	5.83	4.43	25	peristaltic pump
	10/10/96		8.77	14.46	5.69	4.31	25	peristaltic pump
	10/18/96		8.85	14.54	5.69	4.23	25	peristaltic pump
	10/25/96		8.74	14.43	5.69	4.34	20	peristaltic pump
	11/1/96		8.85	14.41	5.56	4.26	20	peristaltic pump
	11/8/96		8.82	14.50	5.68	4.26	25	peristaltic pump
	12/3/96		---	---	---	---	13	active skimmer
	12/13/96		---	---	---	---	---	active skimmer
	1/6/97		---	---	---	---	750	active skimmer

Table 1 Continued
Groundwater Elevations/Product Removal Data
Port of Oakland
2277 Seventh Street, Oakland, California
(Page 2 of 3)

Well	Date	Top of Casing Elevation[1] (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation[2] (feet)	Estimated Product Removed (gallons)	Product Removal Method
MW-4	3/29/95	13.15		9.59		3.56		
	9/6/95			8.48		4.67		
	9/11/95			9.59		3.56		
	9/28/95			9.59		3.56		
	12/27/95			8.39		4.76		
	1/8/96			8.42		4.73		
	4/4/96			8.19		4.96		
	7/10/96			8.56		4.59		
	12/3/96			8.69		4.46		
MW-5	9/6/95	13.49		6.90		6.59		
	9/11/95			9.59		3.90		
	9/28/95			9.59		3.90		
	12/27/95			7.17		6.32		
	4/4/96			6.44		7.05		
	7/10/96			6.79		6.70		
	12/3/96			7.06		6.43		
MW-6	9/6/95	14.00	4.47	7.40	2.93	8.94		
	9/28/95		6.66	9.59	2.93	6.75		
	12/27/96			8.07		5.93		
	1/8/96			7.70		6.30		
	4/4/96			7.70		6.30		
	7/10/96			7.55		6.45		
	12/3/96		---	6.41	---	7.59		
MW-7	9/6/95	14.35		9.10		5.25		
	9/28/95			9.74		4.61		
	12/27/96			9.06		5.29		
	1/8/96			9.06		5.29		
	4/4/96			8.57		5.78		
	7/10/96			9.11		5.24		
	12/3/96			9.62		4.73		

Table 1 Continued
Groundwater Elevations/Product Removal Data
Port of Oakland
2277 Seventh Street, Oakland, California
(Page 3 of 3)

Well	Date	Top of Casing Elevation[1] (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation[2] (feet)	Estimated Product Removed (gallons)	Product Removal Method
MW-8	9 6/95	12.94		7.84		5.10		
	9 28/95		8.79	8.91	0.12	4.13		
	12 27/96		8.30	8.61	0.31	4.58		
	1 8/96		8.35	8.80	0.45	4.50		
	4 4/96		8.32	8.37	0.05	4.61		
	7 10/96		9.41	9.44	0.03	3.52		
	12 3/96		---	---	---	---	0.003	passive skimmer
	12 13/96		---	---	---	---	0.007	passive skimmer
	1 6 97		---	---	---	---	0.007	passive skimmer

Notes:

[1] Top of Casing (TOC) Elevations from Groundwater Monitoring and Sampling Report by Alisto Engineering Group, dated September 12, 1996. TOC elevations surveyed to nearest 0.01 foot relative to mean lower low water (Port of Oakland Datum: 3.2 feet below mean sea level).

--- = not measured/not estimated

[2] Groundwater Elevation corrected for the presence of floating product according to the formula: CDTW = DTW - (0.80 x PT), where CDTW is the corrected depth to groundwater, DTW is the measured depth to groundwater, 0.80 is the density correction factor for diesel, and PT is the measured thickness of floating product.

Measurements on 12/3/96, 12/13/96, and 1/6/97 by U&A; all other measurements listed from Alisto Engineering Group (1996).

From 3Q97 GWMR

Table 1
Groundwater Elevations/Product Removal Data
Port of Oakland
2277 Seventh Street, Oakland, California
(Page 1 of 4)

Well	Date	Top of Casing Elevation[1] (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation[2] (feet)	Estimated Product Removed (gallons)	Product Removal Method
MW-1	3/29/95	14.14	7.50	7.67	0.17	6.61		
	9/6/95		8.68	9.45	0.77	5.31		
	9/28/95		8.74	9.85	1.11	5.18		
	12/27/95		8.51	9.04	0.53	5.52		
	1/8/96		8.67	9.15	0.48	5.37		
	4/4/96		8.25	8.50	0.25	5.84		
	7/10/96		8.70	9.52	0.82	5.28		
	12/3/96		---	---	---	---	0.1	passive skimmer
	12/13/96		---	---	---	---	0.23	passive skimmer
	1/6/97		---	---	---	---	0.08	passive skimmer
	3/28/97		---	---	---	---	0.002	passive skimmer
	6/13/97		---	---	---	---	0.23	passive skimmer
	9/18/97		---	---	---	---	0.23	passive skimmer
MW-2	5/27/94	14.36		8.01		6.35		
	3/29/95			7.47		6.89		
	9/6/95			9.04		5.32		
	9/28/95			7.47		6.89		
	12/27/95			8.95		5.41		
	1/8/96			8.95		5.41		
	4/4/96			8.46		5.90		
	7/10/96			9.03		5.33		
	12/3/96			9.54		4.82		
	3/28/97			7.89		6.47		
	6/13/97			9.17		5.19		
	9/18/97			9.51		4.85		

Table 1 Continued
Groundwater Elevations/Product Removal Data
Port of Oakland
2277 Seventh Street, Oakland, California
(Page 2 of 4)

Well	Date	Top of Casing Elevation[1] (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation[2] (feet)	Estimated Product Removed (gallons)	Product Removal Method
MW-3	3/29/95	14.22	6.66	9.59	2.93	6.97		
	9/6/95		8.48	13.70	5.22	4.70		
	9/28/95		7.80	13.60	5.80	5.26		
	12/27/95		8.01	12.71	4.70	5.27		
	1/8/96		8.16	13.10	4.94	5.07		
	4/4/96		7.10	11.50	4.40	6.24		
	7/10/96		7.94	13.28	5.34	5.21		
	10/3/96		8.62	14.45	5.83	4.43	25	peristaltic pump
	10/10/96		8.77	14.46	5.69	4.31	25	peristaltic pump
	10/18/96		8.85	14.54	5.69	4.23	25	peristaltic pump
	10/25/96		8.74	14.43	5.69	4.34	20	peristaltic pump
	11/1/96		8.85	14.41	5.56	4.26	20	peristaltic pump
	11/8/96		8.82	14.50	5.68	4.26	25	peristaltic pump
	12/3/96		---	---	---	---	13	active skimmer
	12/13/96		---	---	---	---	---	active skimmer
	1/6/97		---	---	---	---	750	active skimmer
	2/19/97		---	---	---	---	425	active skimmer
	5/1/97		---	---	---	---	350	active skimmer
	6/13/97		---	---	---	---	50	active skimmer
	10/23/97		---	---	---	---	350	active skimmer
MW-4	3/29/95	13.15		9.59		3.56		
	9/6/95			8.48		4.67		
	9/11/95			9.59		3.56		
	9/28/95			9.59		3.56		
	12/27/95			8.39		4.76		
	1/8/96			8.42		4.73		
	4/4/96			8.19		4.96		
	7/10/96			8.56		4.59		
	12/3/96			8.69		4.46		
	3/28/97			7.40		5.75		
	6/13/97			8.53		4.62		
	9/18/97			8.62		4.53		

Table 1 Continued
Groundwater Elevations/Product Removal Data
Port of Oakland
2277 Seventh Street, Oakland, California
(Page 3 of 4)

Well	Date	Top of Casing Elevation[1] (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation[2] (feet)	Estimated Product Removed (gallons)	Product Removal Method
MW-5	9/6/95	13.49		6.90		6.59		
	9/11/95			9.59		3.90		
	9/28/95			9.59		3.90		
	12/27/95			7.17		6.32		
	4/4/96			6.44		7.05		
	7/10/96			6.79		6.70		
	12/3/96			7.06		6.43		
	3/28/97			6.45		7.04		
	6/13/97			6.58		6.91		
	9/18/97			6.89		6.60		
MW-6	9/6/95	14.00	4.47	7.40	2.93	8.94		
	9/28/95		6.66	9.59	2.93	6.75		
	12/27/96			8.07		5.93		
	1/8/96			7.70		6.30		
	4/4/96			7.70		6.30		
	7/10/96			7.55		6.45		
	12/3/96		---	6.41	---	7.59		
	3/28/97		---	---	---	---	0.0005	passive skimmer
	6/13/97		---	---	---	---	0	passive skimmer
	9/18/97		---	---	---	---	0	passive skimmer

Table 1 Continued
Groundwater Elevations/Product Removal Data
Port of Oakland
2277 Seventh Street, Oakland, California
(Page 4 of 4)

Well	Date	Top of Casing Elevation[1] (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation[2] (feet)	Estimated Product Removed (gallons)	Product Removal Method
MW-7	9/6/95	14.35		9.10		5.25		
	9/28/95			9.74		4.61		
	12/27/96			9.06		5.29		
	1/8/96			9.06		5.29		
	4/4/96			8.57		5.78		
	7/10/96			9.11		5.24		
	12/3/96			9.62		4.73		
	3/28/97			8.06		6.29		
	6/13/97			8.28		6.07		
	9/18/97			9.65		4.70		
MW-8	9/6/95	12.94		7.84		5.10		
	9/28/95		8.79	8.91	0.12	4.13		
	12/27/96		8.30	8.61	0.31	4.58		
	1/8/96		8.35	8.80	0.45	4.50		
	4/4/96		8.32	8.37	0.05	4.61		
	7/10/96		9.41	9.44	0.03	3.52		
	12/3/96		---	---	---	---	0.003	passive skimmer
	12/13/96		---	---	---	---	0.007	passive skimmer
	1/6/97		---	---	---	---	0.007	passive skimmer
	3/28/97		---	---	---	---	---	---
	6/13/97		9.04	9.05	0.01	3.90	---	---
	9/18/97		9.22	9.60	0.38	3.64	---	---

Notes:

[1] Top of Casing (TOC) Elevations from Groundwater Monitoring and Sampling Report by Alisto Engineering Group, dated September 12, 1996. TOC elevations surveyed to nearest 0.01 foot relative to mean lower low water (Port of Oakland Datum; 3.2 feet below mean sea level).

--- = not measured/not estimated

[2] Groundwater Elevation corrected for the presence of floating product according to the formula:
CDTW = DTW - (0.80 x PT), where CDTW is the corrected depth to groundwater, DTW is the measured depth to groundwater, 0.80 is the density correction factor for diesel, and PT is the measured thickness of floating product.

Measurements on and since 12/3/96 by U&A; all other measurements listed from Alisto Engineering Group (1996).

Table 2. Product Removal and Product Thickness Data
Port of Oakland
2277 7th Street, Oakland California

Well ID	Elevation of Top of Casing[1] (feet)	Date Of Monitoring	Depth to Free Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Product Removed (gallons)	Product Removal Method [2]
MW-1	14.14	12/31/97	-	-	-	0.2	passive skimmer
		01/29/98	-	-	-	0.2	passive skimmer
		03/02/98	-	-	-	0.018	passive skimmer
		05/11/98	-	-	-	0.02	passive skimmer
		06/15/98	-	-	-	0.2	passive skimmer
		11/06/98	9.34	10.3	0.96	1.2	passive skimmer
		01/07/99	-	-	-	0.2	passive skimmer
		02/11/99	-	-	-	0.2	passive skimmer
		03/12/99	-	-	-	0.2	passive skimmer
		03/19/99	NM	8.45	>0.01	0.07	passive skimmer
		04/14/99	-	-	-	0.2	passive skimmer
		05/11/99	-	-	-	0.2	passive skimmer
		06/24/99	8.88	9.63	0.8	0.2	passive skimmer
		07/15/99	--	--	--	0.2	passive skimmer
		07/16/99	--	--	--	0.2	passive skimmer
		08/27/99	--	--	--	0.2	passive skimmer
		09/28/99	--	--	0.65	0.2	passive skimmer
		10/05/99	--	--	--	0.2	passive skimmer
		11/12/99	9.38	10.27	0.89	0.2	passive skimmer
		12/21/99	--	--	--	0.2	passive skimmer
MW-3	14.22	12/31/97	-	-	-	30	active skimmer
		01/29/98	-	-	-	10	active skimmer
		04/13/98	-	-	-	240	active skimmer
		05/11/98	-	-	-	1,545	active skimmer
		06/15/98	-	-	-	1,950	active skimmer
		11/06/98	8.84	9.94	1.1	500	active skimmer
		01/05/99	-	-	-	275[2]	active skimmer
		01/14/99	-	-	-	400[2]	active skimmer
		02/03/99	-	-	-	400[2]	active skimmer
		02/26/99	-	-	-	570[2]	active skimmer
		03/19/99	7.52	8.05	0.5	211	active skimmer
		06/16/99	-	-	-	310	active skimmer
		06/24/99	8.38	8.56	0.2	--	active skimmer
		07/14/99	--	--	--	50[2]	active skimmer
		09/28/99	--	--	0.2	--	active skimmer
		10/29/99				125[2]	active skimmer
		11/12/99	9.14	9.23	0.09	--	active skimmer
MW-6	14.00	13/31/97	-	-	-	0.0014	passive skimmer
		01/29/98	-	-	-	0.0014	passive skimmer
		03/02/98	-	-	-	0.0014	passive skimmer
		11/06/98	NM	9:62	>0.01	0.0	passive skimmer
		03/19/99	NM	7.37	>0.01	0.0	passive skimmer
MW-8 [1]	12.94	12/31/97	8.49	8.82	0.33	4.38	-
		11/06/98	9.25	10.3	1.1	3.48	-

- Data prior to November 6, 1998 taken from *Groundwater Monitoring, Sampling and Product Removal System O&M Report* dated July 21, 1998, by Innovative Technical Solutions, Inc.
- Data prior to November 6, 1998 taken from *Groundwater Monitoring, Sampling and Product*
- Product removal volumes from 11/6/98 on represent total product removed during that reporting period.

[1] Free product in well is too viscous to allow product thickness or groundwater level measurements.

[2] Product removal totals for MW-3 are estimated from documentation of product removal from the treatment system performed by Performance Excavators, Inc.

NM - Well checked for free product but was not able to detect a measurable amount in the well.

Greyed areas indicates data from this reporting period.

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-1						
	04/18/00	13.65	NM	8.21	0.0	5.44
	05/22/00	13.65	NM	8.51	0.0	5.14
	07/10/01	13.65	8.8	10.00	1.20	3.65
	12/12/01	13.65	NM	NA	NA	NA
	03/08/02	13.65	NM	NA	NA	NA
	06/13/02	13.65	8.70	10.00	1.30	3.65
	09/26/02	13.65	8.60	9.50	0.90	4.15
	03/17/03	13.65	7.61	8.88	1.27	4.77
	06/18/03	13.65	8.20	9.44	1.24	4.21
	09/03/03	13.65	8.50	9.40	0.90	4.25
	11/26/03	13.65	8.85	9.25	0.40	4.40
	03/05/04	13.65	6.76	7.07	0.31	6.58
	06/02/04	13.65	8.26	8.71	0.45	4.94
	09/03/04	13.65	8.70	9.11	0.41	4.54
	12/16/04	13.65	7.75	7.92	0.17	5.73
	03/29/05	13.65	6.21	6.38	0.17	7.27
	06/14/05	13.65	7.41	7.61	0.20	6.04
	08/10/05	13.65	8.05	8.55	0.50	5.10
	09/29/05	13.65	8.28	8.95	0.67	4.70
	12/21/05	13.65	5.70	5.90	0.20	7.75
	03/24/06	13.65	5.98	6.27	0.29	7.38
	07/28/06	13.65	7.88	8.35	0.47	5.30
	11/29/06	NA	10.58	10.81	0.23	NA
	06/01/07	15.80	11.11	11.45	0.34	4.35
	11/14/07	15.80	10.87	10.93	0.06	4.87
	06/05/08	15.80	11.36	11.46	0.10	4.34
	12/18/08	15.80	10.82	10.89	0.07	4.91
	03/04/09	15.80	9.38	9.52	0.14	6.28
	04/01/09	15.80	10.65	10.67	0.02	5.13
	06/17/09	15.80	11.21	11.28	0.07	4.52
	12/08/09	15.80	NP	10.79	0.0	5.01
	06/17/10	15.80	10.79 [4]	10.79	0.0	5.01
	12/14/10	15.80	9.42 [4]	9.42	0.0	6.38
	06/07/11	15.80	NP	10.77	0.0	5.03
	06/21/11	15.80	NP	10.37	0.0	5.43
	09/26/11	15.80	11.23 [4]	11.23	0.0	4.57
	12/05/11	15.80	11.15 [4]	11.15	0.0	4.65
MW-2						
	12/31/97	13.87	NP	8.73	0.0	5.14
	04/13/98	13.87	NP	7.72	0.0	6.15
	11/06/98	13.87	NP	9.43	0.0	4.44
	03/19/99	13.87	NP	8.21	0.0	5.66
	06/24/99	13.87	NP	8.91	0.0	4.96
	09/28/99	13.87	NP	9.42	0.0	4.45
	11/12/99	13.87	NP	9.63	0.0	4.24
	02/11/00	13.87	NP	8.54	0.0	5.33
	05/22/00	13.87	NP	8.10	0.0	5.77
	09/06/00	13.87	NP	8.79	0.0	5.08
	12/19/00	13.87	NP	9.19	0.0	4.68
	02/21/01	13.87	NP	7.99	0.0	5.88
	04/03/01	13.87	NP	8.23	0.0	5.64
	07/10/01	13.87	NP	8.70	0.0	5.17
	12/12/01	13.87	NP	8.16	0.0	5.71
	01/22/02	13.87	NP	7.64	0.0	6.23
	03/08/02	13.87	NP	8.31	0.0	5.56
	06/13/02	13.87	NP	8.64	0.0	5.23

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-2 (cont)	09/26/02	13.87	NP	8.95	0.0	4.92
	12/12/02	13.87	NP	9.17	0.0	4.70
	03/17/03	13.87	NP	7.77	0.0	6.10
	06/18/03	13.87	NP	8.44	0.0	5.43
	09/03/03	13.87	NP	8.98	0.0	4.89
	11/26/03	16.72	NP	12.01	0.0	4.71
	03/05/04	16.72	NP	9.75	0.0	6.97
	06/02/04	16.72	NP	11.22	0.0	5.50
	09/03/04	16.72	NP	11.62	0.0	5.10
	12/16/04	16.72	NP	10.80	0.0	5.92
	03/29/05	16.72	NP	9.67	0.0	7.05
	06/14/05	16.72	NP	10.68	0.0	6.04
	08/10/05	16.72	NP	11.05	0.0	5.67
	09/29/05	16.72	NP	11.32	0.0	5.40
	12/21/05	16.47	NP	9.57	0.0	6.90
	03/24/06	16.47	NP	9.55	0.0	6.92
	07/28/06	16.47	NP	10.85	0.0	5.62
	11/29/06	NA	NP	11.69	0.0	NA
	06/01/07	16.43	NP	11.72	0.0	4.71
	11/14/07	16.43	NP	12.28	0.0	4.15
	06/05/08	16.43	NP	12.01	0.0	4.42
	12/18/08	16.43	NP	12.20	0.0	4.23
	03/04/09	16.43	NP	10.19	0.0	6.24
	04/01/09	16.43	NP	11.34	0.0	5.09
	06/17/09	16.43	NP	11.90	0.0	4.53
	12/09/09	16.43	NP	12.13	0.0	4.30
	06/16/10	16.43	NP	11.57	0.0	4.86
	12/14/10	16.43	NP	11.04	0.0	5.39
	06/07/11	16.43	NP	10.70	0.0	5.73
	06/21/11	16.43	NP	11.18	0.0	5.25
	09/26/11	16.43	NP	11.87	0.0	4.56
	12/05/11	16.43	NP	11.95	0.0	4.48
MW-3						
	11/06/98	13.73	8.84	9.94	1.10	NC
	03/19/99	13.73	7.52	8.05	0.53	NC
	06/24/99	13.73	8.38	8.56	0.18	NC
	11/12/99	13.73	9.14	9.23	0.09	NC
	02/11/00	13.73	7.97	8.37	0.40	NC
	03/01/00	13.73	6.59	7.24	0.65	NC
	03/21/00	13.73	6.50	6.56	0.06	NC
	05/22/00	13.73	7.51	8.05	0.54	NC
	06/26/00	13.73	7.82	8.20	0.38	NC
	07/25/00	13.73	7.90	8.92	1.02	NC
	08/31/00	13.73	8.15	9.50	1.35	NC
	09/06/00	13.73	8.21	9.42	1.21	NC
	09/21/00	13.73	8.30	8.88	0.58	NC
	12/19/00	13.73	8.60	9.65	1.05	NC
	02/22/01	13.73	6.36	8.15	1.79	NC
	04/03/01	13.73	7.48	8.88	1.40	NC
	04/23/01	13.73	7.85	9.10	1.25	NC
	05/30/01	13.73	7.75	9.10	1.35	NC
	07/10/01	13.73	8.10	9.60	1.50	NC
	03/08/02	13.73	7.80	8.00	0.20	NC

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-3 (cont)	04/03/02	13.73	7.60	7.70	0.10	NC
	04/23/02	13.73	7.90	8.40	0.50	NC
	04/25/02	13.73	7.90	8.80	0.90	NC
	05/10/02	13.73	8.10	8.20	0.10	NC
	05/24/02	13.73	8.05	8.10	0.05	NC
	06/13/02	13.73	8.10	8.70	0.60	NC
	07/05/02	13.73	8.10	8.95	0.85	NC
	07/19/02	13.73	8.10	8.90	0.80	NC
	07/30/02	13.73	8.10	8.90	0.80	NC
	08/14/02	13.73	8.10	8.90	0.80	NC
	09/13/02	13.73	8.30	9.30	1.00	NC
	09/26/02	13.73	8.30	9.00	0.70	NC
	10/14/02	13.73	8.60	9.50	0.90	NC
	11/04/02	13.73	8.75	9.99	1.24	NC
	11/21/02	13.73	8.59	11.29	2.70	NC
	12/06/02	13.73	8.56	9.30	0.74	NC
	12/18/02	13.73	7.35	8.43	1.08	NC
	12/30/02	13.73	6.50	7.15	0.65	NC
	01/02/03	13.73	6.20	6.20	0.00	7.53
	01/03/03	13.73	6.21	6.21	0.00	7.52
	01/14/03	13.73	6.20	6.21	0.01	7.52
	01/30/03	13.73	6.81	6.85	0.04	6.88
	02/18/02	13.73	7.09	7.15	0.06	NC
	02/26/03	13.73	7.04	7.11	0.07	NC
	03/13/03	13.73	7.22	8.11	0.89	NC
	03/17/03	13.73	7.15	7.50	0.35	NC
	04/16/03	13.73	7.27	8.25	0.98	NC
	06/18/03	13.73	7.78	9.00	1.22	NC
	09/03/03	13.73	8.31	9.96	1.65	NC
	11/26/03	15.69	10.79	12.85	2.06	NC
	03/05/04	15.69	8.39	9.85	1.46	NC
	06/02/04	15.69	10.03	11.35	1.32	NC
	09/03/04	15.69	10.46	12.06	1.60	NC
	12/16/04	15.69	9.41	10.38	0.97	NC
	03/29/05	15.69	8.17	9.01	0.84	NC
	06/14/05	15.69	9.59	10.55	0.96	NC
	08/10/05	15.69	9.91	11.15	1.24	NC
	09/29/05	15.69	10.21	11.61	1.40	NC
	12/21/05	15.69	8.21	8.28	0.07	NC
	03/24/06	15.69	8.20	8.82	0.62	NC
	07/28/06	15.69	9.81	9.83	0.02	NC
	11/29/06	NA	10.72	11.70	0.98	NA
	06/01/07	15.66	10.77	11.46	0.69	NC
	11/14/07	15.66	10.98	12.19	1.21	NC
	06/05/08	15.66	10.51	11.96	1.45	NC
	12/18/08	15.66	10.78	12.00	1.22	3.66
	03/04/09	15.66	9.31	9.93	0.62	5.73
	04/01/09	15.66	10.38	11.10	0.72	4.56
	06/17/09	15.66	10.79	12.30	1.51	3.36
	12/08/09	15.66	11.05	12.81	1.76	2.85
	06/17/10	15.66	10.39	12.29	1.90	3.37
	12/15/10	15.66	10.13	10.74	0.61	4.92

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-3 (cont)	06/07/11	15.66	9.91	10.95	1.04	4.71
	06/21/11	15.66	10.74	11.20	0.46	4.46
	09/26/11	15.66	10.71	12.55	1.84	3.11
	12/05/11	15.66	10.83	12.20	1.37	3.46
MW-4						
	12/31/97	12.66	NP	7.09	0.0	5.57
	04/13/98	12.66	NP	7.71	0.0	4.95
	11/06/98	12.66	NP	8.69	0.0	3.97
	03/19/99	12.66	NP	8.00	0.0	4.66
	06/24/99	12.66	NP	8.45	0.0	4.21
	09/28/99	12.66	NP	8.73	0.0	3.93
	11/12/99	12.66	NP	8.83	0.0	3.83
	02/11/00	12.66	NP	7.71	0.0	4.95
	05/22/00	12.66	NP	8.09	0.0	4.57
	09/06/00	12.66	NP	8.32	0.0	4.34
	12/19/00	12.66	NP	8.47	0.0	4.19
	02/21/01	12.66	NP	7.51	0.0	5.15
	04/03/01	12.66	NP	8.13	0.0	4.53
	07/10/01	12.66	NP	8.12	0.0	4.54
	12/12/01	12.66	NP	7.65	0.0	5.01
	01/22/02	12.66	NP	7.60	0.0	5.06
	03/08/02	12.66	NP	7.96	0.0	4.70
	06/13/02	12.66	NP	8.20	0.0	4.46
	09/26/02	12.66	NP	8.21	0.0	4.45
	12/12/02	12.66	NP	8.38	0.0	4.28
	03/17/03	12.66	NP	7.72	0.0	4.94
	06/18/03	12.66	NP	8.02	0.0	4.64
	09/03/03	12.66	NP	8.29	0.0	4.37
	11/26/03	12.66	NP	8.69	0.0	3.97
	03/05/04	12.66	NP	7.45	0.0	5.21
	06/02/04	12.66	NP	8.25	0.0	4.41
	09/03/04	12.66	NP	8.31	0.0	4.35
	12/16/04	12.66	NP	7.96	0.0	4.70
	03/29/05	12.66	NP	7.11	0.0	5.55
	06/14/05	12.66	NP	7.90	0.0	4.76
	08/10/05	12.66	NP	7.86	0.0	4.80
	09/29/05	12.66	NP	8.00	0.0	4.66
	12/21/05	12.66	NP	7.30	0.0	5.36
	03/24/06	12.66	NP	7.05	0.0	5.61
	07/28/06	12.66	NP	7.92	0.0	4.74
	11/29/06	NA	NP	11.63	0.0	NA
	06/01/07	15.91	NP	11.82	0.0	4.09
	11/14/07	15.91	NP	11.88	0.0	4.03
	06/05/08	15.91	NP	11.67	0.0	4.24
	12/18/08	15.91	NP	11.20	0.0	4.71
	03/04/09	15.91	NP	10.93	0.0	4.98
	04/01/09	15.91	NP	11.63	0.0	4.28
	06/17/09	15.91	NP	11.88	0.0	4.03
	12/08/09	15.91	NP	12.03	0.0	3.88
	06/16/10	15.91	NP	11.75	0.0	4.16
	12/14/10	15.91	NP	11.62	0.0	4.29
	06/07/11	15.91	NP	11.80	0.0	4.11

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-4 (cont)	06/21/11	15.91	NP	11.42	0.0	4.49
	09/26/11	15.91	NP	11.83	0.0	4.08
	12/05/11	15.91	NP	12.03	0.0	3.88
MW-5						
	12/31/97	13.00	NP	6.38	0.0	6.62
	04/13/98	13.00	NP	5.56	0.0	7.44
	11/06/98	13.00	NP	6.59	0.0	6.41
	03/19/99	13.00	NP	6.20	0.0	6.80
	06/24/99	13.00	NP	6.73	0.0	6.27
	09/28/99	13.00	NP	6.91	0.0	6.09
	11/12/99	13.00	NP	7.06	0.0	5.94
	02/11/00	13.00	NP	7.00	0.0	6.00
	05/22/00	13.00	NP	6.21	0.0	6.79
	09/06/00	13.00	NP	6.56	0.0	6.44
	12/19/00	13.00	NP	6.68	0.0	6.32
	02/21/01	13.00	NP	6.08	0.0	6.92
	04/03/01	13.00	NP	6.38	0.0	6.62
	07/10/01	13.00	NP	6.58	0.0	6.42
	12/12/01	13.00	NP	6.40	0.0	6.60
	01/22/02	13.00	NP	6.10	0.0	6.90
	03/08/02	13.00	NP	6.10	0.0	6.90
	06/13/02	13.00	NP	6.31	0.0	6.69
	09/26/02	13.00	NP	6.60	0.0	6.40
	12/12/02	13.00	NP	6.75	0.0	6.25
	03/17/03	13.00	NP	5.73	0.0	7.27
	06/18/03	13.00	NP	6.10	0.0	6.90
	09/03/03	13.00	NP	6.50	0.0	6.50
	11/26/03	13.00	NP	6.70	0.0	6.30
	03/05/04	13.00	NP	5.70	0.0	7.30
	06/02/04	13.00	NP	6.27	0.0	6.73
	09/03/04	13.00	NP	6.61	0.0	6.39
	12/16/04	13.00	NP	6.02	0.0	6.98
	03/29/05	13.00	NP	5.25	0.0	7.75
	06/14/05	13.00	NP	5.82	0.0	7.18
	08/10/05	13.00	NP	6.00	0.0	7.00
	09/29/05	13.00	NP	6.26	0.0	6.74
	12/21/05	13.00	NP	5.91	0.0	7.09
	03/24/06	13.00	NP	NA[2]	NA[2]	NA
	07/28/06	13.00	NP	6.08	0.0	6.92
	11/29/06	NA	NP	9.39	0.0	NA
	06/01/07	15.39	NP	10.60	0.0	4.79
	11/14/07	15.39	NP	9.77	0.0	5.62
	06/05/08	15.39	NP	9.74	0.0	5.65
	12/18/08	15.39	NP	9.80	0.0	5.59
	03/04/09	15.39	NP	8.78	0.0	6.61
	04/01/09	15.39	NP	9.16	0.0	6.23
	06/17/09	15.39	NP	9.51	0.0	5.88
	12/08/09	15.39	NP	9.52	0.0	5.87
	06/16/10	15.39	NP	9.31	0.0	6.08
	12/14/10	15.39	NP	9.31	0.0	6.08
	06/07/11	15.39	NP	9.06	0.0	6.33
	06/21/11	15.39	NP	9.06	0.0	6.33
	09/26/11	15.39	NP	9.30	0.0	6.09
	12/05/11	15.39	NP	9.31	0.0	6.08

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-6						
	06/24/99	13.51	NP	8.61	0.0	4.90
	09/28/99	13.51	NP	9.26	0.0	4.25
	11/12/99	13.51	NP	8.01	0.0	5.50
	02/11/00	13.51	NP	7.20	0.0	6.31
	05/22/00	13.51	NP	7.13	0.0	6.38
	09/06/00	13.51	NP	7.12	0.0	6.39
	12/19/00	13.51	NP	7.57	0.0	5.94
	02/21/01	13.51	NP	7.50	0.0	6.01
	04/03/01	13.51	NP	6.88	0.0	6.63
	07/10/01	13.51	NP	7.15	0.0	6.36
	12/12/01	13.51	NP	9.50	0.0	4.01
	01/22/02	13.51	NP	6.69	0.0	6.82
	03/08/02	13.51	NP	6.98	0.0	6.53
	06/13/02	13.51	NP	7.45	0.0	6.06
	09/26/02	13.51	NP	7.95	0.0	5.56
	12/12/02	13.51	NP	7.71	0.0	5.80
	12/18/02	Monitoring well was destroyed				
MW-7						
	12/31/97	13.86	NP	8.88	0.0	4.98
	04/13/98	13.86	NP	7.86	0.0	6.00
	11/06/98	13.86	NP	9.55	0.0	4.31
	03/19/99	13.86	NP	8.41	0.0	5.45
	06/24/99	13.86	NP	9.08	0.0	4.78
	09/28/99	13.86	NP	9.60	0.0	4.26
	11/12/99	13.86	NP	9.77	0.0	4.09
	02/11/00	13.86	NP	8.67	0.0	5.19
	05/22/00	13.86	NP	8.43	0.0	5.43
	09/06/00	13.86	NP	8.88	0.0	4.98
	12/19/00	13.86	NP	9.21	0.0	4.65
	02/21/01	13.86	NP	8.13	0.0	5.73
	04/03/01	13.86	NP	8.45	0.0	5.41
	07/10/01	13.86	NP	8.87	0.0	4.99
	12/12/01	13.86	NP	8.39	0.0	5.47
	01/22/02	13.86	NP	7.99	0.0	5.87
	03/08/02	13.86	NP	8.51	0.0	5.35
	06/13/02	13.86	NP	8.90	0.0	4.96
	09/26/02	13.86	NP	9.00	0.0	4.86
	12/12/02	13.86	NP	9.28	0.0	4.58
	12/18/02	Monitoring well was destroyed				
MW-8 [3]						
	12/31/97	12.45	8.49	8.82	0.33	NC
	11/06/98	12.45	9.25	10.30	1.05	NC
	11/21/98	Monitoring well was destroyed and replaced with well MW-8A				

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

Monitoring Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-8A						
	12/12/01	12.45	NP	7.20	0.0	NA
	01/22/02	12.45	NP	7.20	0.0	5.25
	03/08/02	12.45	NP	7.70	0.0	4.75
	06/13/02	12.45	NP	7.72	0.0	4.73
	09/26/02	12.45	NP	7.91	0.0	4.54
	12/12/02	12.45	NP	8.15	0.0	4.30
	03/17/03	12.45	NP	7.28	0.0	5.17
	06/18/03	12.45	NP	7.72	0.0	4.73
	09/03/03	12.45	NP	8.18	0.0	4.27
	11/26/03	12.45	NP	8.55	0.0	3.90
	03/05/04	12.45	NP	6.92	0.0	5.53
	06/02/04	12.45	NP	7.92	0.0	4.53
	09/03/04	12.45	NP	8.16	0.0	4.29
	12/16/04	12.45	NP	7.62	0.0	4.83
	03/29/05	12.45	NP	6.63	0.0	5.82
	06/14/05	12.45	NP	7.60	0.0	4.85
	08/10/05	12.45	NP	7.50	0.0	4.95
	09/29/05	12.45	NP	7.76	0.0	4.69
	12/21/05	12.45	NP	6.90	0.0	5.55
	03/24/06	12.45	NP	6.65	0.0	5.80
	07/28/06	12.45	NP	7.34	0.0	5.11
	11/29/06	NA	NP	11.41	0.0	NA
	06/01/07	14.99	NP	11.26	0.0	3.73
	11/14/07	14.99	NP	11.40	0.0	3.59
	06/05/08	14.99	NP	11.45	0.0	3.54
	12/18/08	14.99	NP	11.30	0.0	3.69
	03/04/09	14.99	NP	10.07	0.0	4.92
	04/01/09	14.99	NP	10.92	0.0	4.07
	06/17/09	14.99	NP	11.40	0.0	3.59
	12/08/09	14.99	NP	11.64	0.0	3.35
	06/16/10	14.99	NP	11.75	0.0	3.24
	12/14/10	14.99	NP	10.75	0.0	4.24
	06/07/11	14.99	NP	10.51	0.0	4.48
	06/21/11	14.99	NP	10.64	0.0	4.35
	09/26/11	14.99	NP	11.21	0.0	3.78
	12/05/11	14.99	NP	11.29	0.0	3.70
MW-9						
	12/18/08	16.33	NP	12.88	0.0	3.45
	03/04/09	16.33	NP	11.04	0.0	5.29
	04/01/09	16.33	NP	11.51	0.0	4.82
	06/17/09	16.33	NP	11.95	0.0	4.38
	12/08/09	16.33	NP	12.30	0.0	4.03
	06/16/10	16.33	NP	11.75	0.0	4.58
	12/14/10	16.33	NP	11.51	0.0	4.82
	06/07/11	16.33	NP	11.32	0.0	5.01
	06/21/11	16.33	NP	11.37	0.0	4.96
	09/26/11	16.33	NP	11.92	0.0	4.41
	12/05/11	16.33	NP	11.99	0.0	4.34

TABLE 1. Historical Groundwater Elevation and Free Product Data
Port of Oakland's Harbor Facilities Complex Site
555 - 651 Maritime Street, Oakland, California

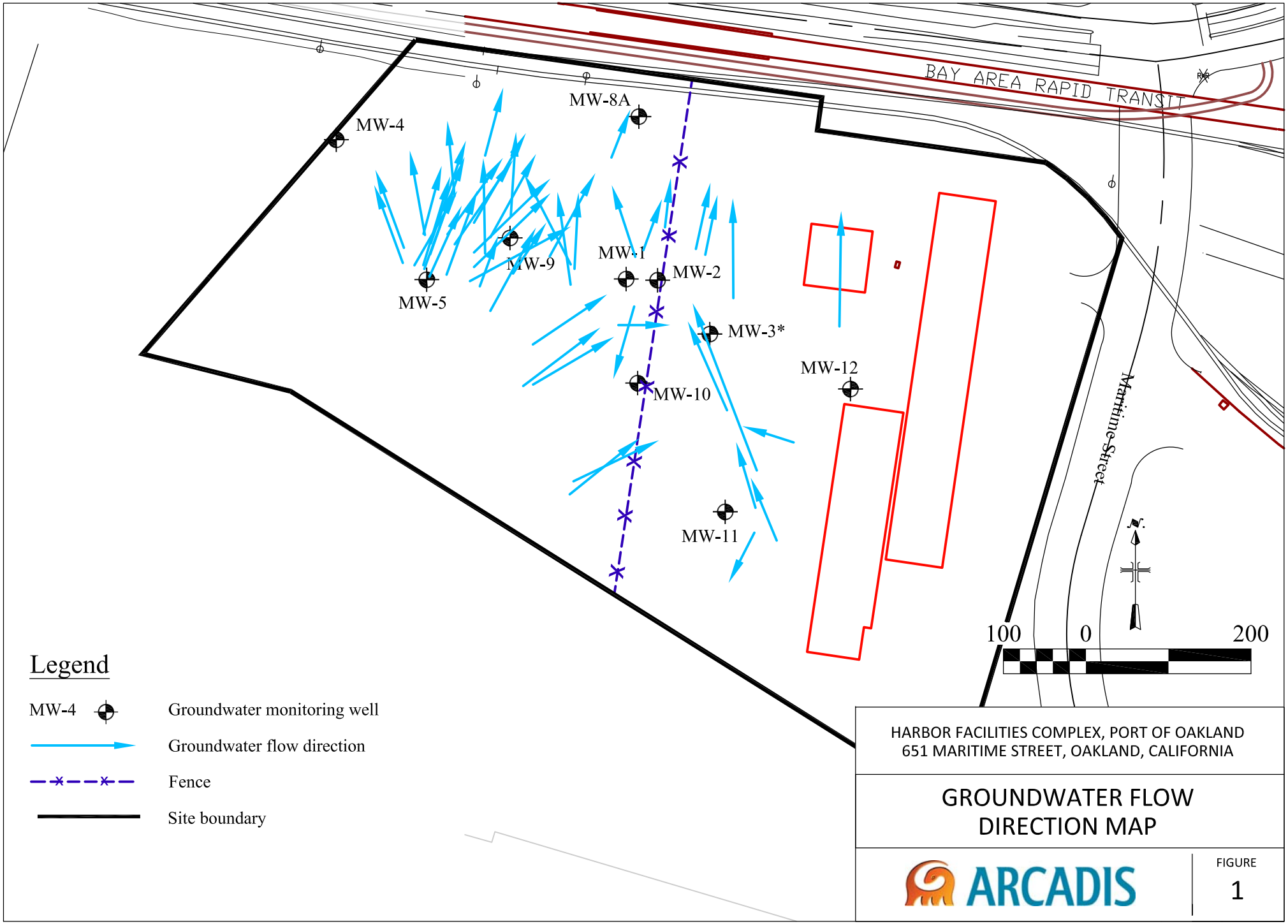
Monitoring Well	Date Measured	Elevation [1] Top of Casing (feet)	Depth to Product (feet btc)	Depth to Water (feet btc)	Product Thickness (feet)	Groundwater Elevation [1] (feet)
MW-10						
	12/18/08	15.65	NP	14.34	0.0	1.31
	03/04/09	15.65	NP	9.78	0.0	5.87
	04/01/09	15.65	NP	10.33	0.0	5.32
	06/17/09	15.65	NP	10.79	0.0	4.86
	12/08/09	15.65	NP	10.96	0.0	4.69
	06/16/10	15.65	NP	10.62	0.0	5.03
	12/14/10	15.65	NP	10.31	0.0	5.34
	06/07/11	15.65	NP	10.11	0.0	5.54
	06/21/11	15.65	NP	10.19	0.0	5.46
	09/26/11	15.65	NP	10.79	0.0	4.86
	12/05/11	15.65	NP	10.80	0.0	4.85
MW-11						
	12/18/08	15.47	NP	13.42	0.0	2.05
	03/04/09	15.47	NP	9.57	0.0	5.90
	04/01/09	15.47	NP	9.94	0.0	5.53
	06/17/09	15.47	NP	10.40	0.0	5.07
	12/09/09	15.47	NP	10.68	0.0	4.79
	06/16/10	15.47	NP	10.02	0.0	5.45
	12/01/10	15.47	NP	10.02	0.0	5.45
	06/07/11	15.47	NP	10.00	0.0	5.47
	06/21/11	15.47	NP	9.85	0.0	5.62
	09/26/11	15.47	NP	10.33	0.0	5.14
	12/05/11	15.47	NP	10.59	0.0	4.88
MW-12						
	12/18/08	16.79	NP	12.75	0.0	4.04
	03/04/09	16.79	NP	10.60	0.0	6.19
	04/01/09	16.79	NP	11.23	0.0	5.56
	6/17/2009	16.79	NP	11.83	0.0	4.96
	12/8/2009	16.79	NP	12.13	0.0	4.66
	6/16/2010	16.79	NP	11.31	0.0	5.48
	12/14/2010	16.79	NP	11.15	0.0	5.64
	6/7/2011	16.79	NP	10.81	0.0	5.98
	6/21/2011	16.79	NP	11.01	0.0	5.78
	9/26/2011	16.79	NP	11.77	0.0	5.02
	12/5/2011	16.79	NP	11.89	0.0	4.90

Notes:
Source of data prior to December 2005: Innovative Technical Solutions, Inc. *Third Quarter of 2005 Groundwter Monitoring and Product Monitoring Report* , 8 November 2005.
NP = no product detected with the interface probe
NC = not calculated due to the presence of free-phase product in the well
btc = below top of the well casing
NA = not available
NM = not measured
-- = no measurable product.

[1] Wells were resurveyed on January 24, 2009. Elevation data is relative to North American Vertical Datum of 1988 (NAVD 88).
[2] Well could not be measured due to abundant surface water covering well head.
[3] Viscous product not related to the lighter product identified in other wells.
[4] Product not measureable, but visible evidence of product on interface probe

Attachment 9

Historical groundwater flow direction figure



User:Orsi Spec:PIRNIE STANDARD File:G:\Projects\Projects\4656\016\acad\GW Flow Map.DWG

Attachment 10

Historical soil gas analytical results

TABLE 4: SOIL GAS CHEMICAL TEST RESULTS - Fixed Gases and Total Petroleum Hydrocarbons
Phase II Environmental Site Assessment
Future Port Field Support Services Complex
Port of Oakland
Oakland, California

LOCATION		MFC-01	MFC-03	MFC-05	MFC-07	MFC-10	MFC-13	MFC-14	MFC-15
MATRIX		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
COLLECTION DATE		3/27/02	3/27/02	3/27/02	3/27/02	3/27/02	3/27/02	3/27/02	3/27/02
DEPTH [1]		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	UNITS								
Carbon Dioxide	% v	**8.2**	**8.4**	**11**	**7.3**	**6.4**	**10**	**10**	**6.0**
Oxygen	% v	**2.5**	**4.1**	**6.0**	**11**	**8.4**	**1.3**	**0.91**	**9.4**
Nitrogen	% v	**92**	**89**	**82**	**83**	**88**	**85**	**65**	**63**
Methane	% v	**0.21**	**0.065**	**0.00070**	**0.00096**	<0.00044	**6.1**	**24**	**22**
Carbon Monoxide	% v	<0.0027	<0.0022	<0.0020	<0.0019	<0.0022	<0.0024	<0.0021	<0.0017
Gasoline	ppmv	**45**	<2.2	<2.0	<1.9	<2.2	**330**	**1,000**	**630**

Notes:
(1) Soil Gas samples collected at an average depth of 4.0 feet below ground surface (bgs).

Samples collected in Summa Canisters.

% v = percent by volume (1% = 10,000 ppmv)

ppmv = parts per million by volume

Samples were analyzed for Petroleum Hydrocarbons in the gasoline range by EPA Method 19 TO-3 and for carbon dioxide, oxygen, nitrogen, methane, and carbon monoxide by ASTM D1946.

TABLE 4: SOIL GAS CHEMICAL TEST RESULTS - Fixed Gases and Total Petroleum Hydrocarbons
Phase II Environmental Site Assessment
Future Port Field Support Services Complex
Port of Oakland
Oakland, California

LOCATION		MFC-16	MFC-17	MFC-18	MFC-19	MFC-23	MFC-28	MFC-29	MFC-31
MATRIX		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
COLLECTION DATE		3/26/02	3/26/02	3/26/02	3/26/02	3/28/02	3/28/02	3/28/02	3/25/02
DEPTH [1]		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	UNITS								
Carbon Dioxide	% v	**6.3**	**7.7**	**17**	**13**	**0.039**	**1.6**	**0.87**	**2.1**
Oxygen	% v	**6.5**	**0.89**	**0.35**	**2.1**	**22**	**3.0**	**3.3**	**12**
Nitrogen	% v	**50**	**15**	**19**	**17**	**80**	**39**	**17**	**55**
Methane	% v	**37**	**76**	**64**	**68**	**0.0013**	**56**	**78**	**38**
Carbon Monoxide	% v	<0.0030	<0.0022	<0.0020	<0.0021	<0.0027	<0.0021	<0.0029	<0.0043
Gasoline	ppmv	**28,000**	**340**	**910**	**810**	<2.7	**13**	**78**	**290**

Notes:
(1) Soil Gas samples collected at an average depth of 4.0 feet below ground surface (bgs).

Samples collected in Summa Canisters.

% v = percent by volume (1% = 10,000 ppmv)

ppmv = parts per million by volume

Samples were analyzed for Petroleum Hydrocarbons in the gasoline range by EPA Method 19 TO-3 and for carbon dioxide, oxygen, nitrogen, methane, and carbon monoxide by ASTM D1946.

TABLE 4: SOIL GAS CHEMICAL TEST RESULTS - Fixed Gases and Total Petroleum Hydrocarbons
Phase II Environmental Site Assessment
Future Port Field Support Services Complex
Port of Oakland
Oakland, California

LOCATION		MFC-33	MFC-35	MFC-36	MFC-37	MFC-38	MFC-41	MFC-45
MATRIX		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
COLLECTION DATE		3/25/02	3/25/02	3/28/02	3/25/02	3/28/02	3/28/02	3/28/02
DEPTH [1]		4.0	4.0	4.0	4.0	4.0	4.0	4.0
	UNITS							
Carbon Dioxide	% v	**1.8**	**3.8**	**8.0**	**7.1**	**0.083**	**2.7**	**0.19**
Oxygen	% v	**18**	**16**	**1.5**	**10**	**22**	**19**	**20**
Nitrogen	% v	**69**	**65**	**91**	**70**	**80**	**81**	**84**
Methane	% v	**17**	**19**	**1.9**	**18**	**0.17**	<0.00042	**0.077**
Carbon Monoxide	% v	<0.0025	<0.0020	<0.0019	<0.0028	<0.0018	<0.0021	<0.0034
Gasoline	ppmv	**140**	**170**	**85**	**140**	<1.8	<2.1	**6.9**

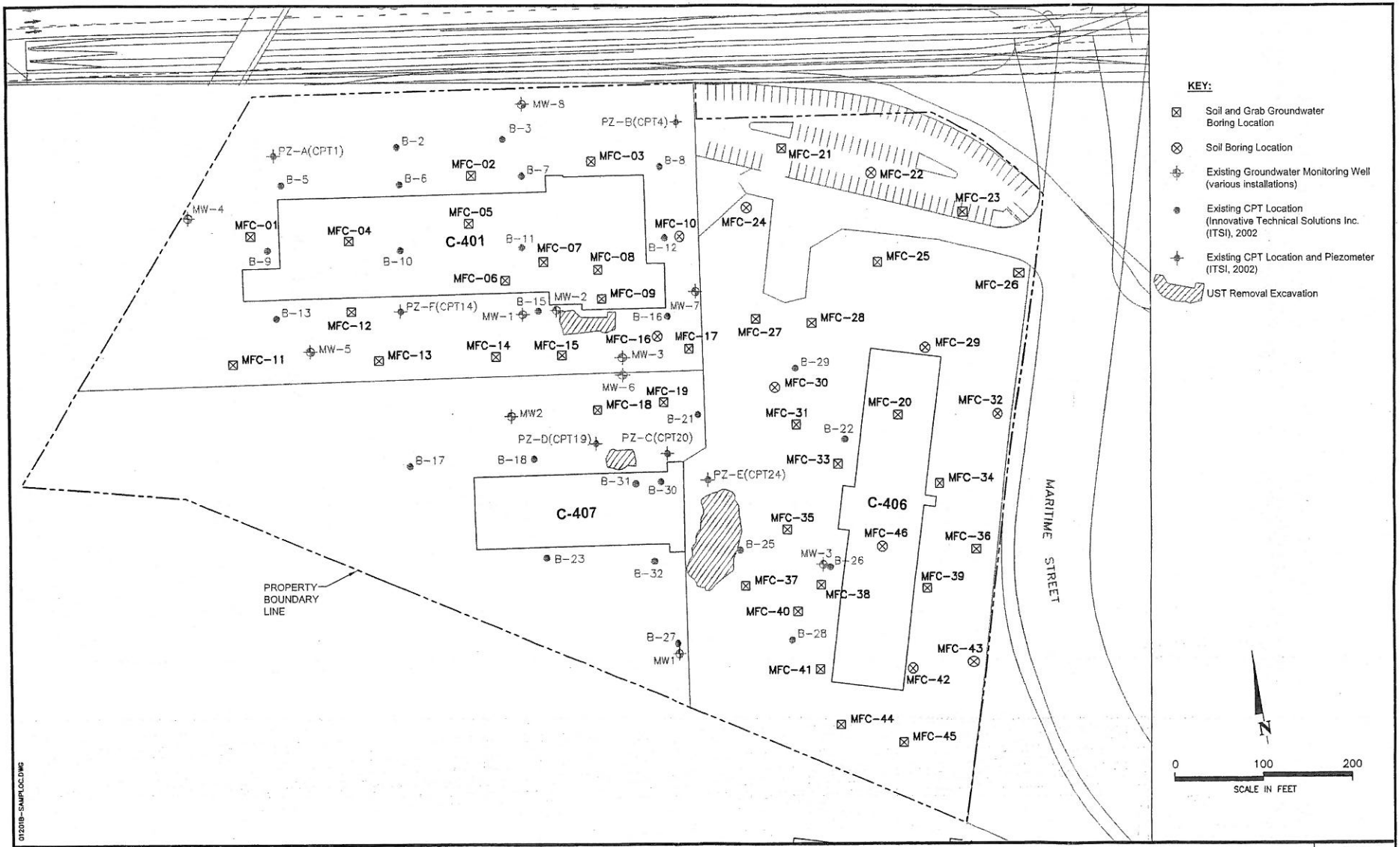
Notes:
(1) Soil Gas samples collected at an average depth of 4.0 feet below ground surface (bgs).

Samples collected in Summa Canisters.

% v = percent by volume (1% = 10,000 ppmv)

ppmv = parts per million by volume

Samples were analyzed for Petroleum Hydrocarbons in the gasoline range by EPA Method 19 TO-3 and for carbon dioxide, oxygen, nitrogen, methane, and carbon monoxide by ASTM D1946.



IRIS ENVIRONMENTAL
1615 Broadway, Suite 1003, Oakland, California 94612

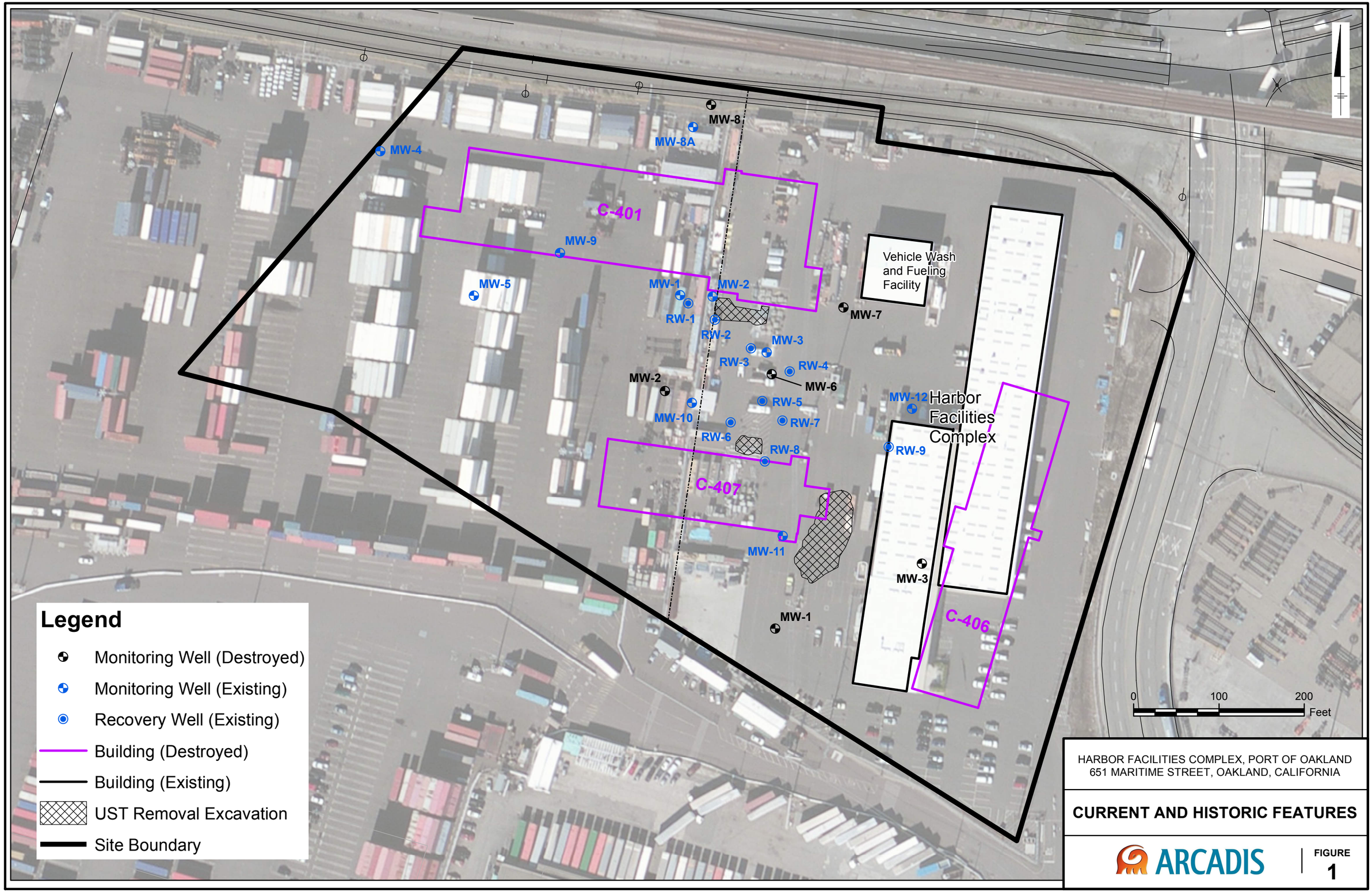
Sampling Locations and Site Layout
Port of Oakland Future Port Field Support Services Complex
2225 and 2277 7th Street
Oakland, California

Figure
2

Drafter: MAS | Date: 4/3/02 | Contract Number: 01-20IB | Approved: | Revised:

Attachment 11

Aerial figure with current and historical site features



CITY: DIV/GROUP: DB: LD: PIC: PM: TM: TR:
Project (Project #)

HARBOR FACILITIES COMPLEX, PORT OF OAKLAND
651 MARITIME STREET, OAKLAND, CALIFORNIA

CURRENT AND HISTORIC FEATURES

ARCADIS

FIGURE
1