

Wickham, Jerry, Env. Health

To: hpietropaoli@stellar-environmental.com
Cc: Richard Makdisi
Subject: RE: Redwood Service Yard

Henry and Richard,
Based upon your request, the schedule for submittal of a work plan for case RO0246 is extended to February 11, 2008.

Have a good holiday,
Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
510-567-6791 phone
510-337-9335 fax
jerry.wickham@acgov.org

From: Henry Pietropaoli [mailto:hpietropaoli@stellar-environmental.com]
Sent: Friday, December 21, 2007 9:14 AM
To: Wickham, Jerry, Env. Health
Cc: Richard Makdisi
Subject: Redwood Service Yard

Dear Jerry,

As per our phone conversation today with Richard Makdisi, we are requesting an additional month to design a pilot test work plan for the remedial activity at the Redwood Regional Park site (ACEHS Fuel Leak Site No. RO0000246).

Thanks and Happy Holidays,

HENRY PIETROPAOLI, P.G., R.E.A.
STELLAR ENVIRONMENTAL SOLUTIONS, INC.
2198 Sixth Street, Suite 201
Berkeley, CA 94710
Wk Phone: 510-644-3123
Fax: 510-644-3859
Cell: 510-926-9416
hpietropaoli@stellar-environmental.com
www.stellar-environmental.com

12/21/2007

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

F

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

October 11, 2007

Mr. Neal Fujita
East Bay Regional Park District
2950 Peralta Oaks Ct.
Oakland, CA 94605

Subject: Fuel Leak Case No. RO0000246, and Geotracker Global ID T0600100489, Redwood Regional Park, 7867 Redwood Road, Oakland, CA 94619

Dear Mr. Fujita:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above referenced site including the recently submitted documents entitled, "Third Quarter 2007 Site Monitoring Report," dated October 9, 2007 and "Q1/Q2 Bioventing Status Report," dated July 9, 2007. Stellar Environmental Solutions, Inc. prepared both reports on behalf of East Bay Regional Park District.

A bioventing system, which consists of three vent wells, four vapor monitoring points, an airblower, distribution piping, and air flow valves and other appurtenances, was installed at the site in December 2005 and January 2006. In correspondence dated May 25, 2005, ACEH concurred with the installation of a full-scale bioventing system but noted that site conditions may limit the potential to provide air flow to some zones of residual contamination. We also noted that implementation of an additional technology may be necessary if bioventing is not effective in reducing TPH concentrations in groundwater within the central portion of the plume.

Groundwater monitoring data collected since system installation indicate that the fuel hydrocarbon plume is not decreasing in size. Discharges of fuel hydrocarbons to Redwood Creek continue to occur. As discussed in technical comment 4 below, air flow through the bioventing wells is limited. Bioventing does not appear to be reducing petroleum hydrocarbon contamination at a measurable rate. In order to accelerate remediation to more acceptable rates, we request that you evaluate an additional remedial technology for the site. Therefore, we request that you propose a pilot test to evaluate one or more additional remedial technologies. Please submit a Pilot Test Work Plan **by January 11, 2008** to address the technical comments below.

TECHNICAL COMMENTS

1. **Plume Stability.** We concur with the conclusion in the QMR that the plume is neither stable nor reducing as groundwater concentrations fluctuate seasonally. Although bioventing has been conducted for approximately 21 months, no effects have been observed in groundwater monitoring data collected in the central portion of the plume.

2. **Ongoing Discharges to Redwood Creek.** Evidence of discharges of fuel hydrocarbons to Redwood Creek continues to be observed in the creek bank below the former USTs. In addition, TPH is intermittently detected in surface water samples from the creek in the area of the discharge. The rate of cleanup needs to be increased to minimize and stop discharges to the creek.
3. **Source Area Remediation.** In our May 24, 2005 correspondence, we requested that the proposed bioventing system be expanded to treat soil in the area of the former UST. We requested that an additional vent well and additional vapor monitoring point be located within area of the former UST excavation to address residual soil contamination beneath the area of the former gasoline and diesel USTs. We requested that the vent well be screened to provide air flow to soil between the base of the former excavation and the lower extent of groundwater fluctuation. However, based on arguments that the contaminant mass had migrated from the area of the former USTs to the central portion of the plume, the bioventing system was not expanded to treat soil in the area of the former USTs. We continue to question whether remediation is required in the source area. The concentration of TPH as gasoline detected in groundwater from well MW-2 increased from 59 micrograms per liter ($\mu\text{g/L}$) in March 2007 to 2,600 $\mu\text{g/L}$ in September 2007. The highest concentration of TPH as gasoline previously detected in groundwater from MW-2 during the period from March 2002 to September 2007 was 1,200 $\mu\text{g/L}$. Well MW-2 is directly downgradient from the former USTs. Therefore, it appears that petroleum hydrocarbons are entering groundwater in the area of the former USTs.
4. **Remedial System Performance.** Since installation of the bioventing system in December 2005 and January 2006, there has been limited air flow through the venting wells, primarily due to partial or complete submergence of the screen intervals. Air flow appears to occur throughout the year through injection well VW-1 although flow may be reduced because the well screen is partially submerged throughout the seasons. Air flow only occurs through well VW-2 during the dry season when the top of the screen interval is exposed. No air flow has been observed through well VW-3 although the well is only partially submerged. Due to these restrictions in air flow, the area and volume of contaminants treated by the system appears to be limited.
5. **Additional Remedial Technology.** We request that you evaluate data collected to date on site conditions, contaminant distribution, bioventing system operation, and other pertinent data to propose a pilot test to evaluate an additional remedial technology. In the Pilot Test Work Plan requested below, please present a limited screening of applicable technologies as well as sufficient information necessary to support your selection of a remedial technology for the pilot test.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **January 11, 2008** – Pilot Test Work Plan

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to

Mr. Neal Fujita
RO0000246
October 11, 2007
Page 4

present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

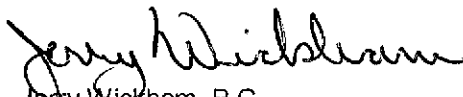
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791 or contact me my electronic mail at jerry.wickham@acgov.org.

Sincerely,



Jerry Wickham, P.G.
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Richard Makdisi
Stellar Environmental Solutions, Inc.
2198 Sixth Street, Suite 201
Berkeley, CA 94710

Carl Wilcox
California Department of Fish and Game
P.O. Box 47
Yountville, CA 94500

Donna Drogos, ACEH
Jerry Wickham, ACEH
File



2198 SIXTH STREET, SUITE 201-BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

July 7, 2006

Mr. Jerry Wickham
Alameda County Health Care Services Agency
Department of Environmental Health – Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Alameda County
JUL 11 2006
Environmental Health

Subject: Change in SES Project Management

Dear Barney:

I am writing to inform you that I will be leaving the employment of Stellar Environmental Solutions, Inc. (SES) effective Friday July 7, 2006. I have enjoyed a positive 8 years here, and am taking another position in the environmental field with a different focus. It has been a pleasure working with you on our past and current projects. The four current projects under your oversight include the following:

1001 77th Avenue, Oakland
Alameda County Health Case No. RO2905
GeoTracker Global ID SL0600129548

7867 Redwood Road, Oakland
Alameda County Health Case No. RO246
GeoTracker Global ID T0600100489

240 W. Macarthur Boulevard, Oakland
Alameda County Health Case No. RO142
GeoTracker Global ID T0600102243

2836 Union Street, Oakland
Alameda County Health Case No. RO2901
GeoTracker Global ID T0600105641

SES is in the process of assigning new project managers for those projects. During this transition period, please direct future inquiries to the SES Principal – Richard Makdisi – who is fully up to speed on the cases.

Sincerely,

Bruce Rucker, R.G. R.E.A.
Project Manager

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



7

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

March 15, 2006

Mr. Neal Fujita
East Bay Regional Park District
2950 Peralta Oaks Ct.
Oakland, CA 94605

Subject: Fuel Leak Case N [REDACTED] Redwood Regional Park, 7867 Redwood Road,
Oakland, CA

Dear Mr. Fujita:

Alameda County Environmental Health (ACEH) has reviewed the case file for the above-referenced site and the document entitled "Bioventing System Installation and Startup Report," dated February 21, 2006. The report discusses the installation and startup of a bioventing system at the site. Due to high water levels and/or filter pack saturation, the bioventing system currently has limited effectiveness since air injection is minimally occurring only at VW-1. The report concludes that air injection rates and response at the vapor monitoring reports should improve when water levels fall. The report recommends continued monthly operation and maintenance of the bioventing system, and conducting an in-situ respiration (ISR) test. We request that you address the technical comments below, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

- 1. Monthly Operation and Maintenance of Bioventing System.** ACEH concurs with the conducting monthly operation and maintenance of the bioventing system, including air flow optimization when water level changes or air injection rates warrant. The results of the monthly operation and maintenance are to be presented in the quarterly and annual reports requested below.
- 2. Conducting an ISR Test.** An ISR test, including estimates of air permeability and radius of influence, is to be conducted when water levels drop sufficiently to evaluate the effectiveness of the system. Please present the results of the ISR test in the Quarterly Monitoring Report and Bioventing Status Report for the Second or Third Quarter requested below, depending upon when the ISR test is conducted.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Jerry Wickham), according to the following schedule:

- **May 15, 2006** – Quarterly Monitoring Report and Bioventing Status Report for First Quarter 2006
- **August 15, 2006** – Quarterly Monitoring Report and Bioventing Status Report for Second Quarter 2006
- **November 15, 2006** – Quarterly Monitoring Report and Bioventing Status Report for Third Quarter 2006
- **February 15, 2007** – Annual Summary Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at jerry.wickham@acgov.org.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover

Mr. Neal Fujita
March 15, 2006
Page 3

letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

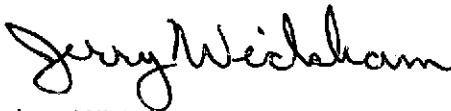
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

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

Sincerely,



Jerry Wickham
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Bruce Rucker
Stellar Environmental Solutions, Inc.
2198 Sixth Street, Suite 201
Berkeley, CA 94710

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

RC 246

EAST BAY REGIONAL



PARK DISTRICT

August 5, 2005

Mr. Jerry Wickham
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Fuel Leak Case No. RO0000246, Redwood Regional Park, 7887 Redwood Road, Oakland, CA

Dear Mr. Wickham,

In correspondence dated June 24, 2005, you agreed that in order to proceed with remediation, the proposed full-scale bioventing design as outlined in the October 2004 "Bioventing Pilot Test Results Report" should be implemented as an interim remedial measure. As a result, East Bay Regional Park District (EBRPD) is preparing a bid package that will include the following scope of work (please refer to attached Drawing No. 2 for additional detail):

1. Install one Groundwater Monitoring Well (MW-12) and decommission one existing Groundwater Monitoring Well (MW-4).
2. Install two Vent Wells (VW-2, VW-3) and one Vapor Monitoring Point (VMP-4).
3. Install system equipment including: Air Distribution Piping (with supplemental piping and stub outs if system expansion is necessary), System Blower (with supplemental shed and instrumentation).
4. System startup and testing.
5. System operation, maintenance, testing, annual system check, In-Situ Respiration test and appropriate reporting (for 12 months subsequent to system installation).

EBRPD really appreciates your input, advice and expertise in the development of this portion of the remediation project. EBRPD thanks you for your high level of support, cooperation and understanding.

We will keep you updated as this process moves forward. Please call me anytime at (510) 649-3313 should you have any questions, comments or directives.

Sincerely,

Neal Fujita
Water Resources Manager

Alameda County
AUG 11 2005
Environmental Health

BOARD OF DIRECTORS

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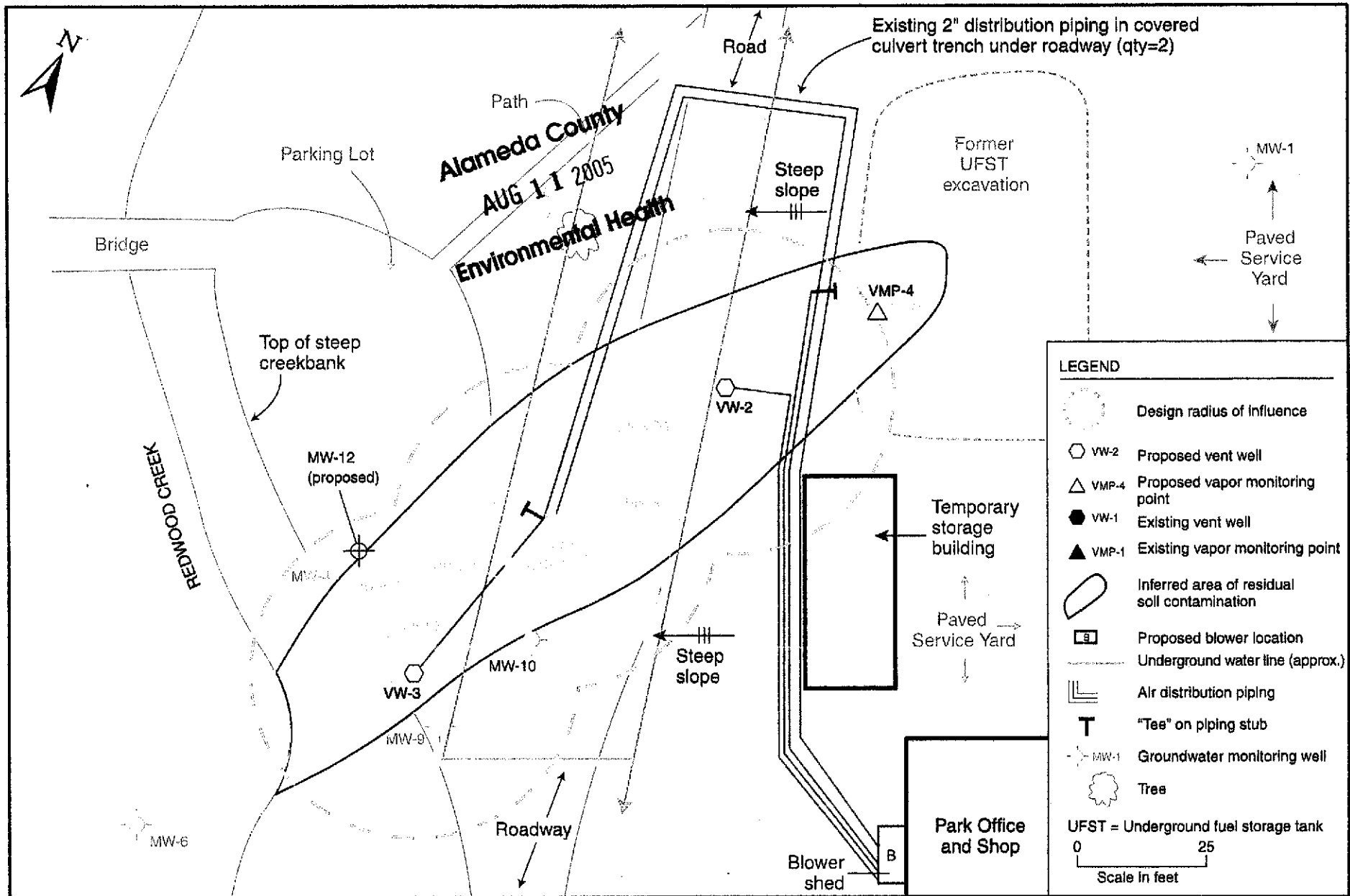
Ted Radke
Ward 7

Doug Siden
Ward 4

Jean Siri
Ward 1

Pat O'Brien
General Manager





SHEET TITLE PROPOSED FULL-SCALE BIOVENTING SYSTEM DESIGN

PROJ NAME Redwood Regional Park Bioventing System

PROJ ADDRESS 7867 Redwood Rd, Oakland, CA

SCALE AS SHOWN

DATE 7/15/05

DRAWING NO.

2

SHEET NO.

1 OF 1

EAST BAY REGIONAL PARK DISTRICT

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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

June 24, 2005

Mr. Neil Fujita
East Bay Regional Park District
2950 Peralta Oaks Ct.
Oakland, CA 94605

Subject: Fuel Leak Case No. [REDACTED]; Redwood Regional Park, 7867 Redwood Road,
Oakland, CA

Dear Mr. Fujita:

In correspondence dated May 25, 2005, Alameda County Environmental Health (ACEH) staff provided technical comments on the proposed full-scale bioventing design for the above referenced fuel leak site. Those technical comments requested an additional vent well and vapor monitoring point within the area of the former USTs and an additional vent well and vapor monitoring point north of well MW-4. Based on our discussions on June 17, 2005, it appears that implementation of the requested two additional vent wells and monitoring points would result in a delay to the project. In order to proceed with remediation, ACEH agrees that the proposed full-scale bioventing system design consisting of three bioventing wells and three vapor monitoring points (as outlined in the October 2004 "Bioventing Pilot Test Results Report") should be implemented as an interim remedial measure. The performance of the system is to be reviewed as data become available and the system is to be augmented in the future with additional vent wells and vapor monitoring points as necessary. The remaining comments and requirements provided in the ACEH May 25, 2005 correspondence still apply.

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

Sincerely,

Jerry Wickham, P.G.
Hazardous Materials Specialist

cc: Mr. Bruce Rucker
Stellar Environmental Solutions, Inc.
2198 Sixth Street, Suite 201
Berkeley, CA 94710

Mr. Carl Wilcox
California Department of Fish and Game
P.O. Box 47
Yountville, CA 94500

Donna Drogos
Jerry Wickham

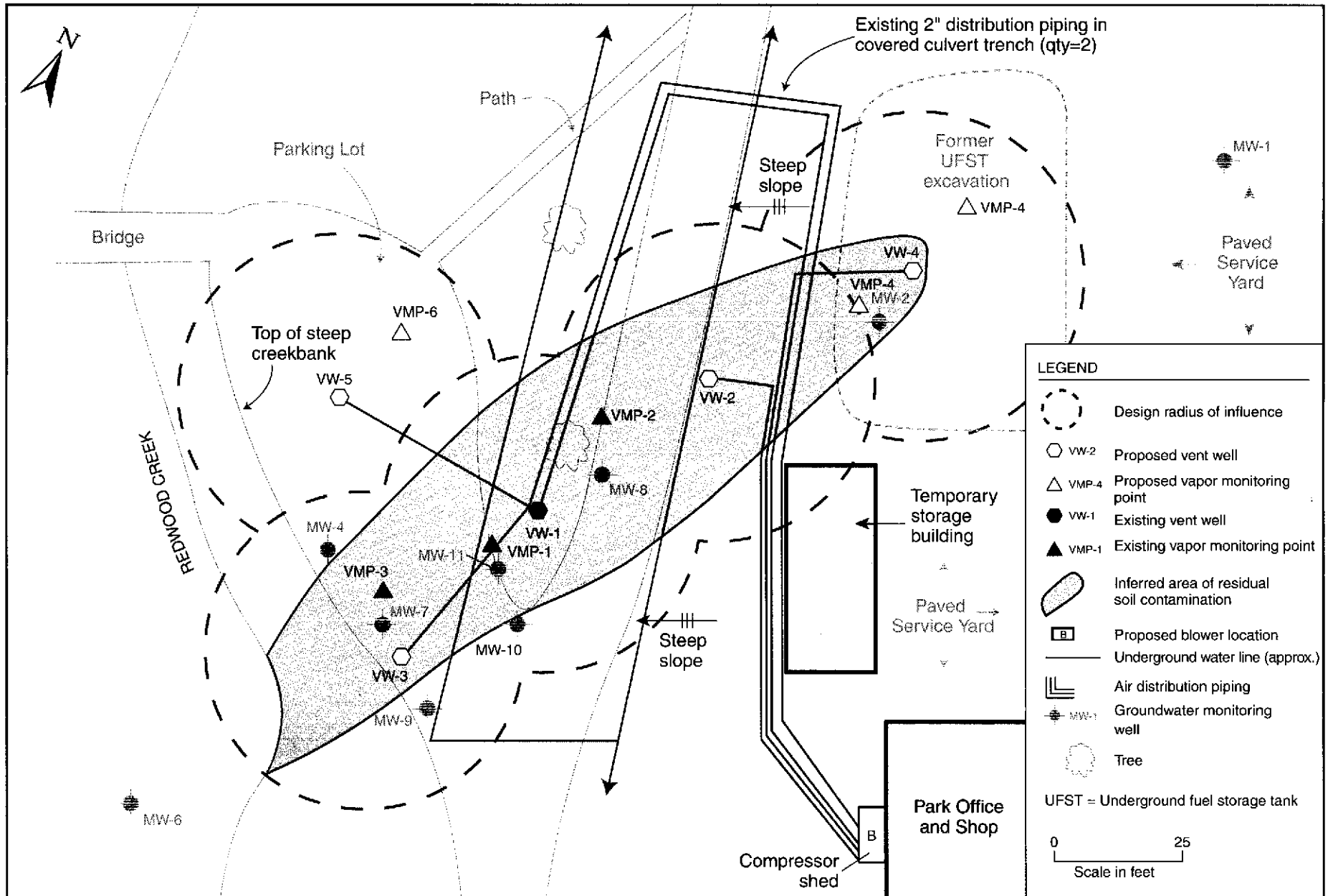
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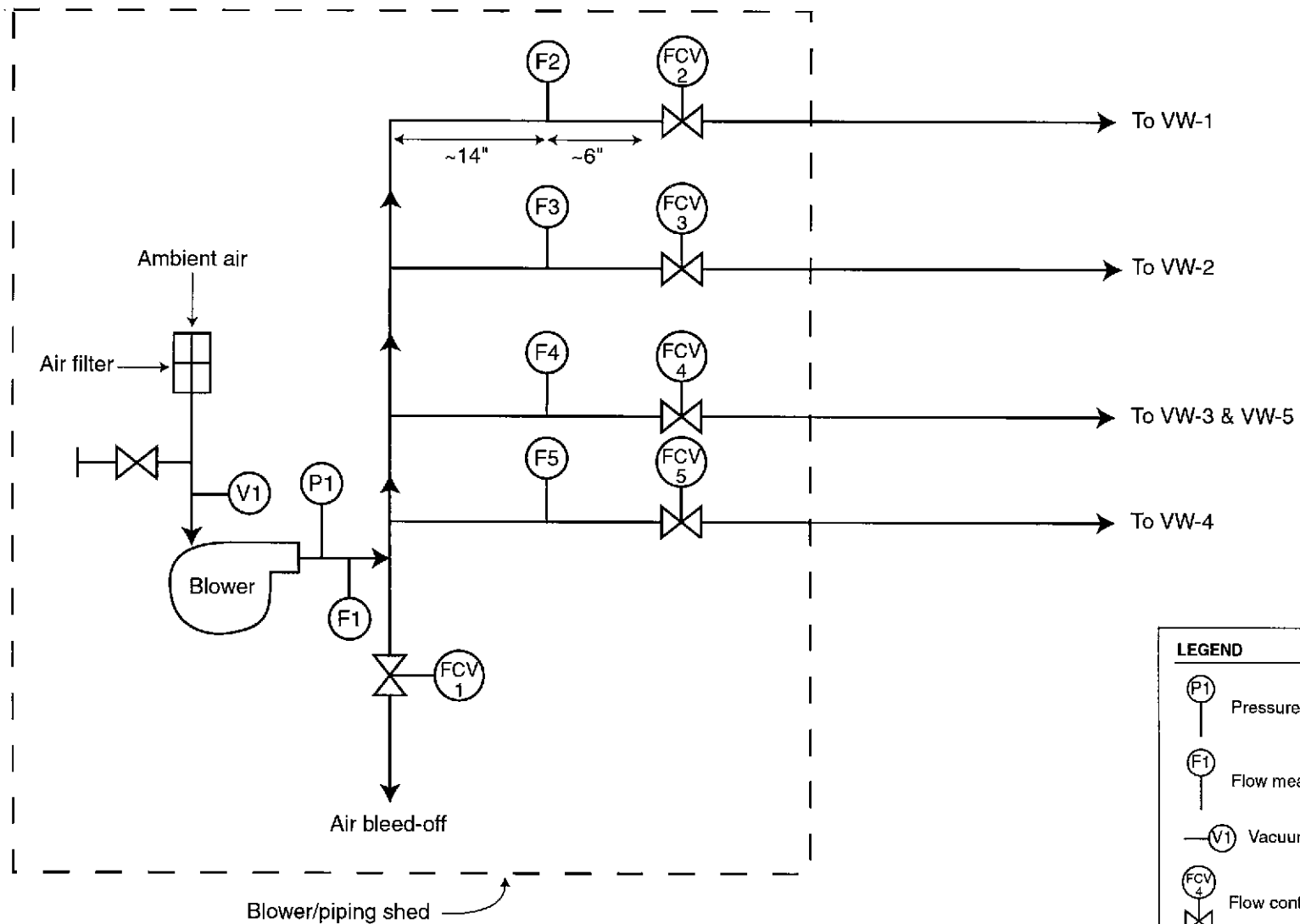
RD 246

STELLAR ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, BERKELEY, CA 94710
TEL: 510.644.3123 ★ FAX: 510.644.3859

RECEIVED
JUN 13 2005
ALAMEDA COUNTY HEALTH CARE SERVICES

TRANSMITTAL MEMORANDUM	
TO: ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY DEPT. OF ENVIRONMENTAL HEALTH HAZARDOUS MATERIALS DIVISION 1131 HARBOR BAY PKWY, SUITE 250 ALAMEDA, CA 94502	DATE: JUNE 9, 2005
ATTENTION: MR. JERRY WICKHAM	FILE: SES-2005-02
SUBJECT: REDWOOD REGIONAL PARK FUEL LEAK SITE	
WE ARE SENDING: <input checked="" type="checkbox"/> HEREWITH	<input type="checkbox"/> UNDER SEPARATE COVER
<input checked="" type="checkbox"/> VIA MAIL	<input type="checkbox"/> VIA
THE FOLLOWING: FIGURES 2 AND 5 (REVISED BIOVENTING FULL-SCALE DESIGN: SITE PLAN AND PIPING SCHEMATIC) FOR REDWOOD REGIONAL PARK SERVICE YARD SITE – OAKLAND, CALIFORNIA	
<input checked="" type="checkbox"/> AS REQUESTED	<input type="checkbox"/> FOR YOUR APPROVAL
<input type="checkbox"/> FOR REVIEW	<input type="checkbox"/> FOR YOUR USE
<input type="checkbox"/> FOR SIGNATURE	<input type="checkbox"/> FOR YOUR FILES
COPIES TO: N. FUJITA (EBRPD)	By: <u>Bruce Rucker</u> BR





LEGEND	
	Pressure gauge
	Flow measurement port
	Vacuum gauge
	Flow control valve
	Vacuum relief valve

2005-02-05

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

BIOVENTING PROCESS FLOW AND INSTRUMENTATION DIAGRAM
Redwood Regional Park Service Yard, Oakland, CA

Figure 5
by: MJC JUNE 2005

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



7

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

May 25, 2005

Mr. Neil Fujita
East Bay Regional Park District
2950 Peralta Oaks Ct.
Oakland, CA 94605

Subject: Fuel Leak Case No. RC [REDACTED] Redwood Regional Park, 7867 Redwood Road,
Oakland, CA

Dear Mr. Fujita:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the subject site and the report entitled, "Bioventing Pilot Test Results Report," dated October, 2004, prepared for the East Bay Regional Park District by Stellar Environmental Solutions, Inc. The report presented the results of a bioventing pilot test conducted in September and October 2004. The bioventing pilot test included the installation of one vent well and three vapor monitoring points, laboratory analysis of soil and vapor samples, an oxygen influence/soil permeability test, and a respiration test. The report recommended the installation and operation of a full-scale bioventing system and presented plans for the installation of the full-scale bioventing system. ACEH concurs with the installation and operation of a full-scale bioventing system but requests that the system be expanded to address residual contamination throughout the site.

ACEH concurs with implementation of the full-scale bioventing system to reduce the mass of residual petroleum hydrocarbons in the area of the former underground storage tanks (UST) and the zone of water table fluctuation in the area downgradient from the former USTs. However, the semi-confined conditions encountered at the site may limit the potential to provide air flow to some zones of residual contamination. Therefore, the implementation of an additional technology may be necessary if bioventing is not effective in reducing TPH concentrations in groundwater within the central portion of the plume.

Based on ACEH staff review of the documents referenced above, we request that you address the following technical comments, perform the proposed work, and send us the reports described below. Please submit a revised Figure 9 (Propose Full-scale Bioventing System Design) for approval prior to initiating installation of the full-scale system. Please provide 72-hour advance notification to ACEH prior to initiating field activities.

TECHNICAL COMMENTS

- 1. Additional Vent Well within Area of Former USTs.** The report currently proposes one additional vent well (VW-2) on the east site of Redwood Road and one additional vent well (VW-3) at the edge of the creek bank. No vent wells are proposed within the area of the former UST excavation. The design radius of influence does not cover the inferred area of residual soil contamination. More significantly, the inferred area of residual contamination shown on Figure 9 likely underestimates the extent of soil contamination in the area of the

former USTs. The former USTs were located within the northern portion of the excavated area. A confirmation soil sample (E3-16) collected from the bottom of the excavation detected 12,000 mg/kg of TPH as gasoline in soil. Although soil samples collected beneath the diesel UST contained concentrations of less than 4 mg/kg of TPH as diesel, up to 270,000 micrograms per liter ($\mu\text{g/L}$) of TPH as diesel has been detected in a groundwater sample collected near Redwood Creek (HP-02). Based on this evidence of a significant release of TPH as diesel, it is highly likely that significant residual TPH remains in the soil beneath the former diesel UST. Therefore, the bioventing system needs to be expanded to treat the soil beneath the former UST excavation backfill. Therefore, ACEH requests that an additional vent well (VW-5) be located within area of the former UST excavation to address residual soil contamination beneath the area of the former gasoline and diesel UST. We recommend that the vent well be located north of proposed VMP-4. The vent well should be screened to provide air flow to soil between the base of the former excavation and the lower extent of groundwater fluctuation. An additional vapor monitoring point (VMP-5) is to be installed north of additional vapor well VW-5 to monitor the effects of VW-5. Please present results from the system installation and start-up in the report requested below.

2. **Additional Vent Well Northeast of Well MW-4.** ACEH requests that an additional vent well (VW-6) be placed northeast of well MW-4 and that an additional vapor monitoring point (VMP-6) be added north of additional vent well VW-6. The purpose of the additional vent well is to address residual contamination north of well MW-4. TPH as diesel and TPH as gasoline were detected in groundwater grab samples collected in April 1999 in the area north of well MW-4. The extent of groundwater concentrations exceeding 10,000 $\mu\text{g/L}$ of TPH in the 1999 groundwater samples extended beyond the area that was treated with ORC injections in 2002. Therefore, residual soil contamination extends beyond the area of inferred residual soil contamination shown on Figure 9.
3. **Monitoring Well MW-4.** ACEH requests that a monitoring well be installed to replace well MW-4. Based on the response of well MW-4 to purging, the ability of groundwater to enter the well has deteriorated over time. The monitoring well currently dewateres during purging and is slow to recover. After the well was installed in 1995, the water level in well MW-4 drew down approximately 2 feet after purging of 24 gallons. During the most recent sampling event in March 2005, well MW-4 drew down approximately 12 feet and dewatered after purging of 10 gallons. The concentrations of TPH in groundwater detected in samples from monitoring well MW-4 have been used to infer that the extent of the plume does not extend north beyond well MW-4. Installation of a new well is requested to confirm that groundwater concentrations have decreased in this portion of the plume and to monitor groundwater concentrations during quarterly sampling events in the future. The bottom of the monitoring well shall be placed at the top of bedrock and the screen zone shall be no longer than 15 feet.

We request that soil and depth-discrete groundwater samples be collected prior to or during well installation. Soil samples should be collected from any zone where stained soil or elevated photoionization detector readings are observed. If stained soil or elevated photoionization detector readings are not observed, a minimum of two soil samples are to be collected within the expected zone of water table fluctuation. Groundwater samples shall be collected at a minimum at the depth where groundwater is first encountered and at the top of bedrock. Groundwater samples are also to be collected from any saturated zone where stained soil or odor is observed. The groundwater grab samples are to be collected using a

groundwater sampling device capable of collecting a depth discrete groundwater sample from a screened interval of no more than 2 feet. Soil and groundwater samples are to be analyzed for TPH as gasoline, TPH as diesel, methyl tert-butyl ether, benzene, toluene, ethylbenzene, and xylenes. Please present the results from the soil and groundwater sampling in the System and Installation Start-up Report requested below.

4. **Proposed Location of Vent Well VW-3.** We generally concur with the proposed location of vent well VW-3 within the central portion of the plume but request that the well be moved to a location approximately 7 feet southeast of well MW-7 to minimize potential air flow interference caused by well MW-7.
5. **Groundwater and Surface Water Monitoring.** Quarterly groundwater and surface water monitoring is to be continued. Please present the results from the quarterly groundwater monitoring in the reports requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Jerry Wickham), according to the following schedule:

- **July 15, 2005** – Quarterly Report for the Second Quarter 2005
- **October 17, 2005** - Quarterly Report for the Third Quarter 2005
- **October 28, 2005** – System Installation and Start-Up Report (to include results from soil and groundwater sampling for well MW-4)
- **January 17, 2006** - Quarterly Report for the Fourth Quarter 2005 (to include system measurements and summary of system operations and maintenance)

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

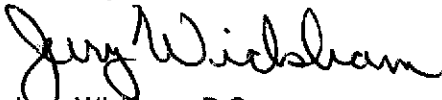
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

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

Sincerely,



Jerry Wickham, P.G.
Hazardous Materials Specialist

cc: Mr. Bruce Rucker
Stellar Environmental Solutions, Inc.
2198 Sixth Street, Suite 201
Berkeley, CA 94710

Mr. Carl Wilcox
California Department of Fish and Game
P.O. Box 47
Yountville, CA 94500

Donna Drogos
File

Seery, Scott, Env. Health

From: Michael Phelps [mphelps@stellar-environmental.com]
Sent: Thursday, April 15, 2004 11:54 AM
To: Scott Seery
Cc: Bruce Rucker
Subject: Redwood Regional Park - Bioventing



redwood bioventing
wells.pdf

Scott,

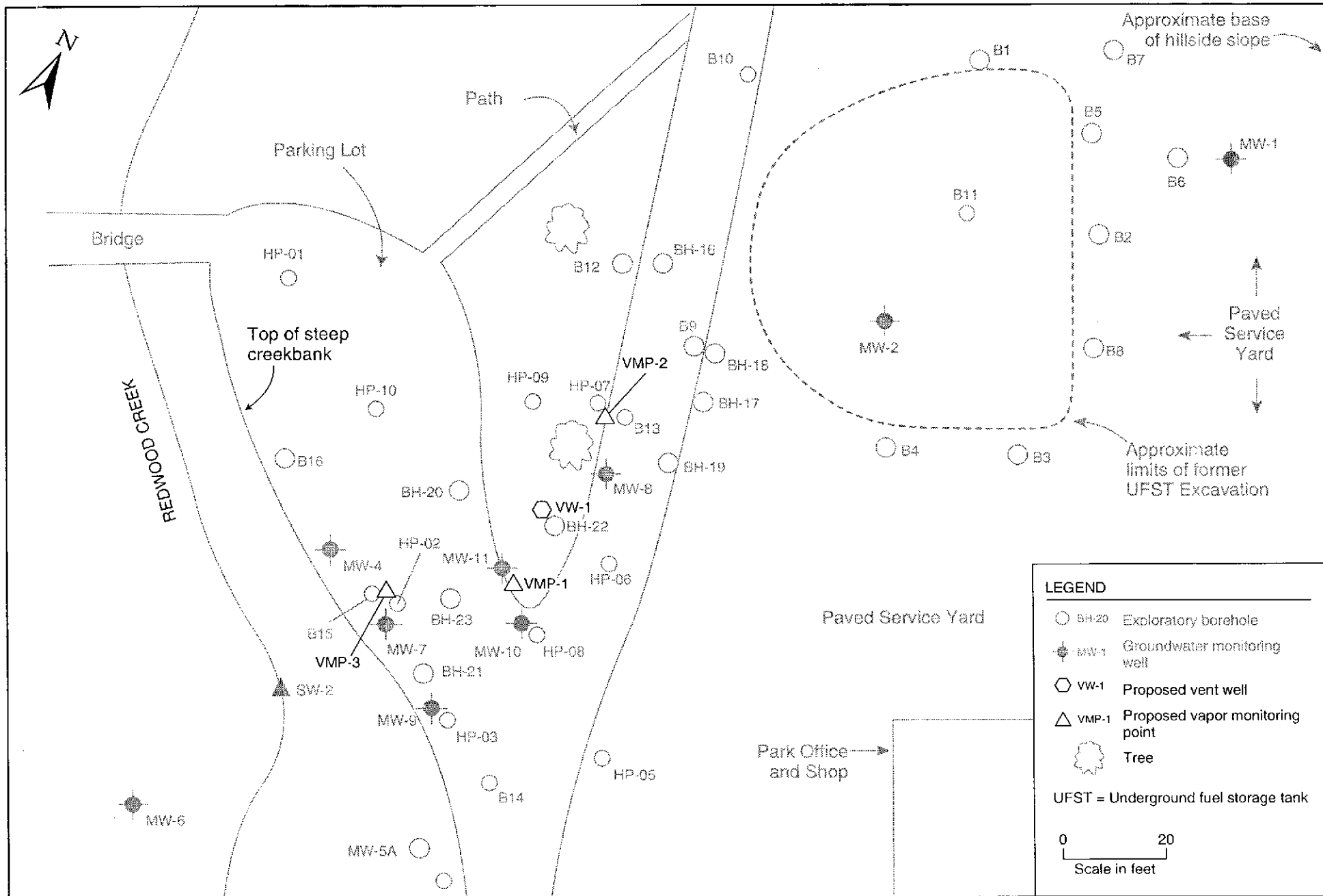
It was great to finally meet you at Tuesday's meeting. At your request at the end of Tuesday's meeting, I am attaching to this e-mail our plan map for the proposed bioventing pilot test wells, which supplements our Bioventing Feasibility Letter Report (dated Feb. 6, 2004).

The pilot test will be conducted according to the description/plan under the "Phased Approach" section of that Letter Report (pages 6-8). The three (3) VMPs will be spaced at approximate distances of 10, 20, and 35 feet from the VW, based on the expected radius of influence and EPA guidance (as shown on the attached figure). We have also placed them near previous borings, where knowledge about the geology and contaminated areas exists.

We trust that this map and the previously-submitted Letter Report is sufficient information to gain written approval from you for us to implement the pilot test and prepare an evaluation report. If you have any questions, please contact myself or Bruce Rucker.

Michael

Michael B. Phelps, P.E.
Principal Engineer
Stellar Environmental Solutions, Inc.
2198 Sixth Street, Suite 201
Berkeley, CA 94710
Tel: 510-644-3123
Fax: 510-644-3859
E-Mail: mphelps@stellar-environmental.com



LEGEND

- BH-20 Exploratory borehole
- MW-1 Groundwater monitoring well
- ⬡ VW-1 Proposed vent well
- △ VMP-1 Proposed vapor monitoring point
- ★ Tree

UFST = Underground fuel storage tank

0 20
Scale in feet

PROPOSED BIOVENTING PILOT TEST WELLS
Redwood Regional Park Service Yard, Oakland, CA

Figure 1

by: MJC APRIL 2004

2003-02-40

From: Seery, Scott, Env. Health
Sent: Tuesday, April 13, 2004 2:57 PM
To: 'brucker@stellar-environmental.com'
Subject: Redwood Regional Park

Bruce

Thanks for the productive and informative meeting today.

My curiosity is still piqued regarding the geology at the site, and so I was looking over some of the boring logs this afternoon, up to and including those completed in September 2003. I've noticed that the x-section contained in today's meeting packet, and the x-section presented in the 2003 Annual report, are along slightly different section lines, though basically the same. Lithology detail differences, especially near boring terminuses, are noteworthy between the two sections. I noticed that there appeared to be a few errors in the x-section of the December report. But that aside, depending on where this section is drawn (even if along the same general trend as the subject x-sections are) will significantly alter how the geology can be depicted, interpreted. I am particularly interested in what is going on close to the creek.

Take a look, if you would, please, at that cluster of 9 borings/wells between B-16 and B-14, inclusive. What drew me to this location is what I saw when I compared the two x-sections I mentioned. In MW-7, for example (the point through which the December 2003 x-section passes), no bedrock is encountered to 24' bg, and a lense of clayey SAND (wet, loose) is encountered between 18.5 and 19.5' bg. In B-15 (the point through which today's x-section passes, in lieu of MW-7) shows bedrock encountered at 17' bg. These two sampling points are within some 5 or 6 feet of each other based on map scale. This is very interesting, and speaks to the paleochannel you discussed, and perhaps more in terms of contaminant transport.

I think it would be a good exercise to produce a series of subparallel sets of x-sections along lines from source area to creek, and a set of 2 or 3 sections that run normal to those. Perhaps fence diagrams can be generated so that we can see a more 3-D view. Certainly these may help to identify areas where little info is known, and may help to identify potential target areas for the BV project. And of course, the site conceptual model (SCM) would benefit from the clues and understanding that may arise after producing these sections.

And I'm now I'm reminded after all this talk about the SCM: has there been an SCM actually published for this project?

Scott



Alameda County

MAR 22 2004

Environmental Health

March 16, 2004

Mr. Scott Seery
 Alameda County Department of Environmental Health
 1131 Harbor Bay Parkway, Suite 250
 Alameda, CA 94502-6577

Subject: Redwood Regional Park, Hazardous Material Incident

Dear Mr. Seery:

On Thursday, March 11, 2004 at approximately 12:30 PM, Redwood Regional Park Supervisor Dee Rosario paged me and detailed an ongoing incident at Redwood Regional Park. As you know, East Bay Regional Park District (EBRPD) and Stellar Environmental Solutions, Inc. (SES) have been working with your agency on an underground tank remediation project. SES has been monitoring groundwater wells to establish levels of contamination due to residual amounts of gasoline and diesel fuel. SES has been storing the purged well water from sampling events in a 1,100-gallon polyethylene storage tank situated in the Redwood Park Corporation Yard. Dee informed me that the polyethylene storage tank was accidentally punctured and was leaking its contents onto the asphalted area of the corp yard. I told Dee to try to contain the fluid as much as possible and I responded immediately. When onsite, I saw that Redwood staff had contained the spill to the immediate asphalted area around the tank by placing an earthen berm around the tank. The flow from the puncture was also stopped by the placement of plastic sheeting within the puncture area of the tank. The area was secured and spilled material never came close to any waterway during this incident. The amount of released material was estimated to be 50 gallons. Although Fire Department response was requested, Dee canceled the response due to quick containment by onsite staff.

I contacted Bruce Rucker from SES to initiate appropriate response and get details on the contents of the storage tank. I also immediately notified Alameda County Department of Environmental Health (left messages for you and Donna Drogos), Regional Water Quality Control Board, and Office of Emergency Services. I was later contacted by California Department of Fish and Game for follow-up detail on the incident.

The contents of the storage tank (approximately 850 gallons) has yet to be analyzed for appropriate disposal, however previous analyses of similar purge water (disposed of in September 2001) had 55 ppb diesel and no detectable gas, BTEX, or MTBE. Similar low levels of contaminant can be expected of the water currently in the tank.

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On Monday, March 15, 2004, a new tank was placed in the Redwood Park corp yard and the remaining water was pumped from the punctured tank into the new tank. Safeguards to protect the integrity of the new storage tank were discussed and will be implemented.

Should you have any questions, concerns or directives regarding this incident, please feel free to call me anytime at (510) 649-3313.

Sincerely,



Neal Fujita
Water Management Supervisor

cc: Donna Drogos – ACDEH
Steven Hill – RWQCB

Seery, Scott, Env. Health

From: Michael Phelps [mphelps@stellar-environmental.com]
Sent: Tuesday, February 03, 2004 4:50 PM
To: Scott Seery
Cc: Bruce Rucker; Neal Fujita
Subject: RE: Redwood Regional Park Service Yard Site

Scott,

I am assisting Bruce in responding to your concerns regarding bioventing feasibility in the context of the EPA guidance document that you referenced. We are planning to forward a more detailed analysis of bioventing feasibility for the Redwood site to you and Neal Fujita by the end of this week. It will include:

- a screening of technologies from the EPA guidance in the context of the available Redwood site data
- a more detailed evaluation of likely bioventing effectiveness using the flow chart criteria from Exhibit III-3 in the EPA guidance
- an explanation for why we recommended bioventing as the most appropriate technology
- our planned phased-approach (data collection, pilot test, reevaluation/design modification, full-scale implementation as warranted)

Once you have reviewed this information, I hope we can meet to discuss any remaining concerns you may have prior to our producing a work plan. I am very familiar with the bioventing technology, having worked on more than 25 bioventing projects on the west coast, and I feel pretty confident that it is the best and most cost-effective way to handle the residuals in soil that provide ongoing impacts to groundwater at the Redwood site.

Michael

Michael B. Phelps, P.E.
Principal Engineer
Stellar Environmental Solutions, Inc.
2198 Sixth Street, Suite 201
Berkeley, CA 94710
Tel: 510-644-3123
Fax: 510-644-3859
E-Mail: mphelps@stellar-environmental.com

-----Original Message-----

From: Seery, Scott, Env. Health [mailto:scott.seery@acgov.org]
Sent: Wednesday, January 28, 2004 2:30 PM
To: 'Bruce Rucker'
Cc: Neal Fujita
Subject: RE: Redwood Regional Park Service Yard Site

Bruce

As we discussed a few weeks back, my review of EPA guidance document 510-B-94-003, "How to Evaluate Alternative Cleanup Technologies for UST Sites", indicates certain preliminary steps need be completed in determining the suitability and feasibility of BV to this project well before scoping out a work plan to implement it. A brief glance at what was submitted in the *Year 2003 Annual Summary Report* does not appear to qualify as the sort of evaluation I would need to begin a discussion of this technology application.

Once the feasibility of BV is determined based on evaluation of site specific conditions as outlined in the referenced EPA guidance, I will be happy to meet with you to discuss this case and the results of the feasibility study, and offer suggestions for scoping a BV work plan that would appear appropriate. I'm by no means anything of an expert, but it

does appear that we do need a few critical site-conditions to be met, as outlined in the guidance, before BV would appear suitable to this project.

I believe this EPA guidance document is still available, but if not, I can make a copy of this 43 page chapter and forward that to you.

Please let me know how you would like to proceed.

Scott

-----Original Message-----

From: Bruce Rucker [mailto:brucker@stellar-environmental.com]

Sent: Wednesday, January 28, 2004 1:28 PM

To: Scott Seery

Cc: Neal Fujita

Subject: Redwood Regional Park Service Yard Site

Scott -

Neal Fujita and Ken Burger have indicated that we will be participating in a meeting with you (likely in February 2004) to discuss the proposed bioventing project. So that we may address all the potential issues of concern that you may have, could you let us know (at your earliest convenience) what specific issues you anticipate discussing. We hope that the low-permeability bioventing paper we sent to you addresses your previous concern about the viability of bioventing at the site. Thank you in advance for your reply.

p.s. I will be out of the office between Thursday 1/29 and Tues 1/3. If you have any specific needs in that time, please contact Richard Makdisi (SES Principal) directly. Thanks.

Bruce M. Rucker
Stellar Environmental Solutions, Inc.
2198 Sixth Street, #201
Berkeley, CA 94710

Tel: 510-644-3123
Fax: 510-644-3859
E-mail: Brucker@stellar-environmental.com

20 246

Seery, Scott, Env. Health

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 1/28/2004

Bruce M. Rucker
Stellar Environmental Solutions, Inc.
2198 Sixth Street, #201
Berkeley, CA 94710

Tel: 510-644-3123
Fax: 510-644-3859
E-mail: Brucker@stellar-environmental.com

Seery, Scott, Env. Health

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Bruce M. Rucker
Stellar Environmental Solutions, Inc.
2198 Sixth Street, #201
Berkeley, CA 94710

Tel: 510-644-3123
Fax: 510-644-3859
E-mail: Brucker@stellar-environmental.com

Redwood Fork
7867 Redwood Rd.
Oakland

8-27-01

MEMO to file:

At the site today to note stream flow and GW discharge into stream bed. There was no stream flow, but some pools of standing water were evident, including portions of the bed sidewall where GW discharge was evident. Rust-colored (apparent) algae was present in this particular pool, and invertebrate populations, (e.g., mosquito larvae) noteworthy. Fe staining could be seen where seeps daylighted on stream sidewalls.

While I was there, a Blaine Tech sampler was in the process of sampling/gauging wells. Moderate-to-strong gasoline odors were evident in purge water from well MW-7.

SOS



July 18, 2001

Mr. Scott Seery
Alameda County Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Subject: Funding for Redwood Regional Park Underground Tank
Remediation

Dear Mr. Seery:

As per our conversation last week, this is to notify you that funding for the subject site continued monitoring and remediation (injection of oxygen releasing compound) should be appropriated at the East Bay Regional Park District Board of Directors meeting on August 7.

Consequently, quarterly monitoring originally scheduled by Stellar Environmental Services for the month of July has been rescheduled for August, after funds are appropriated. Stellar Environmental Services estimated \$152,000 for continued quarterly monitoring and additional remediation efforts leading to regulatory site closure.

Allocation of \$152,000 for the project should occur on August 7.

Sincerely,

Kenneth R. Burger
Stewardship Manager

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JUL 23 2001



5/22/01

memo to file:

I inspected the area of Redwood Creek where the HC-impacted GW seeps enter the creek in the "hot" zone downgradient of well MW-7. Iron fixation was still evident by way of Fe-oxide staining on the creekbank. Interestingly, a number of fungal mats were present in the small pools directly adjacent the area where the GW seeps appeared. These seeps trickled into these pools.

905

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

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

January 8, 2001

STID 4145

Kenneth Burger
East Bay Regional Park District
P.O. Box 5381
Oakland, CA 94605-0381

RE: Redwood Regional Park, 7867 Redwood Road, Oakland – Site Feasibility Study

Dear Mr. Burger:

We are in receipt and have completed review of the October 2000 Stellar Environmental Solutions (Stellar) document entitled "*Site Feasibility Study Report*" that presents Stellar's evaluation of various corrective action alternatives based on technical feasibility, cost-benefit, and remediation goals, among other criteria considered. Based on Stellar's feasibility study (FS), the use of in-situ oxygen-releasing compounds, or ORCTM, is proposed as the most cost-effective and viable alternative considered to achieve project objectives.

The use of in-situ ORCTM injection, as specified in the cited Stellar FS report, has been accepted with concurrence from Mr. Roger Brewer, Regional Water Quality Control Board (RWQCB), with the following clarifications and stipulations:

- 1) ORCTM injection points shall completely penetrate the saturated zone to underlying bedrock
- 2) Reports shall also reference the applicable surface water screening levels (e.g., TPH) derived from the recently published California Toxics Rule (CTR, May 2000 Federal Register), as well as USEPA Ecotox criteria, when evaluating appropriate target clean-up standards. (Note: These data have been conveniently tabulated in the Interim-Final August 2000 RWQCB Risk-Based Screening Levels document.)

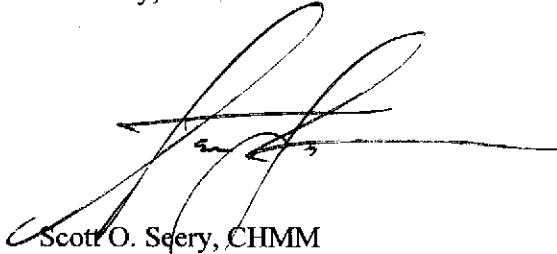
In addition, reference is made to the August 22, 2000 correspondence from this office in which you were requested to reinstate a quarterly schedule of well sampling, monitoring, and reporting. We understand that this request has not been strictly honored. Please be advised that Section 2652(d), Title 23, California Code of Regulations, among other relevant provisions, requires that technical reports of the sort we have requested are to be submitted *every 3 months or more frequently as specified by the agency*.

You are respectfully directed to immediately reinstate the requested schedule of quarterly sampling, monitoring, and reporting. This schedule shall continue until further notice.

Mr. Burger
Re: Redwood Regional Park, 7867 Redwood Rd., Oakland
January 8, 2001
Page 2 of 2

Please call me at (510) 567-6783 should you have any questions and to inform me when field work will begin.

Sincerely,

A handwritten signature in black ink, appearing to read 'Scott O. Seery', with a long horizontal flourish extending to the right.

Scott O. Seery, CHMM

Hazardous Materials Specialist

cc: Ariu Levi, Chief, Environmental Protection, ACDEH
Tom Peacock, ACDEH
Leroy Griffin, Oakland Fire Dept.
Roger Brewer, RWQCB
Mike Rugg, CA Dept. of Fish and Game, P.O. Box 47, Yountville, CA 94599
Bruce Rucker, Stellar Environmental Solutions, 2110 Sixth St., Berkeley, CA 94710



Winston H. Hickox
*Secretary for
Environmental
Protection*

California Regional Water Quality Control Board

San Francisco Bay Regional Water Quality Control Board

Internet Address: <http://www.swrcb.ca.gov>
1515 Clay Street, Suite 1400, Oakland, California 94612
Phone (510) 622-2300 • FAX (510) 622-2460



Gray Davis
Governor

TO: Scott Seary
Alameda County Environmental Health Agency

FROM: Roger Brewer, Chuck Headlee
Bay Area Regional Water Quality Control Board
Toxics Cleanup Division

DATE: December 7, 2000

SUBJECT: October 20, 2000, Site Feasibility Study Report, Redwood Regional Park Service Yard,
Alameda County

I reviewed the feasibility study prepared for cleanup of gasoline-impacted groundwater at the Redwood Regional Park Service Yard. I agree that the proposed, in-situ ORC treatment is appropriate at this point. Following the results of this treatment, the need for additional work at the site should be re-evaluated. Chuck Headlee is also reviewing the feasibility study. He will contact you directly if he has any additional comments.

My primary comments deal with groundwater and surface water screening levels proposed for the site (Table 1 in report). I recommend that the report also refer to surface water standards presented in the recently published California Toxics Rule (CTR, May 2000 Federal Register) as well as USEPA Ecotox criteria. I'll e-mail electronic copies of these documents to you. Screening levels should also be presented for Total Petroleum Hydrocarbon (TPH). TPH screening levels for surface water presented in our recent Risk-Based Screening Levels (RBSL) document (August 2000) can be referred to as a starting point. Information regarding the RBSL document can be found at our website (www.swrcb.ca.gov/rwqcb2). Note that CTR and Ecotox levels are also summarized in this document.

It is my understanding that you will send a formal letter to East Bay Regional Park District that addresses these issues. Please contact our office if you have any questions.

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



November 1, 2000

STID 4145

Kenneth Burger
East Bay Regional Park District
P.O. Box 5381
Oakland, CA 94605-0381

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

RE: Redwood Regional Park, 7867 Redwood Road, Oakland – Workplan for Installation of Additional Monitoring Wells

Dear Mr. Burger:

We are in receipt and have completed review of the October 19, 2000 Stellar Environmental Solutions (Stellar) workplan for the installation of two additional monitoring wells at the subject site. The Stellar plan was submitted in response to the August 22, 2000 correspondence from this office that requested a well installation workplan. The locations of the wells proposed by Stellar essentially reflect the conceptual locations we discussed during our August 9, 2000 meeting.

The cited Stellar workplan has been accepted as submitted.

Please call me at (510) 567-6783 should you have any questions and to inform me when field work will begin.

Sincerely,

A handwritten signature in black ink, appearing to read 'Scott O. Seery', written over a horizontal line.

Scott O. Seery, CHMM
Hazardous Materials Specialist

- cc: Ariu Levi, Chief, Environmental Protection, ACDEH
Tom Peacock, ACDEH
Leroy Griffin, Oakland Fire Dept.
Roger Brewer, RWQCB
Mike Rugg, CA Dept. of Fish and Game, P.O. Box 47, Yountville, CA 94599
Bruce Rucker, Stellar Environmental Solutions, 2110 Sixth St., Berkeley, CA 94710

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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

August 22, 2000

STID 4145

Kenneth Burger
East Bay Regional Park District
P.O. Box 5381
Oakland, CA 94605-0381

RE: Redwood Regional Park, 7867 Redwood Road, Oakland – Request for Corrective Action Plan Feasibility Study and completion of other related tasks

Dear Mr. Burger:

This letter is sent in the wake of the August 9, 2000 meeting during which we discussed, among other closely related topics, potential elements of a future Corrective Action Plan (CAP) for this project. Attending this meeting with us were Mike Rugg, California Department of Fish and Game (DFG), Roger Brewer, California Regional Water Quality Control Board (RWQCB), Dee Rosario, Redwood Park Supervisor, Renee Crowley, Park Unit Manager, and Bruce Rucker, Stellar Environmental Solutions (Stellar); the park district's environmental consultant on this project.

The salient issues and tasks that arose from our meeting include:

- Reevaluate potential impacts to aquatic organisms during periods of low creek flow from discharge of petroleum-impacted groundwater
- Perform a CAP Feasibility Study, pursuant to Title 23, California Code of Regulations (CCR) Sec. 2725(f), to evaluate various corrective action alternatives for remediating or mitigating the actual or potential adverse effects of the release
- Install additional groundwater monitoring wells
- Evaluate eligibility in the State Underground Storage Tank (UST) Cleanup Fund

As you know, field observations indicate the hydrocarbon plume is currently discharging to the creek via groundwater seeps along a front that appears to be up to ~150 feet long. Concentrations of petroleum-related chemicals in groundwater collected from sample points immediately upgradient of Redwood Creek exceed potential RWQCB screening levels for the protection of aquatic organisms (e.g., TPH-gas: 249 - 3700 ug/l, TPH-diesel: 640 ug/l). The highest reported groundwater concentrations (270,000 ug/l TPH-diesel) suggest immiscible phase product is present within 20 feet of the creek bank.

Mr. Burger
Re: Redwood Regional Park, 7867 Redwood Rd., Oakland
August 22, 2000
Page 2 of 2

The recent assessment of Redwood Creek by DFG's Aquatic Bioassessment Laboratory (ABL) would suggest that there are no adverse impacts to the considered riffle macroinvertebrate communities from this hydrocarbon discharge. Concern was raised, however, over potential long-term impacts to aquatic organisms during periods of low stream flow when, during drier months, it appears the creek is fed in large part by groundwater seeps. The ABL study did not conduct its evaluation during such low flow periods. This issue will figure prominently when evaluating the necessity, feasibility and cost-effectiveness of various corrective action alternatives for this project.

The RWQCB also requested the installation of two (2) additional monitoring wells: one located in the perceived "hot" zone of the plume (near HP-02), and another midway between that (pending) well and the former UST pit. Both wells will aid in evaluating long-term impacts to Redwood Creek and the effectiveness of any corrective action employed.

Finally, many of the past and future corrective action costs may be reimbursable through the State UST Cleanup Fund. As funding for this project is a significant concern, the park district is encouraged to explore this funding mechanism. You may contact the State Water Resources Control Board UST Cleanup Fund by calling (916) 227-4307 for more information.

At this time, please submit, within 60 days, a Feasibility Study that embraces the issues raised during the August 9th meeting, as briefly summarized in this letter. This Feasibility Study should also include a workplan for the installation of additional monitoring wells.

In addition, you are also requested to reinstate well sampling, monitoring, and reporting on a quarterly basis. This requirement is pursuant to 23 CCR Sec. 26529(d). Please initiate this work during the current (3rd) quarter of this year and continue until advised otherwise.

Please call me at (510) 567-6783 should you have any questions.

Sincerely,



Scott O. Seery, CHMM

Hazardous Materials Specialist

cc: Ariu/Levi, Chief, Environmental Protection, ACDEH

Tom Peacock, ACDEH

Leroy Griffin, Oakland Fire Dept.

Roger Brewer, RWQCB

Mike Rugg, CA Dept. of Fish and Game, P.O. Box 47, Yountville, CA 94599

Bruce Rucker, Stellar Environmental Solutions, 2110 Sixth St., Berkeley, CA 94710



Winston H. Hickox
Secretary for
Environmental
Protection

California Regional Water Quality Control Board

San Francisco Bay Regional Water Quality Control Board

Internet Address: <http://www.swrcb.ca.gov>
1515 Clay Street, Suite 1400, Oakland, California 94612
Phone (510) 622-2300 • FAX (510) 622-2460



Gray Davis
Governor

TO: Scott Seary
Alameda County Environmental Health Agency

FROM: Roger Brewer, Chuck Headlee
Bay Area Regional Water Quality Control Board
Toxics Cleanup Division

DATE: August 8, 2000

SUBJECT: August 8, 2000, Meeting Regarding Groundwater Impacts at Redwood Regional Park Service Yard, Alameda County

Below is a summary of issues discussed during our meeting this morning regarding future corrective actions at Redwood Regional Park. It is our understanding that you will send a formal letter to East Bay Regional Park District that addresses these issues. Please contact our office if you have any questions.

- 1. Restate ecological concerns regarding discharge of gasoline-impacted groundwater into Redwood Creek.** Sample data and field observations indicate that impacted groundwater is discharging into Redwood Creek over an area approximately 100 to 150 feet long, beginning near the footbridge and extending south. Concentrations of petroleum-related chemicals in groundwater exceed potential screening levels for the protection of aquatic organisms (e.g., TPH-gasoline: 3,700 ug/L, TPH-diesel 640 ug/L; from SF International Airport Board Order). The highest reported concentrations of TPH suggest the presence of free product or a heavy sheen on groundwater within twenty feet of the stream bank (270,000 ug/L, sample HP-02). Impacts to aquatic organisms could be particularly significant during periods of low flow, when the creek is primarily being fed by discharges of groundwater.
- 2. Install additional groundwater monitoring wells in the area of impacted groundwater.** At least one additional monitoring well should be installed in the downgradient most area of highest groundwater impact (e.g., in the vicinity of HP-02). This well(s) will necessary to evaluate the maximum concentration of petroleum-related chemicals in groundwater discharging into Redwood Creek. At least one additional well should also be installed between the above well and the former UST pit. This well(s) will be necessary to monitor the length of the groundwater plume and evaluate the duration and magnitude of long-term impacts to Redwood Creek over time. Both wells will also be needed to evaluate the effectiveness of any corrective actions undertaken at the site.
- 3. Complete a feasibility study and corrective action plan to address groundwater impacts and impacts to Redwood Creek.** The migration rate of the plume toward Redwood Creek has been estimated to be between 10 and 20 feet per year. Use of oxygen releasing compounds or other additives may be appropriate for treatment of the upgradient portions of the plume. More aggressive methods (e.g., interceptor trench, pump and treat, etc.) may, however, be required in the downgradient portions of the plume that are likely to discharge into the creek within the very near future. These issues should be addressed in the feasibility study. Initial corrective actions should be implemented before the end of the year if possible

4. **Evaluate potential for inclusion of site corrective actions in the UST reimbursement fund.** All or part of the cost for implementation of corrective actions at the site may be reimbursable through the state UST cleanup fund. This option should be further evaluated and expedited as appropriate.

**Alameda County Department of Environmental Health
Hazardous Materials Division**

Meeting Attendees

Subject Redwood Regional Park - UST clean-up

Date 8-9-00

Location Env. Health

	<u>Name</u>	<u>Affiliation</u>	<u>Phone # / FAX #</u>
1	<u>Scott Seery</u>	<u>AZDEH</u>	<u>510/567-6783 / 337-9335</u>
2	<u>D Rosario</u>	<u>EBRPD / Redwood</u>	<u>510-482-6024 / 530-1908</u>
3	<u>MIKE RUSK</u>	<u>EISA + GEME</u>	<u>707-944-5523 / 707-944-5563</u>
4	<u>Renee Crowley</u>	<u>EBRPD / Parks/Unit Mgr</u>	<u>(510) 482-6025 / 530-1908</u>
5	<u>Ken Burger</u>	<u>EBRPD Water Quality</u>	<u>(510) 635-0135 622-2374</u>
6	<u>Roger Brewer</u>	<u>RWQCB</u>	<u>510-622 / 510-622-2460</u>
7	<u>Bruce Rucker</u>	<u>Stellar Environmental Solutions</u>	<u>510-644-3103 / 510-644-3859</u>
8	_____	_____	_____ / _____
9	_____	_____	_____ / _____
10	_____	_____	_____ / _____
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15	_____	_____	_____ / _____
16	_____	_____	_____ / _____
17	_____	_____	_____ / _____

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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

October 29, 1999

STID 4145

Mr. Kenneth Burger
East Bay Regional Park District
P.O. Box 5381
Oakland, CA 94605-0381

RE: Redwood Regional Park, 7867 Redwood Road, Oakland

Dear Mr. Burger:

Thank you for our receipt of the June 1999 Stellar Environmental Solutions (Stellar) report entitled "*Residual Contamination Investigation and Remedial Action Assessment Report*". The Stellar report documents recent environmental assessment work conducted at the subject site. This report also incorporates a May 1999 biological and physical/habitat assessment of sections of Redwood Creek performed by the California Department of Fish and Game (DFG), Office of Spill Prevention and Response (OSPR), Water Pollution Control Laboratory (WPCL).

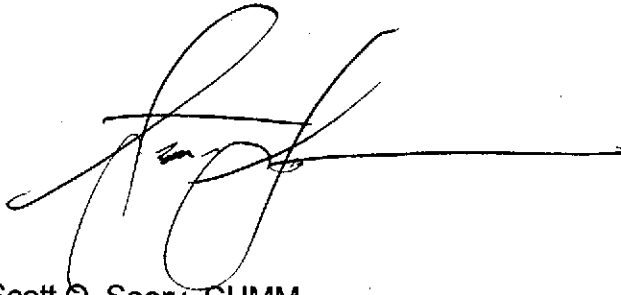
The WPCL recommends that a follow-up assessment of Redwood Creek be performed once stream flow begins again with the onset of the rainy season. I understand that this work is anticipated to occur in November or the first part of December. Stellar informs that WPCL's follow-up assessment report, in addition to the quarterly surface water and monitoring well sampling data, will be bundled together in a subsequent report that they anticipate will be completed in December 1999.

I request that, once Stellar distributes the much-anticipated report, all parties meet in early January 2000 to discuss the results of this comprehensive assessment effort, and to determine and scope an appropriate corrective action plan for this case.

October 29, 1999

Please also call me at (510) 567-6783 should you have any questions or if I may be of any assistance.

Sincerely,

A handwritten signature in black ink, appearing to read 'Scott O. Seery', with a long horizontal line extending to the right.

Scott O. Seery, CHMM
Hazardous Materials Specialist

Cc: Ariu Levi, Chief, Environmental Protection
Chuck Headlee, RWQCB

Michael Rugg, Department of Fish and Game
P.O. Box 47, Yountville, CA 94599

Leroy Griffin, Oakland Fire Department

Bruce Rucker, Stellar Environmental Solutions
2198 Sixth Street, Berkeley, CA 94710

STELLAR ENVIRONMENTAL SOLUTIONS

2110 Sixth Street
Berkeley, CA 94710
Telephone: (510) 644-3123
Fax (510) 644-3859

fax

to: Mr. Scott Seery, Alameda County Environmental Health Dept

fax #: (510) 337-9355

from: Bruce Rucker - Stellar Environmental Solutions

date: April 21, 1999

subject: Redwood Regional Park Site Investigation

Pages: 1

NOTES: Scott:

Just an update to the Redwood project schedule. ~~Groundwater monitoring, stream bioassessment and drilling have been completed.~~ The schedule for report completion will be delayed (probably until end of May) because Fish and Game Water Pollution Control Laboratory (who conducted the bioassessment) will not complete the bioassessment writeup until mid-May. We'll keep you informed of the schedule as it develops. I have sent a similar update to Mike Rugg of Fish & Game.

Regards. *Bruce*

4/30

Visited site in attempt to locate soil borings. Only one likely and possible location could be identified of the 10 proposed.

EOS

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



February 26, 1999

STID 4145

Mr. Kenneth Burger
East Bay Regional Park District
P.O. Box 5381
Oakland, CA 94605-0381

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

RE: Redwood Regional Park, 7867 Redwood Road, Oakland

Dear Mr. Burger:

Thank you for our receipt of the following Stellar Environmental Solutions ("Stellar") documents:

- December 1998 – *Site Investigation and Site Closure Assessment Report*
- October 1998 – *Workplan for Continued Site Investigation and Site Closure Assessment*

Recommendations incorporated into Section 6.0 of Stellar's December 1998 report present a road map for the continued assessment of the subject site in order to determine what, if any, impact there may be to Redwood Creek and associated biota. Of these recommendations, a determination of plume geometry and concentration gradient, both perpendicular to and along the plume axis, is recommended to contemplate fully the magnitude and timing of potential impacts to Redwood Creek. Stellar also recognizes that, in such cases, the California Department of Fish and Game (DFG) requires an in-stream bioassessment be performed in conformance with DFG's established bioassessment procedure. I understand that the initial in-stream bioassessment is planned for Spring 1999, and that a follow-up assessment is scheduled for Fall 1999.

This office concurs in full with Stellar's recommendations.

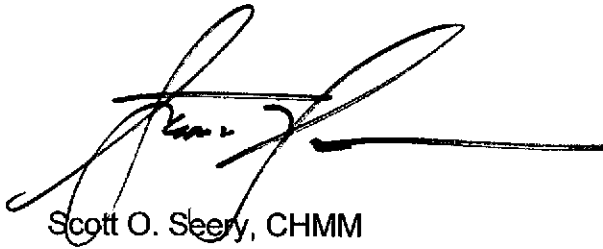
Please have your consultant submit a brief work plan for the pending phase of the plume definition investigation. This brief work plan need only present a map showing proposed hydropunch locations and Stellar's standard operating procedures (SOP) for such assessments. I have already discussed the scope of this pending investigation with Stellar's Mr. Bruce Rucker.

This brief work plan is due within 30 days of the date of this letter.

February 26, 1999

Please call me at (510) 567-6783 should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott O. Seery", with a long horizontal line extending to the right.

Scott O. Seery, CHMM

Hazardous Materials Specialist

Cc: Chuck Headlee, RWQCB

Michael Rugg, Department of Fish and Game

P.O. Box 47, Yountville, CA 94599

Leroy Griffin, Oakland Fire Department

Bruce Rucker, Stellar Environmental Solutions

2110 Sixth St., Berkeley, CA 94710

REGIONAL PARKS

EAST BAY REGIONAL PARK DISTRICT

98 JUN 18 PM 2:40

June 17, 1998

Mr. Scott Seri
Alameda County Health Department
1131 Harbor Bay Parkway
Alameda, CA 94502

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Subject: Redwood Regional Park Underground Tank Leak

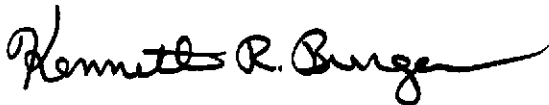
Dear Mr. Seri:

I reviewed our files and extracted copies of two early summaries of consultant investigations that were submitted to Mike Rugg, California Department of Fish & Game (CDF&G) (attached). Mr. Rugg never responded to these submittals.

In addition, during the initial site investigation in 1993 resulting in excavation of several hundred yards of contaminated earthen material, a Fish & Game warden was present. Unfortunately, no one remembers who the investigating warden was on-scene.

Call me at (510) 635-0138, ext. 2341 should you need further information.

Sincerely,



Kenneth R. Burger
Stewardship Manager

t:\ken\redwdtnk



ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES

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

July 1, 1998

STID 4145

Mr. Kenneth Burger
East Bay Regional Park District
P.O. Box 5381
Oakland, CA 94605-0381

RE: Redwood Regional Park, 7867 Redwood Road, Oakland

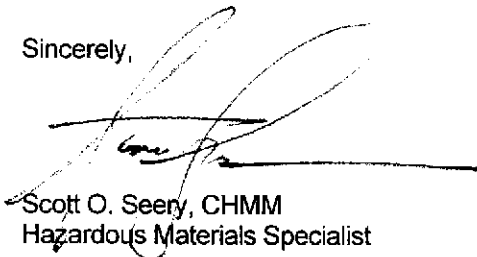
Dear Mr. Burger:

Thank you for meeting today with me and Mr. Michael Rugg of the California Department of Fish and Game to discuss and evaluate the unique issues associated with the underground storage tank (UST) release investigation at the subject site. **Preventing plume discharge into Redwood Creek appears to be the primary goal for this site.** The use of oxygen releasing compounds (ORC) in a screen of wells arranged across the axis of the plume was presented as one means to prevent this discharge. Other methods may be possible, as well. In addition, various approaches to and frequencies for monitoring groundwater and creek impact were discussed.

We agreed that you would further discuss these issues with Mr. Rugg. This information would in turn be relayed to your consultant, and a work plan produced. **The work plan is to present: 1) a plan for the protection of Redwood Creek which is acceptable to both EBRPD and the Department of Fish and Game; 2) a proposal for an additional monitoring well or wells nearer the toe of the plume, if deemed prudent by your two agencies; and, 3) a proposal for sampling schedule revisions if such appear reasonable.**

Please submit this work plan within 60 days. Please also call me at (510) 567-6783 should you have any questions or if I may be of any assistance.

Sincerely,



Scott O. Seery, CHMM
Hazardous Materials Specialist

Cc: Mee Ling Tung, Director, Environmental Health
Chuck Headlee, RWQCB

Michael Rugg, Department of Fish and Game
P.O. Box 47, Yountville, CA 94599
Leroy Griffin, Oakland Fire Department

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



16 September, 1997

STID 4145

re: 7867 Redwood Ave., Oakland, CA 94619

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

Ken Berger
East Bay Regional Park District
2950 Peralta Oaks Ct.
Oakland, CA 94605

Dear Ken Berger:

This office has received and reviewed Quarterly progress Reports dated 6 Jun 96, 24 Sep 96, 31 Jan 97, April 97, and 30 Jun 97, all by Parsons Engineering Science, Inc. for the above site. The following comments concern these reports:

1. There are no conclusions or recommendations in these reports, only analytical data.
2. It seems that the greatest concentration of contaminants are around MW-4, which has Redwood Creek downgradient from it and between it and MW-6. Contamination has only occasional been found in the creek. Have you thought of using ORC (oxygen releasing compound) in the wells MW-2 and MW-4?
3. It is not necessary to purge wells prior to sampling. Several studies have found no benefit in this practice and significant cost.
4. It seems that the highest levels of contamination always occur during February, the month with the highest rainfall.

72

This case will be transferred to Pam Evans of this office. You may contact her at (510) 567-6700 if you have any questions regarding this letter.

16 September, 1997
East Bay Regional Park District
STID 4145
Page 2 of 2

Sincerely,

A handwritten signature in cursive script, appearing to read "Thomas Peacock". The signature is written in dark ink and is positioned above the typed name.

Thomas Peacock, Manager

c: Bruce Rucker, Parsons Engineering Science, Inc., 2101
Webster St., Suite 700, Oakland, CA 94612
Gordon Coleman - Files

PARSONS ENGINEERING SCIENCE, INC.

2101 Webster Street • Suite 700 • Oakland, California 94612 • (510) 891-9085 • Fax (510) 835-4355

25 June 1997
Ref: 729457.07000

Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Attention: Ms. Juliet Shin, Hazardous Materials Specialist

Subject: Groundwater Characterization Program at
Redwood Regional Park Service Yard, Oakland, California

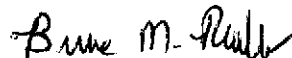
Dear Ms. Shin:

We understand that you have recently been reassigned to be the Alameda County Health Care Services Agency (ACHCSA) case worker for the groundwater investigation conducted by Parsons Engineering Science, Inc. (Parsons ES) at the East Bay Regional Park District (EBRPD) Redwood Regional Park Service Yard in Oakland, California. We look forward to working with you again on this project.

On a related note, we would like to bring to your attention a discrepancy in ACHCSA documentation regarding the groundwater monitoring program. The EBRPD requested in a 19 December 1995 letter (attached) discontinuing hydrochemical monitoring of site wells MW-1, MW-3 and MW-6 following the August 1995 event due to the absence of significant groundwater contamination in these wells over the first four quarters of monitoring. That request was approved by ACHCSA in a 9 January 1996 letter (attached). However, the ACHCSA letter stated that well MW-2, not MW-3, was approved for discontinuation. It appears that this was a typographical error, and the current groundwater monitoring program has incorporated the revision as originally requested by EBRPD. Please contact us at your earliest convenience if this is not the case.

Please feel free to call us at our Oakland office (510-891-9085) if you have any questions regarding historical or proposed project activities.

Very truly yours,
PARSONS ENGINEERING SCIENCE, INC.



Bruce M. Rucker
Project Manager

attachments

cc: W. Gee, K. Berger - EBRPD

97 JUN 26 PM 3:45
RECEIVED
MCDONALD
17

REGIONAL PARKS

EAST BAY REGIONAL PARK DISTRICT

December 19, 1995

Ms. Medhulla Logan
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, #250
Alameda CA 94502-6577

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Subject: Proposed 1996 Schedule for Groundwater and Surface Water Analysis and Reporting - Redwood Regional Park Service Yard, Oakland, California

Dear Ms. Logan:

The 1995 Annual Summary Assessment report prepared for the Park District by Parsons Engineering Science for the subject location underground fuel tank remediation was sent to you for review in November 1995. Based upon monitoring results reported therein for quarterly sampling from November 1994 - August 1995, natural attenuation processes (presumably through biological degradation of petroleum products) has resulted in significant decreased concentrations of petroleum hydrocarbons (TPHg & TPHd & BTEX) detected in groundwater monitoring wells. No detectable petroleum contaminants were detected in three of six wells i.e. MW-1, MW-3, and MW-6 during the four quarterly sampling events. In addition, sampling and analysis for petroleum residues in Redwood Creek surface water has not revealed any continued contamination. However, the most likely time to detect this is during winter months when groundwater is nearest the ground surface and when seepage into the creek would be most likely. We are, therefore, proposing the following for 1996:

1. Discontinue groundwater sampling for petroleum analytes in wells MW-1, MW-3, and MW-6.
2. Continue groundwater monitoring quarterly in the remaining three wells (MW-2, MW-4, and MW-5) with report preparation and submittal to your office following each sampling event.
3. Continue monitoring surface water in Redwood Creek for two quarters only (January and March) unless analytes are detected exceeding drinking water standards. If this occurs, quarterly sampling will be continued for the following two quarters.

4. Re-assess the monitoring/remediation effort after data analyses and reporting each quarter as warranted based upon results.

These actions are consistent with recommendations and the report prepared by Parsons Engineering Science for the subject site.

Please notify me at your earliest convenience if our planned efforts for 1996 are acceptable. Your approval in early January will allow quarterly sampling to proceed beginning that month.

If you have questions please call me at 635-0138 x2341.

Sincerely,


Ken Burger
Stewardship Manager

KB:lb

CC: Bruce Rucker, Parsons Engineering Science
Lester Feldman, Regional Water Quality Control Board

bcc: Warren Gee
Laura Comstock
Ted Radosevich

C:\LOGAN

Project File

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

ARNOLD PERKINS, DIRECTOR
RAFAT A. SHAHID, DEPUTY DIRECTOR

Alameda County CC4580
Environmental Health Services
1131 Harbor Bay Pkwy., #250
Alameda CA 94502-6577
(510)567-6700 FAX (510)337-9335

January 9, 1996

Mr. Ken Burger
Regional Parks
2950 Peralta oaks Court
P.O Box 5381
Oakland, CA -94605

Ref: Redwood Regional Park Service Yard, Oakland, CA

Dear Mr. Burger:

I am in receipt of the quarterly monitoring reports for the past 4 quarters, and your letter dated December 19, 1995 for the above referenced address. This Department concurs with your proposal to discontinue groundwater sampling for monitoring wells, MW-1, MW-2 and MW-6 and continue the ground water monitoring at a quarterly intervals for the remaining wells on site. At the present time, surface sampling of the creek should be conducted atleast every 6 months at a minimum. As this is a sensitive environment, sampling should be continued until we have sufficient data that proves that this is not required. If you have any questions, you can reach me at (510) 567-6764.

Sincerely,

Madhulla Logan
Hazardous Material Specialist

CC: Bruce Rucker, Parsons Engineering, 1301 Marina Village
Parkway, Suite 200, Alameda, CA - 94501.

BRP

RECEIVED

JAN 17 1996

PLANNING/STEWARDSHIP

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



ARNOLD PERKINS, DIRECTOR
RAFAT A. SHAHID, DEPUTY DIRECTOR

DEPARTMENT OF PUBLIC HEALTH
499 Fifth Street
Oakland, California 94607
(510)

January 9, 1996

Mr. Ken Burger
Regional Parks
2950 Peralta oaks Court
P.O Box 5381
Oakland, CA -94605


Ref: Redwood Regional Park Service Yard, Oakland, CA

Dear Mr. Burger:

I am in receipt of the quarterly monitoring reports for the past 4 quarters, and your letter dated December 19, 1995 for the above referenced address. This Department concurs with your proposal to ~~discontinue groundwater sampling for monitoring wells, MW-1, MW-2, and MW-5~~ and continue the ground water monitoring at a quarterly intervals for the remaining wells on site. At the present time, surface sampling of the creek should be conducted atleast every 6 months at a minimum. As this is a sensitive environment, sampling should be continued until we have sufficient data that proves that this is not required. If you have any questions, you can reach me at (510) 567-6764.

should be
MW. 3

Sincerely,


Madhulla Logan
Hazardous Material Specialist

CC: Bruce Rucker, Parsons Engineering, 1301 Marina Village
Parkway, Suite 200, Alameda, CA - 94501.



REGIONAL PARKS

95 DEC 21 PM 2:27
EAST BAY REGIONAL PARK DISTRICT

December 19, 1995

Ms. Medhulla Logan
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway, #250
Alameda CA 94502-6577

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General Manager

Subject: Proposed 1996 Schedule for Groundwater and Surface Water Analysis and Reporting - Redwood Regional Park Service Yard, Oakland, California

Dear Ms. Logan:

The 1995 Annual Summary Assessment report prepared for the Park District by Parsons Engineering Science for the subject location underground fuel tank remediation was sent to you for review in November 1995. Based upon monitoring results reported therein for quarterly sampling from November 1994 - August 1995, natural attenuation processes (presumably through biological degradation of petroleum products) has resulted in significant decreased concentrations of petroleum hydrocarbons (TPHg & TPHd & BTEX) detected in groundwater monitoring wells. No detectable petroleum contaminants were detected in three of six wells i.e. MW-1, MW-3, and MW-6 during the four quarterly sampling events. In addition, ~~sampling and analysis for petroleum residues in Redwood Creek surface water has not revealed any continued contamination.~~ However, the most likely time to detect this is during winter months when groundwater is nearest the ground surface and when seepage into the creek would be most likely. We are, therefore, proposing the following for 1996:

1. Discontinue groundwater sampling for petroleum analytes in wells MW-1, MW-3, and MW-6.
2. Continue groundwater monitoring quarterly in the remaining three wells (MW-2, MW-4, and MW-5) with report preparation and submittal to your office following each sampling event.
3. Continue monitoring surface water in Redwood Creek for two quarters only (January and March) unless analytes are detected exceeding drinking water standards. If this occurs, quarterly sampling will be continued for the following two quarters.

dilation
will also
be greatest
than from
over flow



4. Re-assess the monitoring/remediation effort after data analyses and reporting each quarter as warranted based upon results.

These actions are consistent with recommendations and the report prepared by Parsons Engineering Science for the subject site.

Please notify me at your earliest convenience if our planned efforts for 1996 are acceptable. Your approval in early January will allow quarterly sampling to proceed beginning that month.

If you have questions please call me at 635-0138 x2341.

Sincerely,



Ken Burger
Stewardship Manager

KB:lb

CC: Bruce Rucker, Parsons Engineering Science
Lester Feldman, Regional Water Quality Control Board

C:\LOGAN

REGIONAL PARKS

EAST BAY REGIONAL PARK DISTRICT

June 1, 1995

Ms. Madhulla Logan
Alameda County Health
Hazardous Materials Division
1131 Harbor Parkway, Suite 250
Alameda, CA 94502

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Vice-President
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Jocelyn Combs
Beverly Lane
Pat O'Brien
General Manager

Subject: Transportation of Existing Soil Contaminated
by Unleaded Gas from Park District Property
in Alameda County to Contra Costa County

Dear Ms. Logan:

The park District has transported the contaminated soil to a less restricted and open level area approximately 200' x 350' in Sibley Regional Preserve in Contra Costa County, beginning May 24, 1995 and completed the project on May 30, 1995.

The Park District will spread out the contaminated soil to approximately 6-inch thick layer for aeration over a long period of time. The contaminated soil will be occasionally disked to stimulate aeration and will be monitored by the Park District staff.

At the conclusion of the aeration process, the Park District will retain an Environmental Hazardous Waste Consultant firm to conduct sampling and analysis of the layered contaminated soil. A copy of the report will then be forwarded to your office.

If you have any questions, please call me at 635-0138, Ext. 2311.

Sincerely,



Warren Gee
Parkland Design Department
East Bay Regional Park District

cc: Paul C. Andrews, Contra Costa Co. Environ. Division
Bruce M. Rucker, Parsons Engineering Science, Inc.



CERTIFIED MAIL # Z 773 036 409

January 25, 1995

ALAMEDA COUNTY-ENV. HEALTH DEPT.
ENVIRONMENTAL PROTECTION DIV.
1131 HARBOR BAY PKWY., #250
ALAMEDA CA 94502-6577
(510)567-6700Warren Gee
East Bay Regional Park District
Park Lands Design
P.O Box 2381
Oakland, California - 94605-0381

Sub: Redwood Regional Park Service Yard, Oakland, California

Dear Mr. Gee:

I am in receipt of your report "Quarterly Progress Report" dated January 10, 1994 on the referenced property. This report has been reviewed and the following issues identified by this Department still need to be resolved:

1. Confirmation soil samples collected in June 1993 from the south western end of the tank excavation pit indicated high concentrations of Gasoline (TPHg), upto 12,000 ppm. There is no indication from the reports submitted to this Department that soils from the southwest end of the pit which were found to contain significant concentrations of petroleum hydrocarbons was excavated from the pit. The existing contamination in soil if not removed, could potentially leach and add to the existing contamination in the groundwater as evidenced by the recent groundwater monitoring data.
2. A site visit conducted by Ron Owcarz of this Department revealed the presence of soil stockpiled near the creek at Firestation #2. Upon conducting an enquiry, we were informed that the stockpiled soil was from the above referenced property. This Department would like to know the source of this material as we are concerned about the likelihood of surface water runoff from the stockpile to the creek.
3. Six hundred cubic yards of contaminated soil removed from the tank excavation were stockpiled on the referenced property to be transported to Sibley Regional Preserve in Contra Costa County, California for further aeration. This Department has not received any information confirming the actual transportation of the soil to an off site facility
4. Based on the analytical data collected from both groundwater and surface water, there is a significant threat to the Redwood Creek from additional contamination transported from the groundwater. Hence a more aggressive groundwater remediation program would be required to prevent this migration.

This Department concurs with your recommendations, regarding conducting a risk assessment to assess potential impacts to wildlife or human health, and to collect surface water samples from the Redwood Creek on a quarterly basis. Please respond to the above listed issues within 30 days. If you have any questions, call me at (510) 567-6700.

Sincerely,

Madhulla Logan

Madhulla Logan,
Hazardous Material Specialist

First

M. LOGAN

Z 773 036 409



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

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PS Form 3800, March 1993

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, Assistant Agency Director

January 25, 1995

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

Warren Gee
East Bay Regional Park District
Park Lands Design
P.O. Box 2381
Oakland, California - 94605-0381

Sub: Redwood Regional Park Service Yard, Oakland, California

Dear Mr. Gee:

I am in receipt of your report "Quarterly Progress Report" dated January 10, 1994 on the referenced property. This report has been reviewed and the following issues identified by this Department still need to be resolved:

1. Confirmation soil samples collected in June 1993 from the south western end of the tank excavation pit indicated high concentrations of Gasoline (TPHg), upto 12,000 ppm. There is no indication from the reports submitted to this Department that soils from the southwest end of the pit which were found to contain significant concentrations of petroleum hydrocarbons was excavated from the pit. The existing contamination in soil if not removed, could potentially leach and add to the existing contamination in the groundwater as evidenced by the recent groundwater monitoring data.

2. A site visit conducted by Ron Owcarz of this Department revealed the presence of soil stockpiled near the creek at Firestation #2. Upon conducting an enquiry, we were informed that the stockpiled soil was from the above referenced property. This Department would like to know the source of this material as we are concerned about the likelihood of surface water runoff from the stockpile to the creek.

3. Six hundred cubic yards of contaminated soil removed from the tank excavation were stockpiled on the referenced property to be transported to Sibley Regional Preserve in Contra Costa County, California for further aeration. This Department has not received any information confirming the actual transportation of the soil to an off site facility

4. Based on the analytical data collected from both groundwater and surface water, there is a significant threat to the Redwood Creek from additional contamination transported from the groundwater. Hence a more aggressive groundwater remediation program would be required to prevent this migration.

same as 1

This Department concurs with your recommendations, regarding conducting a risk assessment to assess potential impacts to wildlife or human health, and to collect surface water samples from the Redwood Creek on a quarterly basis. Please respond to the above listed issues within 30 days. If you have any questions, call me at (510) 567-6700.

Sincerely,

A handwritten signature in cursive script that reads "Madhulla Logan". The signature is written in dark ink and is positioned below the word "Sincerely,".

Madhulla Logan,
Hazardous Material Specialist



Contra Costa County
Health Services Department

ENVIRONMENTAL HEALTH DIVISION
HAZARDOUS MATERIALS / OCCUPATIONAL HEALTH

RECEIVED
HAZMAT
DEC 20 AM 7:45
December 6, 1994

Mr. Warren Gee
East Bay Regional
Park District
P.O. Box 5381
Oakland, CA 94605-0381

**Subject: Transportation Of Stockpiled Soil Generated During Tank Removals
From Redwood Regional Park To Sibley Regional Preserve**

Dear Mr. Gee:

Contra Costa County Health Services Department (CCCHSD) has reviewed the East Bay Regional Park District's (EBRP) request to relocate approximately 600 cubic yards of hydrocarbon contaminated soil Redwood Regional Park in Alameda County to Sibley Regional Preserve in Contra Costa County. CCCHSD has no objections to the plan. Subsequent to soil transport, final treatment, and sampling, but prior to final soil disposition EBRP must submit to CCCHSD final analytical results and a soil management plan for the transported soil.

If you have any Questions please do not hesitate to call me at (510)646-2286.

Sincerely,

Paul C. Andrews
Hazardous Materials Specialist

PA

cc:

Juliet Shin
Alameda County Health
80 Swan Way, Rm 200
Oakland, CA 94621

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, Assistant Agency Director

November 23, 1994

Mr. Warren Gee
East Bay Regional
Park District
P.O. Box 5381
Oakland, CA 94605-0381

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

STID 4145

Re: Transportation of stockpiled soil, resulting from the tank removals, from Redwood Regional Park to Sibley Regional Preserve

Dear Mr. Gee,

In July 1993, soil samples were collected from stockpiled soil resulting from the underground storage tank removals. Analysis of these samples identified up to 180 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg) and 0.4 ppm benzene.

In a November 3, 1994 letter, the park district has proposed to transport the stockpiled soil from Redwood Regional Park to Sibley Regional Preserve, where there will be more land available to spread this soil out and expedite aeration. In response to the park district's request, this office assessed whether this soil would be considered a hazardous waste under the State's regulations such that the transportation of this soil would require a waste discharge permit and fall under the hazardous waste transportation requirements. Of the contaminant constituents identified in the stockpiled soil, only benzene is a listed toxic substance in Title 22 California Code of Regulations. The State's Regulatory Level for benzene is 0.5 ppm. Since the highest concentrations of benzene in the stockpiled soil did not exceed this regulatory level, it appears that the stockpiled soil is not hazardous and can be transported off site.

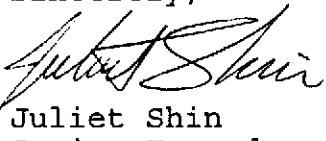
Please be reminded to adequately cover or secure this stockpiled soil during transportation to prevent any releases into the environment. Regardless of its location, this stockpiled soil shall be properly contained during the rainy season to prevent surface runoff from infiltrating the piles.

Please notify this office when the soil is transported to Sibley Park and submit information identifying the location of soil storage and aeration.

Mr. Warren Gee
Re: Redwood Regional Park
November 23, 1994
Page 2 of 2

If you have any questions or comments, please contact me at (510)
567-6700.

Sincerely,



Juliet Shin
Senior Hazardous Materials Specialist

cc: Bruce Rucker
ES Engineering Science
1301 Marina Village Pkwy., Ste. 200
Alameda, CA 94501

Edgar Howell

EAST BAY REGIONAL PARK DISTRICT

LETTER OF TRANSMITTAL

BOARD OF DIRECTORS

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General Manager

To: Ms. Juliet Shin Date: November 7, 1994
Alameda County Health Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Transportation of Existing Soil Contaminated
by Unleaded Gas from Park District Property in Alameda County to Contra Costa Co.

We are sending you herewith:

 Prints, Tracings, Working drawings,
 Specifications, Correspondence, Photographs,

For the following action:

For your information, For your records, For your review,
 For your action, Please return, Please retain one
copy and return
the others with
corrections and
comments,

Comments: _____

Drawing Number	Date of original or revision	Copies	Description

Parkland Design Department

5/94

BY: Warren Gee
warren gee

REGIONAL PARKS

EAST BAY REGIONAL PARK DISTRICT

BOARD OF DIRECTORS

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Pat O'Brien
General Manager

October 12, 1994

Ms. Juliet Shin
Alameda County Health Agency
Division of Hazardous Materials
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

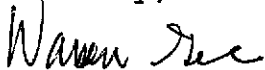
Re: Collection of Surface Water Samples on a
Quarterly Basis from Redwood Creek

Dear Ms. Shin:

The additional work of collecting surface water samples from the creek on a quarterly basis was not anticipated by the Park District. The Park District Design budget for the rest of the fiscal year of 1994 is designated for other Park District projects. The Park District is requesting from the Department of Environmental Health a delay in surface water creek sampling. Funds will be available in the beginning of the new fiscal year January 1, 1995, and at that time the Park District will proceed with this work. Currently the creek is dry and there is no surface water to sample at this time.

Thank you for this consideration and if you have any other questions, please call me at (510) 635-0135, Ext. 2311.

Sincerely,



Warren Gee
Parkland Design Department
East Bay Regional Park District

WG/fjb



ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, Assistant Agency Director

August 25, 1994

Mr. Warren Gee
East Bay Regional
Park District
P.O. Box 5381
Oakland, CA 94605-0381

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

STID 4145

Re: Work plan for investigations at Redwood Regional Park
Service Yard, Oakland, California

Dear Mr. Gee,

This office has reviewed Engineering-Science's (ES) work plan, dated August 1994. This work plan is acceptable to this office. It is the understanding of this office that field work will commence in September 1994.

Creek water samples collected from Redwood Creek have identified up to 1.8 parts per billion (ppb) benzene, which exceeds the MCL drinking water standard of 1ppb. Based on the fact that this surface water is the home to Rainbow Trout, and flows to the Upper San Leandro Reservoir, which is used for municipal and domestic supplies, the contaminated surface water appears to be a potential threat to wildlife and human health. Therefore, you will be required to collect surface water samples from the creek on a quarterly basis, and include details of this work in the required quarterly ground water monitoring reports. Additionally, you will be required to either contain further impact to the creek or develop a Risk Assessment to indicate whether the observed contaminant levels will, in fact, pose a risk to wildlife or human health.

Lastly, the work plan proposes to use trisodium phosphate as detergent for the drilling equipment. Phosphate is known to be hazardous to aquatic life. Please be reminded to avoid disposing of this liquid in the storm sewer. Discharge into the sanitary sewer, under permit, is acceptable since this water is treated before it is outlet into the Bay.

If you have any questions or comments, please contact me at (510) 567-6763.

Sincerely,

Juliet Shin
Hazardous Materials Specialist

Mr. Warren Gee
Re: Redwood Regional Park
August 25, 1994
Page 2 of 2

cc: Bruce M. Rucker
Engineering-Science, Inc.
1301 Marina Village Pkwy.
Alameda, CA 94501

Edgar Howell

REGIONAL PARKS

EAST BAY REGIONAL PARK DISTRICT

March 30, 1994

Ms. Juliet Shin
Hazardous Materials Specialist
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, CA 94621

Re: Redwood Regional Park Service Yard
Work Plan Schedule

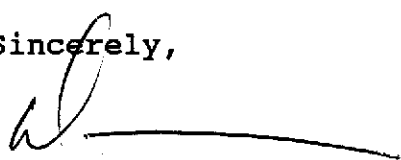
Dear Ms. Shin:

This letter is in response to your letter dated March 23, 1994, regarding the subject site. The East Bay Regional Park District will be able to comply with your order for preparation of a "Short Summary Work Plan" related to soil and ground water contamination within 30 days. We will not, however, be able to submit a work plan for the installation of permanent monitoring wells within 45 days.

We are in the process of receiving proposals for preparation of this work plan and we are required to present our selected consultant to the District board of Directors for their approval prior to entering into a contract. We feel that we can get a work plan to you in 90 days, or mid-June, and I hope that this time line will be acceptable to you.

Please call me directly at (510) 635-0135, Ext. 2303, should you wish to discuss this further.

Sincerely,


Mike Anderson
Chief, Parkland Design

MA/fjb

cc: Warren Gee

BOARD OF DIRECTORS

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General Manager

ALCO
HAZMAT
94 MAR 31 PM 1:31



**ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY**

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

March 29, 1994

Mr. Warren Gee
East Bay Regional
Park District
P.O. Box 5381
Oakland, CA 94605-0381

STID 4145

Re: Creek Sampling at Redwood Road Park Service Yard, Oakland

Dear Mr. Gee,

This office has reviewed a copy of the figure showing the upstream and downstream sampling locations from Redwood Creek, dated March 29, 1994. These sampling locations are acceptable to this office, so you can go ahead and have them analyzed for the appropriate constituents.

If you have any questions or comments, please contact me at (510) 271-4530.

Sincerely,

A handwritten signature in cursive script that reads "Juliet Shin".

Juliet Shin
Hazardous Materials Specialist

cc: Bruce Rucker
Engineering Science, Inc.
1301 Marina Village Pkwy., Ste 200
Alameda, CA 94501

Edgar Howell-File(JS)

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

March 23, 1994

Mr. Warren Gee
East Bay Regional
Park District
2950 Peralta Oaks Ct.
P.O. Box 5381
Oakland, CA 94605-0381

STID 4145

Re: Investigations at Redwood Regional Park Service Yard,
Oakland

Dear Mr. Gee,

This office has reviewed Engineering-Science's (ES) creek sampling report, dated March 2, 1994. One soil sample was collected from the wall of the Redwood Creek bed, and one water sample was collected from Redwood Creek in response to the discovery of discolored soil being located along the sidewall of the creek. Analysis of these samples identified 130 parts per billion (ppb) Total Petroleum Hydrocarbons as gasoline (TPHg) in the water sample and 3 parts per million (ppm) TPHg in the soil sample. This soil and ground water contamination appears to be resulting from leaks occurring from the former underground storage tanks (USTs).

According to the cross section shown on Figure 4.1 of ES's December 1993 Site Characterization Report, the ground water and creek are hydraulically connected (i.e., it appears that the ground water recharges the creek since the depth to ground water is equal to the depth to water in the creek bed). In October 1993, elevated levels of soil and ground water contamination were identified from the borings located adjacent to the creek, B13, B14, and B15 (up to 1,900 ppm in soil and 19,000 ppb from the "grab" ground water samples). This office is concerned that comparable contaminant concentrations will eventually infiltrate this creek and impact the rainbow trout in the creek, and the people and wildlife utilizing Upper San Leandro Reservoir, located 4,000 feet downstream of Redwood creek.

You are required to collect another set of creek water samples, one from upgradient and one from downgradient of the discolored soil. If contaminant concentrations are noticeably greater in the downgradient creek sample, then immediate efforts will need

Mr. Warren Gee
Re: Redwood Regional Park
March 23, 1994
Page 2 of 2

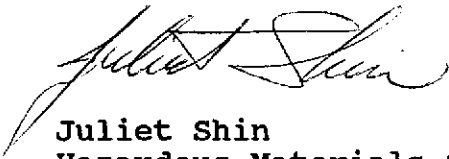
to be made to prevent further impact to the creek by the observed soil and ground water contamination adjacent to and beneath the creek. A short summary work plan shall be submitted to this office **within 30 days** of the date of this letter.

Additionally, you are required to submit a work plan addressing the installation of permanent monitoring wells **within 45 days** of the date of this letter. These wells shall be monitored on a quarterly basis and corresponding quarterly ground water monitoring reports shall be submitted. Water level measurements are to be conducted on a monthly basis for the first three months and quarterly thereafter. Ground water gradient determinations are to be included in the quarterly ground water monitoring reports.

Lastly, please notify the California Fish and Game regarding the impact to Redwood Creek.

If you have any questions or comments, please contact me at (5100 271-4530.

Sincerely,



Juliet Shin
Hazardous Materials Specialist

cc: Bruce Rucker
Engineering Science, Inc.
1301 Marina Village Pkwy., Ste 200
Alameda, CA 94501

Richard Hiett, RWQCB

(Edgar Howell-File(JS)

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

January 27, 1994

Warren Gee
East Bay Regional
Park District
2950 Peralta Oaks Ct.
P.O. Box 5381
Oakland, CA 94605-0381

STID 4145

Re: Investigations at Redwood Regional Park Service Yard,
Oakland

Dear Mr. Gee,

This office has reviewed Engineering-Science's letter work plan, dated January 27, 1994, for the collection of one creek water sample and one soil sample from the creek sidewall. This work plan is acceptable to this office. Please keep us apprised of the work schedule.

If you have any questions or comments, please contact me at (510) 271-4530.

Sincerely,

A handwritten signature in cursive script, appearing to read "Juliet Shin".

Juliet Shin
Hazardous Materials Specialist

cc: Bruce M. Rucker
ES Engineering-Science, Inc.
1301 Marina Village Pkwy., Ste 200
Alameda, CA 94501

Edgar Howell-File(JS)

ALCO
HAZMAT

94 JAN 31 PM 2:47

27 January 1994
Ref:NC367 (723090)

Alameda County Health Care Services Agency
Department of Environmental Health
Division of Hazardous Materials
80 Swan Way, Room 200
Oakland, California 94621
Attention: Ms. Juliette Shin

Subject: Creek and Soil Sampling at Redwood Regional Park, Oakland, California

Dear Ms. Shin:

In accordance with our telephone conversation of 18 January 1994, Engineering-Science, Inc. (ES) is submitting to Alameda County Health Care Services Agency - Department of Environmental Health - Division of Hazardous Materials (ACHCSA-DHM) this description of proposed sampling and analysis activities at the East Bay Regional Park District (EBRPD) Redwood Regional Park Service Yard underground fuel storage tank (UFST) site in Oakland, California. This proposal follows previous site characterization and remediation activities associated with the former UFSTs conducted by ES at the project site, which were summarized in the ES report dated 16 December 1993.

In addition to the recommendations for further site characterization presented in the ES report, your letter of 10 January 1994 requested that EBRPD collect and analyze a sample of the creek water in the vicinity of the discolored soil observed in the creekbed during site characterization activities. We also understand that you have verbally requested (18 January 1994 phone conversation between you and Mr. Bruce Rucker of ES) that a sample of the discolored soil be collected and analyzed.

On behalf of EBRPD, ES proposes to collect one water sample from the creek directly downstream of the area of discolored soil. That sample will be collected at a time when sufficient running water is present in the creek. The sample will be collected in clean glass containers appropriate to the laboratory analyses (1-500 ml amber glass for total petroleum hydrocarbons as diesel and kerosene [TPH-D and TPH-K and 2-40 ml glass volatile organic analysis [VOA] vials for TPH as gasoline [TPH-G] and aromatic hydrocarbons). The sampling containers will be labeled, placed in a cooler with "blue ice" and transported under chain-of-custody the same day to an analytical laboratory certified by the State of California Environmental Protection Agency (CalEPA) Environmental Laboratory Accreditation Program (ELAP).

That sample will be analyzed for contaminants of concern identified in previous site characterization/remediation activities, including:

- Total petroleum hydrocarbons as gasoline (TPH-G), TPH as diesel (TPH-D) and TPH as kerosene (TPH-K) by the Department of Toxic Substances Control (DTSC)/Leaking Underground Fuel Tank (LUFT) Method (modified EPA method 8015)
- Aromatic hydrocarbons (including benzene, toluene, ethylbenzene and total xylenes [BTEX]) by EPA Method 602.

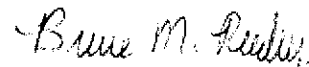
Concurrent with the creek water sampling, ES will collect one sample of the discolored soil from above the creek waterline. That sample will be collected by driving a brass or stainless steel sampling tube (6-inch long by 2-inch diameter) into the soil. The tube will be sealed with Teflon (tradename) tape and non-reactive plastic caps, labeled, refrigerated and transported under chain-of-custody the same day to the analytical laboratory. The soil sample will be analyzed for the same constituents as the creek water sample.

The results of the sampling activities (including sampling protocols, certified analytical laboratory reports and chain-of-custody records) will be summarized in a letter to East Bay Regional Parks District, and a copy will be sent to ACHCSA-DHM.

We trust that this submittal meets the needs of your agency. Please call if you have questions or require further information. We will contact you in the near future to confirm your receipt of this letter.

Very Truly Yours,

ENGINEERING-SCIENCE, INC.



Bruce M. Rucker
Project Manager

cc: W. Gee, EBRPD
F. Stanin, ES

ES

ENGINEERING-SCIENCE, INC.

1301 MARINA VILLAGE PARKWAY
ALAMEDA, CALIFORNIA

TO: Juliet Shin

LOCATION: ACHCSA - DEH - Division of Hazardous Materials

RAPIDFAX NO: 510 569 4757

COPIES TO: _____

FROM: Bruce Ryder

DATE: 1/27/94

TOTAL NUMBER OF PAGES 3 (INCLUDING THIS COVER LETTER)

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL BACK AS SOON AS POSSIBLE.
OFFICE NUMBER (510) 769-0100

ENGINEERING-SCIENCE, INC.
ALAMEDA, CALIFORNIA
RAPIDFAX NUMBER (510) 769-9244

Hard copy mailed today

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

January 10, 1994

Warren Gee
East Bay Regional
Park District
2950 Peralta Oaks Ct.
P.O. Box 5381
Oakland, CA 94605 0381

STID 4145

Re: Investigations at Redwood Regional Park Service Yard,
Oakland

Dear Mr. Gee,

This office has reviewed ES Engineering-Science's (ES) report for the Closure of Underground Fuel Storage Tanks and Initial Site Characterization, dated December 1993. In addition to the investigations proposed in ES's August 1993 work plan, you will be required to collect a creek water sample to determine the degree of impact on the creek by the contamination resulting from the former underground storage tanks. If the creek water is found to be contaminated, you will be required to conduct a risk assessment for the wildlife potentially impacted by the contaminated creek.

Containment measures may be required for the ground water contaminant plume, and immediate remediation of the observed soil contamination in contact with the creek, in order to prevent further impact to the creek. Please notify the Fish and Game, if you haven't already, and inform them of the investigation results to date.

Additionally, elevated levels of kerosene were observed in samples collected from the initial characterization of the site. Therefore, please include the analysis for kerosene in the next phase of work at the site.

Lastly, this office encourages you to apply for the State Trust Fund for potential reimbursement for site investigations and remediation. If you have any questions or comments, please contact me at (510) 271-4530.

Sincerely,

A handwritten signature in cursive script, appearing to read "Juliet Shin".

Juliet Shin
Hazardous Materials Specialist

Mr. Warren Gee
Re: Redwood Regional Park
January 10, 1994
Page 2 of 2

cc: Bruce M. Rucker
ES Engineering-Science, Inc.
1301 Marina Village Pkwy., Ste 200
Alameda, CA 94501

✓Edgar Howell-File(JS)

20 September 1993
Ref: NC367.05.01

93 SEP 21 AM 11:01

Alameda County Health Care Services Agency
Division of Hazardous Materials
80 Swan Way, Room 200
Oakland, California 94621

Attention: Ms. Juliet Shin

Subject: Workplan for Site Characterization at East Bay Regional Parks District
Redwood Regional Park Corporation Yard Site, Oakland, Alameda County,
California

Dear Ms. Shin:


East Bay Regional Parks District (EBRPD) and Engineering-Science, Inc. (ES) have received your letter of 16 September 1993 which summarizes your agency's comments to the aforementioned workplan for site characterization at the referenced site.

ES and EBRPD concur with those ACHCSA-DHM comments, with one exception. The workplan specified that **up to 15 boreholes would be drilled** at the site, while only ten were shown on Figure 2. **It is our intent to drill a minimum of ten and a maximum of 15 boreholes**, as needed to achieve the objectives of the workplan. The need for and locations of boreholes drilled in addition to those ten shown on Figure 2 will be determined in the field based on field observations.

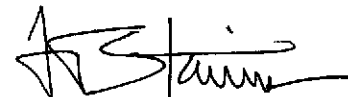
The exact work schedule for this project has not been finalized, but will be conducted within 60 days of the date of your letter. We will notify your agency a minimum of five working days prior to initiating field activities. Please call if you have questions or require additional information.

Very Truly Yours,

ENGINEERING-SCIENCE, INC.



Bruce M. Rucker
Project Manager



Fred T. Stanin, R.G.
Technical Director

BMR/FTS/sls/46-24.R0

cc: W. Gee, EBRPD
N. Siler, ES

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

September 16, 1993

Warren Gee
East Bay Regional
Park District
2950 Peralta Oaks Ct.
P.O. Box 5381
Oakland, CA 94605 0381

STID 4145

Re: Work plan for investigations at Redwood Regional Park,
Corporation Yard, Oakland

Dear Mr. Gee,

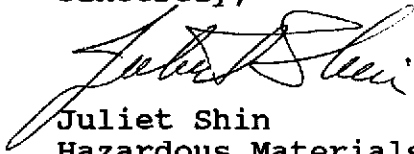
This office has received and reviewed Engineering-Science's work plan, dated August 1993, for soil and ground water investigations at the above site. This work plan is acceptable to this office with the following comments:

- o Permanent monitoring wells shall be installed subsequent to this phase of work. Temporary wells and "grab" ground water samples can only be used as a screening tool for determining the locations of the permanent monitoring wells. These permanent monitoring wells shall be sampled on a quarterly basis for a minimum of four quarters.
- o Per my conversation with Bruce Rucker, Engineering-Science, on September 16, 1993, a total of five soil samples will be analyzed for Total Petroleum Hydrocarbons (TPH) as diesel, in addition to TPH as gasoline and benzene, toluene, ethylbenzene, and xylenes. It is the understanding of this office that at least a portion of these samples will be collected from locations nearest the former diesel tank.
- o A total of 15 boreholes will be placed at this site, although only 10 were shown on the figure in the work plan.
- o Field work must commence within 60 days of the date of this letter. A report documenting the work shall be submitted within 45 days after completing field activities.

Warren Gee
Re: Redwood Regional Park
September 16, 1993
Page 2 of 2

If you have any questions or comments, please contact me at (510)
271-4530.

Sincerely,



Juliet Shin
Hazardous Materials Specialist

cc: Bruce M. Rucker
ES
Engineering-Science, Inc.
1301 Marina Village Pkwy., Ste 200
Alameda, California 94501

Edgar Howell-File(JS)

REGIONAL PARKS

EAST BAY REGIONAL PARK DISTRICT

LETTER OF TRANSMITTAL

To: Department of Environmental Health Date: August 23, 1993
Attn: Juliet Shin
80 Swan Way, Room 350
Oakland, CA 94621

BOARD OF DIRECTORS
 Jocelyn Combs, *President*
 Ted Radke, *Vice President*
 Oliver Holmes, *Treasurer*
 Susan Smartt, *Secretary*
 John O'Donnell
 Douglas Siden
 Jean Siri
 Pat O'Brien
 General Manager

Subject: Redwood Park - Exploratory Borehole Investigation to Evaluate
the Extent and Magnitude of Soil Contamination

We are sending you herewith:

Prints, Tracings, Working drawings,
 Specifications, Correspondence, Photographs,
 Copy of Purchase Order No. 31828 in the amount of \$21,300 to proceed with this phase of the work.

For the following action:

For your information, For your records, For your review
 For your action, Please return, Please retain one copy and return the others with corrections and comments,
 For your Files

93 AUG 24 PM 2:01

Comments: _____

Drawing Number	Date of original or revision	Copies	Description

Parkland Design Department
 BY: WARREN GEE
 Warren Gee



PURCHASE REQUISITION

No. 88837

A/P APPROVAL	REQUESTED BY	APPROVED BY	DEPT.	PARK AREA	DATE
	WARREN GEE	<i>al</i>	DESIGN	REDWOOD PARK	8/23/00

VENDOR NAME: ATTN: BRUCE RUCKER ENGINEERING-SCIENCE INC TO BE DELIVERED TO (PARK/JOB LOCATION):

ADDRESS: 1301 MARINA VILLAGE PARKWAY SUITE 200

CITY: ALAMEDA

STATE: CA ZIP: 94501 EBRPD PHONE NO. 635-0135 EXT. 2311

PHONE NO: 769-0100

CHECK ONE: MAIL P.O. TO VENDOR PAY DIRECT - NO P.O. ISSUED

PURCHASING USE ONLY		CODES FOR UNIT OF MEASURE		TAX CODES	VENDOR NUMBER	TOTAL COST INCL. TAX & SHIPPING
P.O. #	P.O. TYPE	BD = BUNDLE BX = BOX CS = CASE EA = EACH FT = FOOT	GL = GALLON QT = QUART RL = ROLL SH = SHEET ST = SET	T = Taxable - NT = Non-Taxable		
31828	C					\$21,300.00

Line No.	ITEM DETAIL DESCRIPTION	QTY.	Unit	UNIT PRICE	TAX CODE	FUND-GROUP-DEPT.	OBJECT CODE	PROJECT CODE
	EXPLORATORY BOREHOLE INVESTIGATION TO EVALUATE THE EXTENT AND MAGNITUDE OF SOIL CONTAMINATION ASSOCIATED WITH THE FORMER LEAKING U.G. FUEL STORAGE TANK		LS	\$21,300.00	NT	330-801-400-996E	7312	
	TAX							
	SHIPPING CHARGES							

DEPT. HEAD	DATE	CONTROLLER	DATE	GENERAL MANAGER	DATE
<i>al</i>	8/23/00				

EAST BAY REGIONAL PARK DISTRICT

LETTER OF TRANSMITTAL

ATTN: JULIET SHIN
 To: ALAMEDA COUNTY HEALTH AGENCY
DIVISION OF HAZARDOUS MATERIALS
FO SWAN WAY RM 350
OAKLAND CA 94621

Date: 8/4/93

BOARD OF DIRECTORS
 STEVE H. GORDON, President
 JACQUELYN L. STOS, Vice President
 BO RABKE, Treasurer
 TERRY HODGINS, Secretary
 MURIEL KASSEL
 JOHN D. CORNE
 JOHN WILLIAMS
 FRED BRUN
 General Manager

Subject: ABERRATION OF STOCKPILED CONTAMINATED SOIL AT
REDWOOD REGIONAL PARK SITE

We are sending you herewith:

Prints, Tracings, Working drawings,
 Specifications, Correspondence, Photographs,
 REPORT OF THE STOCKPILED SOIL SAMPLING

For the following action:

For your information, For your records, For your review,
 For your action, Please return, Please retain one copy and return the others with corrections and comments,

93 AUG -5 PM 4:59

Comments: IF YOU HAVE ANY QUESTIONS, PLEASE GIVE ME
A CALL AT 635-0135 EXT 2311

Drawing Number	Date of original or revision	Copies	Description

Parkland Design Department

BY: WARREN CREE



REGIONAL PARKS

EAST BAY REGIONAL PARK DISTRICT

93 JUL 22 PM 2:40

BOARD OF DIRECTORS

Jocelyn Combs, *President*
Ted Radke, *Vice President*
Oliver Holmes, *Treasurer*
Susan Smartt, *Secretary*
John O'Donnell
Douglas Siden
Jean Siri
Pat O'Brien
General Manager

July 21, 1993

Ms. Juliet Shin
Alameda County Health Agency
Division of Hazardous Materials
80 Swan Way, Room 350
Oakland, CA 94621

Re: Account for Exploratory Borehole Investigation
at the Redwood Corporation Yard in Oakland, CA

Dear Ms. Shin:

Per our phone conversation of Tuesday, July 21, 1993, as I discussed with you, funds for this phase of the project will be transferred into referenced account within 90 days from July 22, 1993. Engineering Science will be issued a purchase order in the amount of \$21,300.00 to complete this portion of the work.

If you have any other questions, please call me at 653-1035, Ext. 2311.

Sincerely,



Warren Gee
Parkland Design Department
East Bay Regional Park District

WG/bm



ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4530

July 15, 1993

Warren Gee
East Bay Regional
Park District
2950 Peralta Oaks Ct.
P.O. Box 5381
Oakland, CA 94605 0381

STID 4145

Re: Sampling of stockpiled soil piles at Redwood Regional Park

Dear Mr. Gee,

This office reviewed Engineering Science's proposal, dated July 9, 1993, for sampling of the contaminated stockpiled soil at the above site. This office is requiring that the soil samples be analyzed for Total Petroleum Hydrocarbons (TPH) as diesel, in addition to TPH as gasoline and benzene, toluene, ethylbenzene, and xylenes. It appears that no soil samples, to date, have yet been analyzed for diesel although a diesel underground storage tank was also removed from the site.

If you have any questions or comments, please contact me at (510) 271-4530.

Sincerely,

Juliet Shin
Hazardous Materials Specialist

cc: *Edgar Howell-File(JS)

white -env.health
 yellow -facility
 pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200
 Oakland, CA 94621
 (415) 271-4320

Hazardous Materials Inspection Form

II, III

Site ID # 4145 Site Name Redwood Regional Park Today's Date 6/15/93

II.A BUSINESS PLANS (Title 19)

- 1. Immediate Reporting 2703
- 2. Bus. Plan Stds. 25503(b)
- 3. RR Cars > 30 days 25503.7
- 4. Inventory Information 25504(a)
- 5. Inventory Complete 2730
- 6. Emergency Response 25504(b)
- 7. Training 25504(c)
- 8. Deficiency 25505(a)
- 9. Modification 25505(b)

Site Address 7867 Redwood Rd

City Oakland Zip 94619 Phone _____

MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

- I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- II. Business Plans, Acute Hazardous Materials
- III. Underground Tanks

II.B ACUTELY HAZ. MATLS

- 10. Registration Form Filed 25533(a)
- 11. Form Complete 25533(b)
- 12. RMPP Contents 25534(c)
- 13. Implement Sch. Req'd? (Y/N)
- 14. OffSite Conseq. Assess. 25524(c)
- 15. Probable Risk Assessment 25534(d)
- 16. Persons Responsible 25534(g)
- 17. Certification 25534(i)
- 18. Exemption Request? (Y/N) 25536(b)
- 19. Trade Secret Requested? 25538

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

III. UNDERGROUND TANKS (Title 23)

- General
- 1. Permit Application 25284 (H&S)
 - 2. Pipeline Leak Detection 25292 (H&S)
 - 3. Records Maintenance 2712
 - 4. Release Report 2651
 - 5. Closure Plans 2670

- Monitoring for Existing Tanks
- 6. Method
 - 1) Monthly Test
 - 2) Daily Vadose Semi-annual groundwater One time soils
 - 3) Daily Vadose One time soils Annual tank test
 - 4) Monthly Groundwater One time soils
 - 5) Daily Inventory Annual tank testing Cont pipe leak det Vadose/gndwater mon.
 - 6) Daily Inventory Annual tank testing Cont pipe leak det
 - 7) Weekly Tank Gauge Annual tank testing
 - 8) Annual Tank Testing Daily Inventory
 - 9) Other _____

- 7. Precs Tank Test Date: 2643
- 8. Inventory Rec. 2644
- 9. Soil Testing 2646
- 10. Ground Water 2647

- New Tanks
- 11. Monitor Plan 2632
 - 12. Access, Secure 2634
 - 13. Plans Submit Date: 2711
 - 14. As Built Date: 2635

Comments: Came out to site to oversee confirmation sampling from overexcavation. S-1 collected from about 20.5 feet bgs. S-2 collected from 16 feet bgs. S-3 collected from ~16 feet bgs. S-1' was collected to take the place of S-1 at ~17 feet bgs. S-5 collected from ~13 feet bgs. S-6 was collected from 8.5' ~7 1/2 feet bgs.

Diesel tank was 3' 8" to top of tank. Excavated soil from above tanks went down to about 4 feet bgs. According to Henry, ES, this soil got deeper readings on PID. Some "blue" soil was "accidentally" placed on that pile, which should be removed to contaminated soil pile.

[Handwritten signature]

II, III

Contact: _____

Title: _____

Signature: _____

Inspector: Juliet Shin

Signature: Juliet Shin

white -env.health
 yellow -facility
 pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200
 Oakland, CA 94621
 (415) 271-4320

Hazardous Materials Inspection Form

II, III

Site ID # 4145 Site Name Redwood Regional Park Today's Date 6/14/93

Site Address 7867 Redwood Rd.
 City Oakland Zip 94619 Phone _____

II.A BUSINESS PLANS (Title 19)

- ___ 1. Immediate Reporting 2703
- ___ 2. Bus. Plan Stds. 25503(b)
- ___ 3. RR Cars > 30 days 25503.7
- ___ 4. Inventory Information 25504(a)
- ___ 5. Inventory Complete 2730
- ___ 6. Emergency Response 25504(b)
- ___ 7. Training 25504(c)
- ___ 8. Deficiency 25505(a)
- ___ 9. Modification 25505(b)

___ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

- ___ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- ___ II. Business Plans, Acute Hazardous Materials
- ___ III. Underground Tanks

II.B ACUTELY HAZ. MATLS

- ___ 10. Registration Form Filed 25533(a)
- ___ 11. Form Complete 25533(b)
- ___ 12. RMPP Contents 25534(c)
- ___ 13. Implement Sch. Req'd? (Y/N)
- ___ 14. OffSite Conseq. Assess. 25524(c)
- ___ 15. Probable Risk Assessment 25534(d)
- ___ 16. Persons Responsible 25534(g)
- ___ 17. Certification 25534(f)
- ___ 18. Exemption Request? (Y/N) 25536(b)
- ___ 19. Trade Secret Requested? 25538

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

III. UNDERGROUND TANKS (Title 23)

- | | |
|-------------------------------|-----------------------------------------------------------------------------------------|
| General | ___ 1. Permit Application 25284 (H&S) |
| | ___ 2. Pipeline Leak Detection 25292 (H&S) |
| | ___ 3. Records Maintenance 2712 |
| | ___ 4. Release Report 2651 |
| | ___ 5. Closure Plans 2670 |
| Monitoring for Existing Tanks | ___ 6. Method |
| | 1) Monthly Test |
| | 2) Daily Vadose
Semi-annual groundwater
One time soils |
| | 3) Daily Vadose
One time soils
Annual tank test |
| | 4) Monthly Gndwater
One time soils |
| | 5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon. |
| | 6) Daily Inventory
Annual tank testing
Cont pipe leak det |
| | 7) Weekly Tank Gauge
Annual tank tising |
| | 8) Annual Tank Testing
Daily Inventory |
| | 9) Other _____ |
| New Tanks | ___ 7. Precls Tank Test 2643 |
| | Date: _____ |
| | ___ 8. Inventory Rec. 2644 |
| | ___ 9. Soil Testing 2646 |
| | ___ 10. Ground Water. 2647 |
| | ___ 11. Monitor Plan 2632 |
| | ___ 12. Access. Secure 2634 |
| | ___ 13. Plans Submit 2711 |
| | Date: _____ |
| | ___ 14. As Built 2635 |
| Date: _____ | |

Comments:

Went out to site to meet w/ consultants + discuss the newest development at the site - groundwater encountered at ~25 feet below ground surface during overexcavation. It was uncertain whether this water came from the spring. Extensive staining & odors were still present from soil. It was determined that tomorrow would be the last day of overexcavation, and then, if they could remove all the contaminated soil, they would resort to another method of soil remediation. I informed them that a groundwater investigation would definitely be required.

JS

Rev 6/88

II, III

Contact: _____

Title: _____

Signature: _____

Inspector: Juliet Shim

Signature: Juliet Shim

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

II, III

white -env.health
yellow -facility
pink -files

Site ID # _____ Site Name Redwood Reg. Park Today's Date 5/3/93

II.A BUSINESS PLANS (Title 19)

- ___ 1. Immediate Reporting 2703
- ___ 2. Bus. Plan Stds. 25503(b)
- ___ 3. RR Cars > 30 days 25503.7
- ___ 4. Inventory Information 25504(a)
- ___ 5. Inventory Complete 2730
- ___ 6. Emergency Response 25504(b)
- ___ 7. Training 25504(c)
- ___ 8. Deficiency 25505(a)
- ___ 9. Modification 25505(b)

Site Address _____

City _____ Zip 94 Phone _____

___ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

- ___ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- ___ II. Business Plans, Acute Hazardous Materials
- III. Underground Tanks

II.B ACUTELY HAZ. MATLS

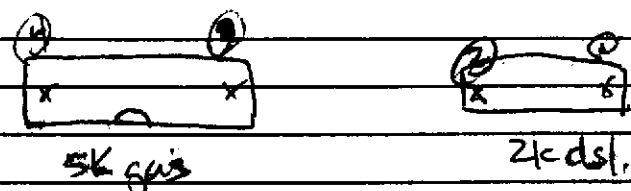
- ___ 10. Registration Form Filed 25533(a)
- ___ 11. Form Complete 25533(b)
- ___ 12. RMPP Contents 25534(c)
- ___ 13. Implement Sch. Req'd? (Y/N) _____
- ___ 14. OffSite Conseq. Assess. 25524(c)
- ___ 15. Probable Risk Assessment 25534(d)
- ___ 16. Persons Responsible 25534(g)
- ___ 17. Certification 25534(f)
- ___ 18. Exemption Request? (Y/N) _____
- ___ 19. Trade Secret Requested? 25538

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments: Roger ^{Johnson} EBRP Herb Kessler - Fire
Henry ES
LOAM

III. UNDERGROUND TANKS (Title 23)

- General
- ___ 1. Permit Application 25284 (H&S)
 - ___ 2. Pipeline Leak Detection 25292 (H&S)
 - ___ 3. Records Maintenance 2712
 - ___ 4. Release Report 2651
 - ___ 5. Closure Plans 2670



- Monitoring for Existing Tanks
- ___ 6. Method
 - 1) Monthly Test
 - 2) Daily Vadose
Semi-annual groundwater
One time soils
 - 3) Daily Vadose
One time soils
Annual tank test
 - 4) Monthly Groundwater
One time soils
 - 5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/groundwater mon.
 - 6) Daily Inventory
Annual tank testing
Cont pipe leak det
 - 7) Weekly Tank Gauge
Annual tank testing
 - 8) Annual Tank Testing
Daily Inventory
 - 9) Other _____

5K UST (gas)
stained soil noted, gas odor
Tank appears in good condition - No obvious holes
although at center bottom is a tie-down for
ancher chains - soil here had gas odor + stained
leak may have been here. Tank is a former buoy
& compartment.

- ___ 7. Precs Tank Test 2643
Date: _____
- ___ 8. Inventory Rec. 2644
- ___ 9. Soil Testing 2646
- ___ 10. Ground Water. 2647

2K diesel
cont. 25um. but no. obvl. s b-log

- New Tanks
- ___ 11. Monitor Plan 2632
 - ___ 12. Access. Secure 2634
 - ___ 13. Plans Submit 2711
Date: _____
 - ___ 14. As Built 2635
Date: _____

① - slight odor 2 - slight odor 10'
③ - strong odor ④ - strong odor 1'

Contact: _____

Title: _____

Signature: R. [Signature]

Inspector: [Signature]

Signature: [Signature]

II, III

PETROLEUM
ENGINEERING, INC.

GENERAL CONTRACTORS
11 WEST NINTH STREET

LICENSE NO. 224358
SANTA ROSA, CA. 95401

PHONE (707) 545-0360
FAX (707) 545-7068

TELECOPIER TRANSMITTAL

DATE: 4/23/93 TIME: 1015

TO: Alameda County HEALTH - HAZARDOUS WASTE DIVISION

ATTN: RON OLCHARZ

FAX: 1-570-569-4757

FROM: Harold Dye

RE: E. Bay Regional Park Site
off Redwood Rd, Oakland

FAX: (707) 545-7068

PHONE: (707) 545-0360

NUMBER OF PAGES BEING SENT INCLUDING THIS SHEET: 3

UP DATED CONTRACTORS Lic. + WORKMAN'S COMP. INSURANCE.



State of California
CONTRACTORS STATE LICENSE BOARD



APR 23 '93 09:09

License Number

22478

Entity

CORP

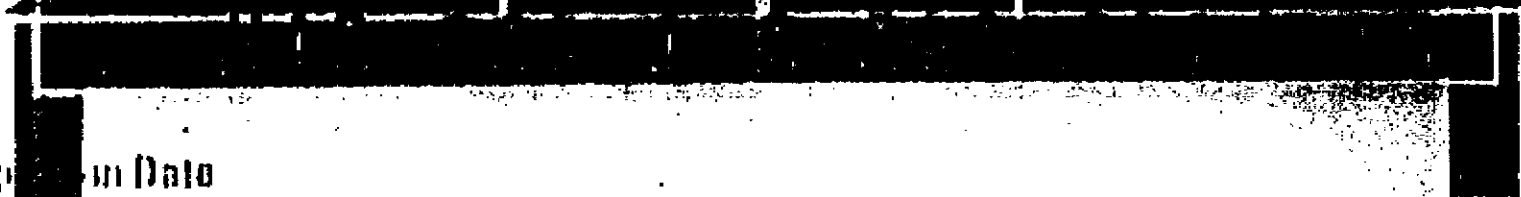
Business Name

PETROLEUM

ENGINEERING

INC

Classification



Expiration Date

06/30/94

HAZ

C21

A

B

C10

C61/D23

P.2

AAORD. CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)

01/07/93

PRODUCER
 Matsen Insurance Brokers
 100 Stony Point Road Ste.160
 O. Box 907
 Santa Rosa, CA 95402

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

INSURED
 Petroleum Engineering Inc.
 11 West Ninth Street
 Santa Rosa, CA 95401

- COMPANY A Transamerica
- COMPANY B
- COMPANY C
- COMPANY D
- COMPANY E

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
	<input type="checkbox"/> GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR. <input type="checkbox"/> OWNER'S & CONTRACTOR'S PROT.				GENERAL AGGREGATE \$ PRODUCTS-COMP/OP AGG. \$ PERSONAL & ADV. INJURY \$ EACH OCCURRENCE \$ FIRE DAMAGE (Any one fire) \$ MED. EXPENSE (Any one person) \$
	<input type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY				COMBINED SINGLE LIMIT \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$
	<input type="checkbox"/> EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM				EACH OCCURRENCE \$ AGGREGATE \$
A	<input type="checkbox"/> WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY	80570204	01/01/93	01/01/94	STATUTORY LIMITS EACH ACCIDENT \$ 1,000,000 DISEASE-POLICY LIMIT \$ 1,000,000 DISEASE-EACH EMPLOYEE \$ 1,000,000
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS
 Re: All Operations of the Named Insured.

CERTIFICATE HOLDER
 County of Alameda
 80 Swan Way
 Oakland, CA 94612

CANCELLATION
 SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE
J. Basset

No-0549724

ANNUAL
 PERMIT

Permit Issued To
 (Insert Employer's Name, Address and Telephone No.)

Petroleum Engineering, Inc.
 11 West Ninth Street
 Santa Rosa CA 95401

No. _____
 Date January 14, 1992
 Region 1 - San Francisco
 District 5 - Santa Rosa
 Tel. _____

Type of Permit Trenching and Excavation

Pursuant to Labor Code Sections 6500 and 6502, this Permit is issued to the above-named employer for the projects described below.

State Contractor's License Number 224358		Permit Valid through December 31, 1992		
Description of Project	Location Address	City and County	Anticipated Dates	
			Starting	Completion
various	various	various	various	various

This Permit is issued upon the following conditions:

1. That the work is performed by the same employer. If this is an annual permit the appropriate District Office shall be notified, in writing, of dates and location of job site prior to commencement.
2. That employer will comply with all occupational safety and health standards or orders applicable to the above projects, and any other lawful orders of the Division.
3. That if any unforeseen condition causes deviation from the plans or statements contained in the Permit Application Form the employer will notify the Division immediately.
4. Any variation from the specification and assertions of the Permit Application Form or violation of safety orders may be cause to revoke the permit.
5. This permit shall be posted at or near each place of employment as provided in 8 CAC 341.4.

Issued From Dye		Received By Bethel	
Cash	Amount	Date	
Check	100	1-14-92	

Investigated by _____
 Approved by Peewee Burton 1/14/92
Dist. Manager Date

STATE OF CALIFORNIA
STATE AND CONSUMER SERVICES AGENCY (CONTRACTORS STATE LICENSE BOARD)



Building Quality



HAZARDOUS SUBSTANCES REMOVAL AND REMEDIAL ACTIONS CERTIFICATION

Pursuant to the provisions of Section 7058.7 of the Business and Professions Code, the Registrar of Contractors does hereby certify that the following qualifying person has successfully completed the hazardous substances removal and remedial actions examination.



Qualifier: DAVID LEWIS LAMPI

License No.: 224358

Namestyle: PETROLEUM ENGINEERING INC

WITNESS my hand and official seal this

24th day of DECEMBER 1991

David R. Peltier
Registrar of Contractors

131, 26 (2/91)

This certification is the property of the Registrar of Contractors, is not transferable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason.

A 4308

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P.4

ISSUE DATE (MM/DD/YY)
 01/07/92

PRODUCER
Woodruff-Sawyer & Co.
 220 Bush Street
 7th Floor
 San Francisco, CA 94104

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
Petroleum Engineering, Inc.
 11 West 9th Street
 Santa Rosa, CA 95401

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A	Fairmont Insurance Co.
COMPANY LETTER B	
COMPANY LETTER C	
COMPANY LETTER D	
COMPANY LETTER E	

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

TO TR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
<input type="checkbox"/> GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIM MADE <input type="checkbox"/> OCCUR <input type="checkbox"/> OWNERS & CONTRACTORS PROT					GENERAL AGGREGATE	\$
					PRODUCTS-COMP/OP AGG.	\$
					PERSONAL & ADV. INJURY	\$
					EACH OCCURRENCE	\$
					FIRE DAMAGE (Any one fire)	\$
					MED. EXPENSE (Any one person)	\$
<input type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY					COMBINED SINGLE LIMIT	\$
					BODILY INJURY (Per person)	\$
					BODILY INJURY (Per accident)	\$
					PROPERTY DAMAGE	\$
						\$
<input type="checkbox"/> RECREO LIABILITY <input type="checkbox"/> OTHER THAN UMBRELLA FORM					EACH OCCURRENCE	\$
					AGGREGATE	\$
<input type="checkbox"/> WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY		WCP80563920	01/01/92	01/01/93	STATUTORY LIMITS	
					EACH ACCIDENT	\$ 1,000,000
					DISEASE--POLICY LIMIT	\$ 1,000,000
					DISEASE--EACH EMPLOYEE	\$ 1,000,000
OTHER						

DESCRIPTION OF OPERATIONS/LOCATION/VEHICLES/SPECIAL ITEMS
 As respects: All California Operations

County of Alameda
 150 Swan Way
 Oakland, CA 94621

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE-