

April 25, 2013

RECEIVED

By Alameda County Environmental Health at 1:04 pm, Jul 17, 2013

Barbara Jakub Hazardous Materials Specialist Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re: Oakland Vehicle Maintenance Facility, 1675 7th Street, Oakland, CA

Perjury Statement

Dear Ms. Jakub:

I declare, under the penalty of perjury, that to the best of my knowledge the information and recommendations as represented to me in the attached First Semi-Annual 2013 Groundwater Monitoring Report are true and correct.

Sincerely:

Emmy Andrews

Facilities Environmental Specialist

Attachments

Cc: Gary Gunderson, TRC



First Semi-Annual 2013 Groundwater Monitoring Report

USPS Oakland Vehicle Maintenance Facility 1675 7th Street Oakland, California

This report has been prepared for:

United States Postal Service

Pacific Facilities Service Office 1300 Evans St, Suite 200 San Francisco CA 94188-8200

> April 25, 2013 Project No. 180497.3

Jacob P. Zepeda Senior Staff Geologist

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April 25, 2013 180497.3

Ms. Emmy Andrews
UNITED STATES POSTAL SERVICE
Pacific Facilities Service Office
1300 Evans St, Suite 200
San Francisco California 94188-8200

RE: FIRST SEMI-ANNUAL 2013
GROUNDWATER MONITORING REPORT
USPS OAKLAND VMF
1675 7TH STREET
OAKLAND, CALIFORNIA

Dear Ms. Andrews:

The attached report summarizes the results of the first semi-annual 2013 groundwater monitoring event performed at the United States Postal Service's Oakland Vehicle Maintenance Facility (VMF), located at 1675 7th Street in Oakland, California. This work was performed in accordance with the *February 12, 2013 Agreement for Environmental Services Contract# 052571-09-J-0041, 4th Renewal Option, (Work Order #28.02).*

We refer you to the text of the report for details regarding this study. If you have any questions, please call and we will be glad to discuss them with you.

Very truly yours,

TRC

Charles Mettler, P.G. Principal Geologist

CCM:JPZ:jcm

Copies: Addressee (email)

Alameda County Department of Environmental Health (1)

Attn: Ms. Barbara Jakub

USPS Oakland VMF/GMF (1)

Attn: Mr. Steven M. Quan

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FIRST SEMI-ANNUAL 2013 GROUNDWATER MONITORING REPORT USPS OAKLAND VMF 1675 7TH STREET OAKLAND, CALIFORNIA

1.0 INTRODUCTION

1.1 Purpose

This report presents the results of the first semi-annual 2013 groundwater monitoring event that was performed at the United States Postal Service's (USPS's) Oakland Vehicle Maintenance Facility (VMF) located at 1675 7th Street in Oakland, California (Figure 1). This work was performed at the request of the Alameda County Department of Environmental Health (ACDEH) to monitor petroleum fuel hydrocarbons in on-site groundwater.

1.2 Site Background

In November 1991, one 750-gallon waste-oil underground storage tank (UST), one 5,000-gallon gasoline UST, and two 10,000-gallon diesel USTs were removed from the Oakland VMF (site); an additional 10,000-gallon diesel UST was removed from the site in June 1992. Strong hydrocarbon odors and visible contamination were present within the UST pit excavations, and a small hole in the bottom of the gasoline UST was identified during removal. Sampling and analysis of the soil and groundwater from below the USTs and product piping was performed concurrently with soil excavation activities. Soil analytical results from these areas indicated the presence of elevated concentrations of total petroleum hydrocarbons as diesel (TPHd), gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (collectively known as BTEX compounds) (Professional Service Industries, Inc. [PSI] 2002). Heavy metals (cadmium, chromium, lead, nickel, and zinc) were also detected in soil samples collected from the former 750-gallon UST excavation, but odors and discoloration of soil were not present. Groundwater was not encountered from the base of the 1991 UST excavations (at 16 feet below ground surface [bgs]), but was encountered at the base of the 1992 UST excavation (at 12 feet bgs). Groundwater collected from the 1992 UST excavation contained elevated concentrations of TPHd (72,000 micrograms per liter [µg/L]), benzene (3.8 µg/L), and xylenes (12 µg/L). Following the removal of the USTs, GeoResource Consultants oversaw the installation of three new 12,000gallon USTs (one gasoline and two diesel) near the southwest corner of the USPS parking garage, and one new 1,000-gallon waste-oil aboveground storage tank (AST).

Based on the elevated concentrations of TPHd, benzene, and xylenes detected in soil and groundwater sampled during the 1992 UST removal activities, the ACDEH requested a groundwater investigation and further evaluation of soil contamination. Later in 1992, following the June excavation activities, additional hydrocarbon-impacted soil was removed from the site near the location of two former diesel USTs (PSI, 2002).

In September 1993, Harding Lawson Associates (HLA) performed a subsurface investigation in which nine soil borings were drilled, and 25 soil samples were collected and analyzed for TPHd, TPHg, and BTEX compounds. Five of the drilled borings were converted to groundwater monitoring wells (MW-1 through MW-5) which were completed to a depth of 20 feet bgs. Elevated concentrations of TPHd (2,400 milligrams per kilogram [mg/Kg]), TPHg (53 mg/Kg), and xylenes (0.087 mg/Kg) were detected in soil collected at 3 feet beneath the former fuel dispenser island from soil boring B-4 (now monitoring well MW-4). Elevated concentrations of TPHd (84 mg/Kg), TPHg (180 mg/Kg), benzene (0.15 mg/Kg), toluene (0.35 mg/Kg), ethylbenzene (2.1 mg/Kg), and xylenes (13 mg/Kg) were detected in soil collected at 6 feet beneath the fuel dispenser island from soil boring B-8 (near monitoring well MW-3). Benzene (0.04 mg/Kg) was detected in soil at 2.5 feet bgs from



soil boring B-2 (now well MW-2). TPHd was detected in a groundwater sample collected from monitoring well MW-4 at a concentration of 580 μ g/L. No other petroleum hydrocarbons were detected in the other groundwater samples collected during the investigation.

Quarterly groundwater monitoring was initiated at the site in January 1994 at the five wells. However, by December 1994, construction of Interstate 880 in the vicinity of the site (Cypress Freeway Reconstruction Project) required the removal of monitoring well MW-5. ACDEH approved the abandonment of well MW-5, which was located up-gradient of the UST removal areas and had been non-detect for petroleum hydrocarbons since being installed in 1993. TPHd concentrations in wells MW-1, MW-2, MW-3 and MW-4 showed an increase during June 1994 to June 1995. In June 1995, free product was discovered in well MW-4 and removed with absorbent socks and bailers.

By June 1997, HLA completed a groundwater well search, chemical data compilation of groundwater and soil contamination, and a Human Health Risk Assessment (HHRA) (Tier I) to evaluate and assess whether site closure was justifiable. A summary of their work performed was provided in their report. In their report, HLA had concluded that "no risk-based remediation is necessary and case closure is recommended." Mr. Kayode Kadara with USPS presented the report by HLA to Ms. Jennifer Eberle with ACDEH in June 1997 and to Mr. Larry Seto with ACDEH in February 1998. The request for site closure was reviewed and denied by Mr. Seto and Madhulla Logan with ACDEH in May 1998. ACDEH indicated that the maximum concentrations of benzene detected in shallow soils at the site exceeded Tier I cleanup levels, and that a Tier II ASTM Risk Based Corrective Action (RBCA) or HHRA should be done for the site using a construction worker scenario due to the presence of impacted soil within 5 feet of the ground surface.

In 1997, Herbst Engineering removed three hydraulic lifts within the VMF building. During the removal. Herbst Engineering contracted JB Environmental to characterize and dispose of the observed soil contamination in these hydraulic lift areas. The stockpiled and drummed soil and sludge was analyzed for heavy metals (California Assessment Manual [CAM 17]), TPHg, TPHd, BTEX, TPH as motor oil (TPHmo), and chlorinated volatile organic compounds (VOCs) for disposal. Analytical results indicated that the impacted soil and sludge contained high concentrations of TPHmo (up to 12,000 mg/Kg), and traces of chlorinated hydrocarbons. An initial investigation of the soil and groundwater impacted by leaking hydraulic lifts was conducted by Lowney Associates (now known as TRC) in August 1999. The investigation identified high concentrations of total recoverable petroleum hydrocarbons (TRPH) in soil (up to 48,000 mg/Kg), and in groundwater (up to 61 mg/L); benzene in groundwater was detected at 0.0065 (mg/L). The follow-up soil and groundwater investigation, conducted by Lowney Associates in March 2000, consisted of seven borings in the vicinity of the former-leaking hydraulic lifts where soil and groundwater was previously tested for TRPH and BTEX compounds. The investigation revealed that the impacts from the leaking hydraulic lifts were limited to the area immediately surrounding the lifts, with no significant migration of contaminants.

In February 2000, Mr. Thomas Peacock, manager of ACDEH local oversight program (LOP), submitted a letter to Mr. Sean McFadden with USPS entitled *Intent to Make a Determination That No Further Action Is Required*, indicating that the LOP intended to make a determination that no further action was required or to issue a closure letter for the site. An additional letter sent to Mr. McFadden (USPS) from Mr. Seto (ACDEH) indicated that groundwater had not been tested for methyl-tert butyl ether (MTBE). The letter indicated that before site closure could be issued, another groundwater sample must be collected from well MW-4 and analyzed for TPHg, TPHd, BTEX, and MTBE, in addition to completing a Tier II RBCA.

In a letter dated November 8, 2000, Mr. Larry Seto (ACDEH) indicated receipt of the Tier II HHRA dated October 11, 1999 by Lowney Associates, but that ACDEH had not received laboratory analysis for the groundwater sample collected from well MW-4, and that a groundwater sample must be collected from MW-4 before case closure could be issued. In addition, the letter notified USPS that



Mr. Tom Peacock with ACDEH would be the new case officer for the site. On November 1, 2000, Lowney Associates collected a groundwater sample from well MW-4, at which time the well was observed to contain approximately 1 to 2 inches of free product. The subsequent Groundwater Quality Evaluation Report (January 2001) by Lowney Associates recommended that quarterly groundwater monitoring at the site continue.

In a letter dated April 9, 2001, Mr. Barney Chan with ACDEH directed Mr. McFadden (USPS) to resume quarterly groundwater monitoring and to include analyses of polyaromatic hydrocarbons (PAHs) to the groundwater monitoring requirements (in addition to TPHg, TPHd, BTEX, and MTBE). Mr. Chan also requested that USPS provide: 1) a map indicating the location of the soil samples from past tank removals, 2) a tabulation of the initial and confirmation soil sample results, 3) a map indicating the location of hydraulic lifts and samples relative to the former and existing USTs, 4) an analysis of residual concentrations of hydraulic fluid in soil and groundwater, and 5) an analysis of the need for further site characterization.

In March 2002, quarterly groundwater monitoring continued by Professional Service Industries (PSI) on the behalf of USPS. Quarterly groundwater monitoring included sampling of groundwater from wells MW-1 through MW-4. Wells MW-1 through MW-3 were analyzed for TPHg, TPHd, and VOCs (including BTEX and MTBE). Well MW-4 was analyzed for semi-volatile organic compounds (SVOCs) and PAHs due to observed free product in the well at the time. During the March 2002 sampling event, TPHd was detected in MW-3 at 540 μg /L and MTBE was detected in MW-3 at 3.8 μg /L and in MW-4 at 8.5 μg /L. Additional VOCs and SVOCs (sec-butylbenzene, naphthalene, n-propylbenzene, anthracene, di-n-octylphalate, flourene, 2-methylnapthalene, naphthalene, phenanthrene, and pyrene) were detected in the groundwater sample collected from MW-4, but only naphthalene was above the EPA Region IX Preliminary Remediation Goals (PRG) at 46 μg /L.

Through correspondence between Mr. Chan (ACDEH), Mr. Roland Queyquep with USPS, and Mr. Ross and Mr. Burfield with PSI (consultant for the USPS) during May through August 2002, ACDEH requested the following to be completed by USPS:

- Clarification of data presented in the Tier II HHRA and an assessment of the continued validity of the HHRA conclusions;
- Sampling and analysis of the free product in MW-4;
- Removal of free product from MW-4: and
- Delineation of the free product plume.

PSI addressed Mr. Chan's (ACDEH) requests in the submitted *Workplan: Site Investigation & Free-Product Removal* dated July 17, 2002 (Workplan). The ACDEH approved the Workplan in their letter dated July 19, 2002. Modifications to the Workplan (screening and analysis of soil samples from the proposed boring, clarification of the groundwater sampling method, and installation of a permanent well) were submitted to ACDEH by PSI on August 19, 2002. ACDEH approved the modifications in their letter dated August 23, 2002.

Quarterly groundwater monitoring in 2002 was done by PSI and results indicated that 4.32 inches of free product was observed in MW-4. The free product was fingerprinted as degraded diesel. PSI removed the free product (approximately 1 to 2 gallons) from well MW-4 from August through October 2002, until free product was no longer apparent within the well. In September 2002, PSI installed monitoring well MW-6 approximately 60 feet down-gradient of wells MW-3 and MW-4 per ACDEH request to delineate the plume down-gradient of the fuel island. Analytical results from the 2002 quarterly groundwater monitoring events indicated no TPHg in the wells except for MW-4. TPHd was detected in wells MW-1, MW-3, and MW-4, but significantly decreased from the first to the fourth quarter; BTEX was not detected in the groundwater samples collected except for toluene,



which was detected at low concentrations in MW-6. MTBE was detected in wells MW-1 through MW-4, ranging from 4 to 7 μ g/L.

On December 30, 2002, PSI submitted their *Historic Summary Report and Closure Request, USPS GMF/VMF* to Mr. Barney Chan (ACDEH). In their report, PSI reviewed the Tier II HHRA and indicated that the conclusions of the HHRA with respect to estimated health risk "are not only valid, but are conservative for current site conditions." PSI also concluded that there had been no significant leak of gasoline fuel as supported by the general absence of TPHg and BTEX constituents, and the low levels of MTBE in groundwater. They also concluded that additional remedial efforts to address residual concentrations of hydraulic fluid in soil and groundwater should not be required. PSI's efforts to remove TPHd free product from MW-4 appeared successful, and that based on the volume of the free product, the amount of discharge of TPHd to the groundwater was on the order of 1 to 2 gallons, and occurred suddenly during a short duration or single event release of diesel fuel centered around or within MW-4. On February 24, 2003, PSI submitted the Fourth Quarter 2002 Groundwater Monitoring Report to Mr. Barney Chan (ACDEH) and requested closure for the site.

A correspondence gap between the ACDEH LOP and USPS occurred between 2003 and 2008, based on our review of the ACDEH LOP case files for the site. This was apparent when an ACDEH letter to the USPS, dated July 3, 2008, identified the site as having not been claimed in GeoTracker. A subsequent Notice of Violation (NOV) sent by the ACDEH dated July 24, 2009, was received by Mr. Roland Queyquep (USPS); the NOV was issued for failing to claim the site in a timely fashion.

On March 11, 2010, Barbara Jakub of the ACDEH performed a site Closure Review that was posted to GeoTracker. In the Closure Review letter, she identified potential vapor intrusion as one of the main impediments to obtaining case closure.

In December 2010, TRC redeveloped and resurveyed the five existing monitoring wells at the site prior to collection of groundwater samples. Laboratory analyses of groundwater from monitoring wells MW-1, MW-3, and MW-4 detected TPHd as dissolved phase hydrocarbons in concentrations ranging from 161 to 6,620 $\mu g/L$. TPHmo was detected in wells MW-2 and MW-4. TPHg and BTEX compounds were not detected above the laboratory reporting limits. MTBE was detected in groundwater samples collected from wells MW-3, MW-4, and MW-6, but were well below the Environmental Screening Level (ESL) of 5 $\mu g/L$. Other fuel oxygenates, [including tertiary butyl alcohol (TBA), diisopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and semi-volatiles 1,2-dichloroethane (1,2-DCA), naphthalene, or other PAHs] were not detected above groundwater ESLs.

The results of the December 2010 monitoring event were submitted by TRC to the ACDEH in the Fourth Quarter 2010 Groundwater Monitoring Report, USPS Oakland Vehicle Maintenance Facility, 1675 7th Street, Oakland, California, dated March 18, 2011. ACDEH responded to the report in a letter dated July 22, 2011, entitled Request for Work Plan and Product Removal for Fuel Leak Case No. RO0000016. In their letter, ACDEH requested resumption of quarterly groundwater monitoring at the site, submittal of a soil vapor investigation workplan and upload of boring logs to GeoTracker. USPS responded in a letter dated September 12, 2011, requesting a reduction of groundwater monitoring frequency to semi-annually and an extension on the deadline for submittal of the soil vapor investigation workplan. During a telephone conference on February 10, 2012, TRC proposed a revised schedule for submittal of the soil vapor investigation work plan of March 16, 2012. This verbal request was approved by the ACDEH in an e-mail on February 10, 2012. During this exchange, TRC confirmed that the due dates for the first and third quarter 2012 monitoring reports are March 30, 2012 and September 30, 2012, respectively.

During the first semi-annual groundwater monitoring event of 2012, concentrations of TPHg and TPHd detected in monitoring well MW-4 exceeded the environmental screening level (ESL) of $100~\mu g/L$ for TPHg and middle distillates. The concentrations had increased since the fourth



quarter of 2010 from below reporting limits to 290 $\mu g/L$ of TPHg, and from 6,620 to 14,000 $\mu g/L$ of TPHd in well MW-4. TPHg and TPHd were not detected in groundwater in any other wells during the first semi-annual 2012 monitoring event.

During the second semi-annual 2012 monitoring event, separate-phase hydrocarbons (SPH) had not been detected in well MW-4 for six months, and the concentrations of TPHg (180 $\mu g/L$) and TPHd (4,500 $\mu g/L$) had decreased significantly. TPHmo was detected in well MW-4 at low levels; TPHg and TPHd were not detected from groundwater samples in the other wells. BTEX and other fuel oxygenates were also not detected above laboratory reporting limits. MTBE was detected, however, well below the groundwater ESL of 5 $\mu g/L$. TRC recommended that ACDEH re-evaluate the site for closure and that a Conceptual Site Model (CSM) be compiled with a closure package for review.

1.3 Scope of Work

The scope of work for this groundwater monitoring event was outlined in our agreement with the USPS dated *February 12, 2013 Agreement for Environmental Services Contract# 052571-09-J-0041, 4th Renewal Option, (Work Order #28.02)*, and included the following tasks:

- Measurement of the shallow groundwater flow direction beneath the site;
- Purging of groundwater and recording of field parameters (pH, dissolved oxygen, and redox potential);
- Collection of groundwater samples from site monitoring wells MW-1, MW-2, MW-3, MW-4, MW-6:
- Laboratory analysis of the groundwater samples for TPHg, TPHd, TPHmo, benzene, toluene, ethylbenzene, xylenes (BTEX) compounds, methyl tertiary butyl ether (MTBE), Di-isopropyl ether (DIPE), Ethyl tert-butyl ether (ETBE), Tert-amyl methyl ether (TAME), and 1,2-dichloroethane (1,2-EDC), and naphthalene by EPA Test Methods 8015M and 8260B;
- Preparation of this first semi-annual 2013 groundwater monitoring report.

2.0 GROUNDWATER QUALITY EVALUATION

2.1 Groundwater Flow Evaluation

On April 15, 2013, groundwater elevation data was measured. The general flow direction in the shallow water-bearing zone was towards the southwest (S50°W) at an approximate gradient of 0.008 feet/feet. This is generally consistent with the flow direction measured during past sampling events. The groundwater elevation data and flow direction are presented in Table 1 and shown on Figure 2. For comparison, the results from previous monitoring events are also presented in Appendix A - Table B.



Top of Depth to Casing Groundwater Groundwater Groundwater Monitoring Elevation **Elevation** Flow Latitude⁺ Longitude+ (ft bgs) Well Date (feet msl) (feet msl) Direction MW-1 37°48'19.16"N 122°18'6.01"W 4/15/2013 S50°W 11.44 6.61 4.83 MW-2 122°18'5.74"W 37°48'18.84"N 4/15/2013 12.06 7.18 S50°W 4.88 MW-3 37°48'18.64"N 122°18'6.54"W 4/15/2013 12.48 8.12 4.36 S50°W MW-4 S50°W 37°48'18.50"N 122°18'6.15"W 4/15/2013 12.83 8.31 4.52 MW-6 37°48'18.08"N 122°18'6.73"W 4/15/2013 11.93 7.98 3.95 S50°W

Table 1. Groundwater Elevations in Site Wells

TOC = top of casing (from PSI 2002)

ft bgs = feet below ground surface

feet msl = feet mean sea level

2.2 Groundwater Quality

On April 15, 2012, groundwater samples were collected from monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-6. Copies of the well sampling logs and a discussion of sampling protocol are included in Appendix B.

The groundwater samples were analyzed for TPHg, TPHd, TPHmo, BTEX compounds, MTBE, DIPE, ETBE, TAME, and 1,2 EDC, and naphthalene by EPA Test Methods 8015M and 8260B. Analytical results are presented in Tables 2a, 2b, and 3 and shown on Figure 3. For comparison, the analytical results and depth to groundwater from historical sampling events are presented in Appendix A. Copies of the laboratory reports are attached in Appendix C.



[•] Measured from the top of the casing.

Monitoring wells were resurveyed on January 10, 2011 in accordance to the State of California Geotracker requirements using the North American Datum 1983.

Table 2a. Analytical Results of Selected Groundwater Samples

(concentrations in micrograms per liter $[\mu g/L]$)

Well No.	Date	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl- benzene	Xylenes	МТВЕ
MW-1	4/15/2013	< 50	110	<100	< 0.5	< 0.5	< 0.5	<1.0	< 0.5
MW-2	4/15/2013	< 50	170	390	< 0.5	< 0.5	< 0.5	<1.0	< 0.5
MW-3	4/15/2013	< 50	240	<100	< 0.5	< 0.5	< 0.5	<1.0	1.9
MW-4	4/15/2013	83	2,500	210	< 0.5	< 0.5	< 0.5	<1.0	2.2
MW-6	4/15/2013	< 50	73	<100	< 0.5	< 0.5	< 0.5	<1.0	0.81
Groundw	Groundwater ESL (1)		100	100	1	40	30	20	5
MCL ⁽²⁾		NE	NE	NE	1	150	300	1,750	13

Notes

Environmental Screening Level-Table A, CRWQCB, SF Bay Region, rev. 2013.

(2) Drinking water Maximum Contaminant Levels-California DHS, June 26, 2009

Bold Compound was detected above one or more of the action levels

 $\mu g/L \quad = Micrograms \ per \ liter$

TPHg = Total petroleum hydrocarbons as gasoline

TPHd = Total petroleum hydrocarbons as diesel

TPHmo = Total petroleum hydrocarbons as motor oil

MTBE = Methyl tert-butyl ether

< = Indicates that the compound was not detected at or above the stated laboratory reporting limit

NE = Not established

Table 2b. Analytical Results of Selected Groundwater Samples

(concentrations in micrograms per liter $[\mu g/L]$)

Well No. Date		ТВА	DIPE	ETBE	TAME	1,2-DCA	Naphthalene
MW-1	4/15/2013	<4.0	< 0.5	< 0.5	< 0.5	< 0.5	<1.0
MW-2 4/15/2013		<4.0	< 0.5	< 0.5	< 0.5	< 0.5	<1.0
MW-3	MW-3 4/15/2013		< 0.5	< 0.5	< 0.5	< 0.5	<1.0
MW-4	MW-4 4/15/2013		< 0.5	< 0.5	< 0.5	< 0.5	<1.0
MW-6	MW-6 4/15/2013		< 0.5	< 0.5	< 0.5	< 0.5	<1.0
Groundwater ESL (1)		12	NE	NE	NE	200	24
MCL ⁽²⁾	·	NE	NE	NE	NE	0.5	NE

Notes

(I) Environmental Screening Level-Table A, CRWQCB, SF Bay Region, rev. 2013

(2) Drinking water Maximum Contaminant Levels-California DHS, June 26, 2009

 $\mu g/L \quad = Micrograms \ per \ liter$

NE = Not established

= Indicates that the compound was not detected at or above the stated laboratory reporting limit

TBA = Tert-butanol

DIPE = Di-isopropyl ether

ETBE = Ethyl tert-butyl ether

TAME = Tert-amyl methyl ether

1,2-DCA = 1,2-dichloroethane



Table 3. Analytical Field Data of Selected Groundwater Samples

Well No.	Date		Specific Conductivity	Temperature	Dissolved Oxygen	Oxidation Reduction Potential
			(µS/cm)	(°C)	(mg/L)	(mV)
MW-1	4/15/2013	6.57	2079	15.98	1.34	275.5
MW-2	4/15/2013	6.37	1781	15.27	1.69	246.4
MW-3	4/15/2013	6.81	2028	15.88	1.78	248.4
MW-4	4/15/2013	6.47	1735	16.85	1.04	-15.0
MW-6	4/15/2013	6.38	1074	19.05	1.40	242.8

Notes

mg/L = milligrams per liter

mV = millivolts

 $\mu S/cm$ = microSiemens per centimeter

°C = degree Celsius

2.3 Hydrocarbon Absorbent Socks and Field Observations

To continue with the petroleum hydrocarbon recovery effort of Separate-phase hydrocarbons (SPH) from well MW-4, a passive collection system 'skimmer' has been deployed in the well since March 9, 2012. Continual monitoring of the SPH in well MW-4 has occurred monthly or bi-monthly thereafter.

Separate-phase hydrocarbons up to 0.96-inches thick were previously observed and measured on February 15, 2012, and approximately 25 gallons of groundwater and SPH were extracted from well MW-4. On March 9, 2012 TRC replaced the cage and absorbent sock collection system with an SPH passive collection system 'skimmer' in well MW-4. Since the February 2012 extraction of SPH and groundwater, SPH has not been observed in well MW-4 through April 15, 2013. An apparent petroleum sheen was observed on the groundwater from the well, but no actual SPH has been present for approximately one year of monitoring. Field observations are presented in Table 4 below.



Table 4. Field Observations of Sheen and SPH within Groundwater

Monitoring Well	Date	Top of Casing Elevation * (feet msl)	Depth to Groundwater ** (ft bgs)	Sheen Observed	Observed Product Thickness (inches)
MW-1	1/3/2011	11.44	5.98	Y	
MW-1	2/15/2012	11.44	7.67	N	
MW-1	8/15/2012	11.44	7.40	N	
MW-1	4/15/2013	11.44	6.61	N	
MW-2	1/3/2011	12.06	6.75	Y	
MW-2	2/15/2012	12.06	8.24	Y	
MW-2	8/15/2012	12.06	7.98	N	
MW-2	4/15/2013	12.06	7.18	N	
MW-3	1/3/2011	12.48	7.68	Y	
MW-3	2/15/2012	12.48	9.20	Y	
MW-3	8/15/2012	12.48	8.89	Y	
MW-3	4/15/2013	12.48	8.12	Y	
MW-4	1/3/2012	12.83	8.12	Y	0.13
MW-4	2/15/2012	12.83	9.47	Y	0.96
MW-4	4/17/2012	12.83	8.51	Y	
MW-4	5/31/2012	12.83	8.53	Y	
MW-4	7/24/2012	12.83	9.17	Y	
MW-4	8/15/2012	12.83	9.14	Y	
MW-4	1/09/2013	12.83	8.01	Y	
MW-4	3/26/2013	12.83	9.02	Y	
MW-4	4/15/2013	12.83	8.31	Y	
MW-6	1/3/2012	11.93	7.61	N	
MW-6	2/15/2012	11.93	9.04	N	
MW-6	8/15/2012	11.93	8.79	N	
MW-6	4/15/2013	11.93	7.98	N	

Notes

Measured from the top of the casing. Monitoring wells were resurveyed on January 10, 2011 in accordance to the State of California

Geotracker requirements using North American Datum 1983.

TOC = top of casing (from PSI 2002) = feet below ground surface ft bgs

= feet mean sea level feet msl

= no product thickness could be measured

CONCLUSIONS 3.0

3.1 **Discussion of General Groundwater Quality**

Groundwater samples were collected during this first semi-annual 2013 monitoring event from wells MW-1 through MW-4, and MW-6. A total of 21 gallons of groundwater containing dissolved-phase total petroleum hydrocarbons (TPH) were purged from well MW-4 prior to sampling during this



event. Based on the groundwater elevation data collected, the general flow direction of the shallow water-bearing zone was towards the southwest and was consistent with prior measurements.

Concentrations of TPHd (2,500 $\mu g/L$), and TPHmo (210 $\mu g/L$) detected in groundwater from monitoring well MW-4 exceeded the environmental screening level (ESL) of 100 $\mu g/L$. However, concentrations of TPHd have decreased significantly since the last semi-annual groundwater monitoring event in August 2012. TPHg was observed to have decreased below the ESL, and TPHmo concentration remains relatively low at 210 $\mu g/L$, only slightly above the ESL of 100 $\mu g/L$. TPHd was detected in very low concentrations in wells MW-1, MW-2, and MW-3; and TPHd was detected above the laboratory reporting limits but below the ESL in MW-6. BTEX compounds and other fuel oxygenates, including TBA, DIPE, ETBE, TAME, and semi-volatiles 1,2-DCA, and naphthalene were not detected above laboratory reporting limits. MTBE was detected in groundwater samples collected from wells MW-3 (1.8 $\mu g/L$), MW-4 (2.2 $\mu g/L$), and MW-6 (0.8 $\mu g/L$), but were well below the groundwater ESL of 5 $\mu g/L$.

3.2 Recommendations

Based on the results obtained during this first semi-annual 2013 groundwater monitoring event, we recommend initiating communications with the ACDEH and presenting a case for closure of this site, due to the absence of SPH from well MW-4, the stability of the dissolved-phase contaminant plume and subsequent continuous decrease of TPHd concentrations during the last year. This site appears to meet the criteria of the Low-Threat Underground Storage Tank (UST) Case Closure Policy (Policy) enacted by the State Water Board on August 24, 2012 as Resolution No. 2012-0016, as indicated in our previous groundwater monitoring during September 2012. As indicated in our previous monitoring report in September 2012, the reasons for our request for closure are as follows:

- All eight "General Criteria" as described in the Policy have been met, with the exception of the completion of a CSM. TRC proposes to include the CSM in a site closure package that will be submitted to ACDEH for review.
- The dissolved TPH plume has been stable and SPH has not been observed in the site monitoring wells for more than one year (since February 2012).
- Although TPH was detected in soil samples collected from MW-3 (180 mg/Kg of TPHg) and MW-4 (2,400 mg/Kg of TPHd) that exceeded the screening criteria of 100 mg/Kg in the bioattenuation zone, the VMF is an active maintenance and fueling facility. As stated in the Policy "Exposures to petroleum vapors associated with historical fuel system releases are comparatively insignificant relative to exposures from small surface spills and fugitive vapor releases that typically occur at active fueling facilities. Therefore, satisfaction of the mediaspecific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk." TPH concentrations in the well that is closest to the VMF offices (MW-3) only slightly exceeds the screening criteria for TPH in soil, indicating that the risk associated with vapor intrusion from underlying soil is relatively insignificant compared to the ambient air within the VMF.
- A Tier II Human Health Risk Appraisal (Lowney 1999) indicated that the estimated maximum carcinogenic risk associated with vapor intrusion due to volatilization of benzene from shallow groundwater and soil was 2.1 E-06, which is lower than the acceptable target risk of 1E-05.
- Benzene and ethylbenzene detected in on-site soil is below the screening criteria set forth in Table 1 of the Policy.



TRC respectfully requests ACDEH to re-evaluate the site for closure based on the reasons listed above. If acceptable, TRC proposes to forego the soil vapor investigation that was proposed in the *Workplan for Soil Vapor Investigation* dated March 19, 2012, due to the insignificant risk posed by the TPH in soil. To move the site toward closure and based on the General Criteria for low-threat closure, TRC recommends compiling a CSM and closure package for review by the ACDEH in lieu of the soil vapor investigation.

4.0 LIMITATIONS

This report was prepared for the use of the United States Postal Service in evaluating groundwater quality at selected on-site locations at the time of this study. We make no warranty, expressed or implied, except that our services have been performed in accordance with environmental principles generally accepted at this time and location. The chemical and other data presented in this report can change over time and are applicable only to the time this study was performed. We are not responsible for the data presented by others.

5.0 REFERENCES

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- Professional Service Industries, December 30, 2002. *Historic Summary Report and Closure Request, United States Postal Service Vehicle Maintenance Facility, 1675* 7th Street, Oakland, California.
- Lowney Associates, October 11, 2001, Tier II Human Health Risk Assessment, USPS Oakland Vehicle Maintenance Facility, 1675 7th Street, Oakland, California.
- Geo/Resource Consultants, Inc, September 17, 1992. Supplemental Observation Letter, Underground Storage Tank (UST) Program, U.S. Postal Service Vehicle Maintenance Facility, 1675 7th Street, Oakland, California.

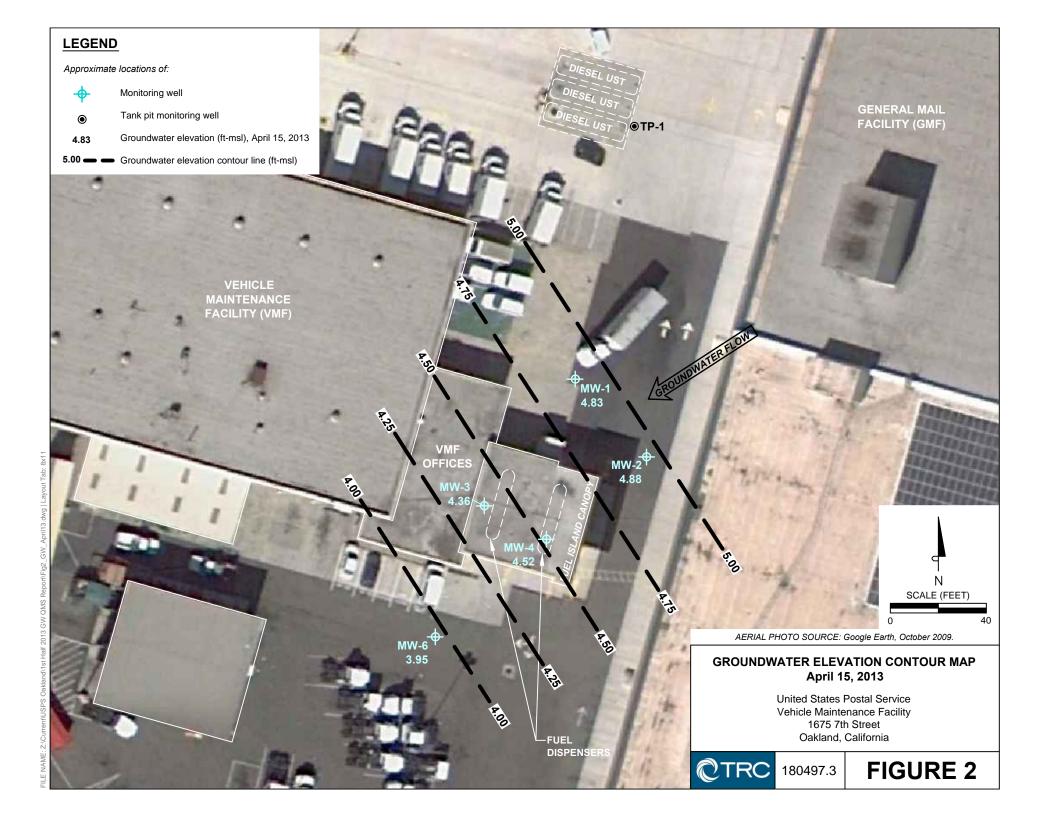


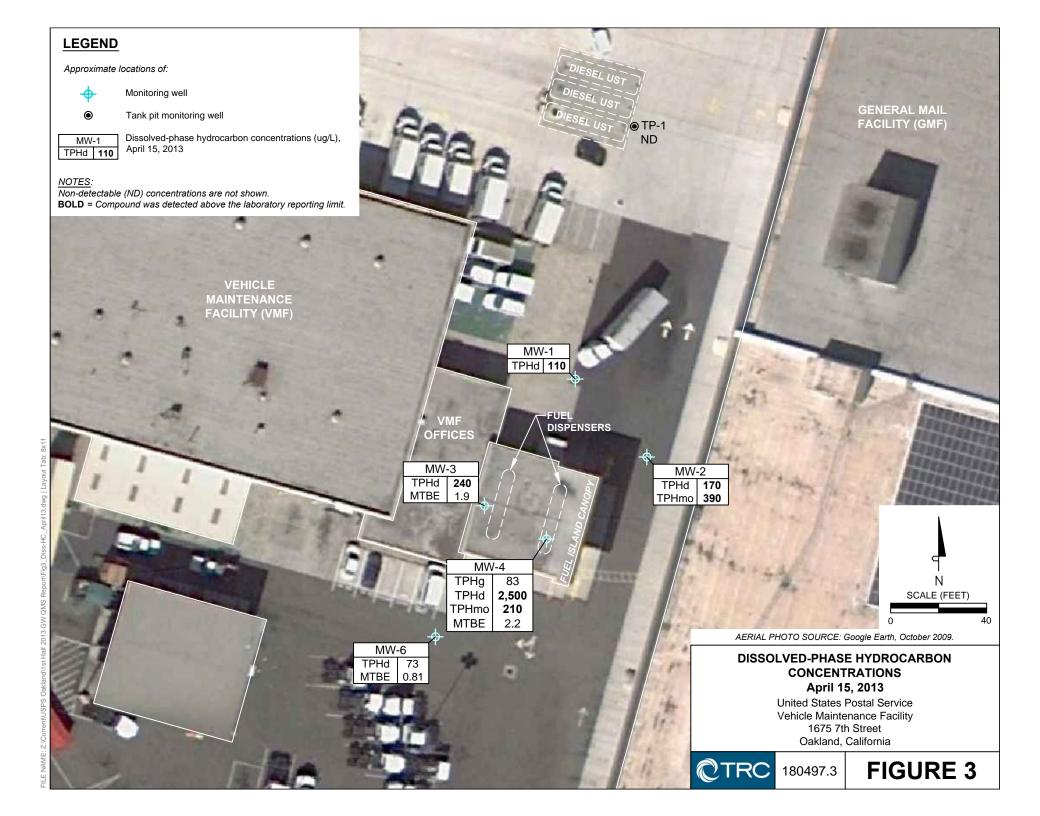
FIGURE 1

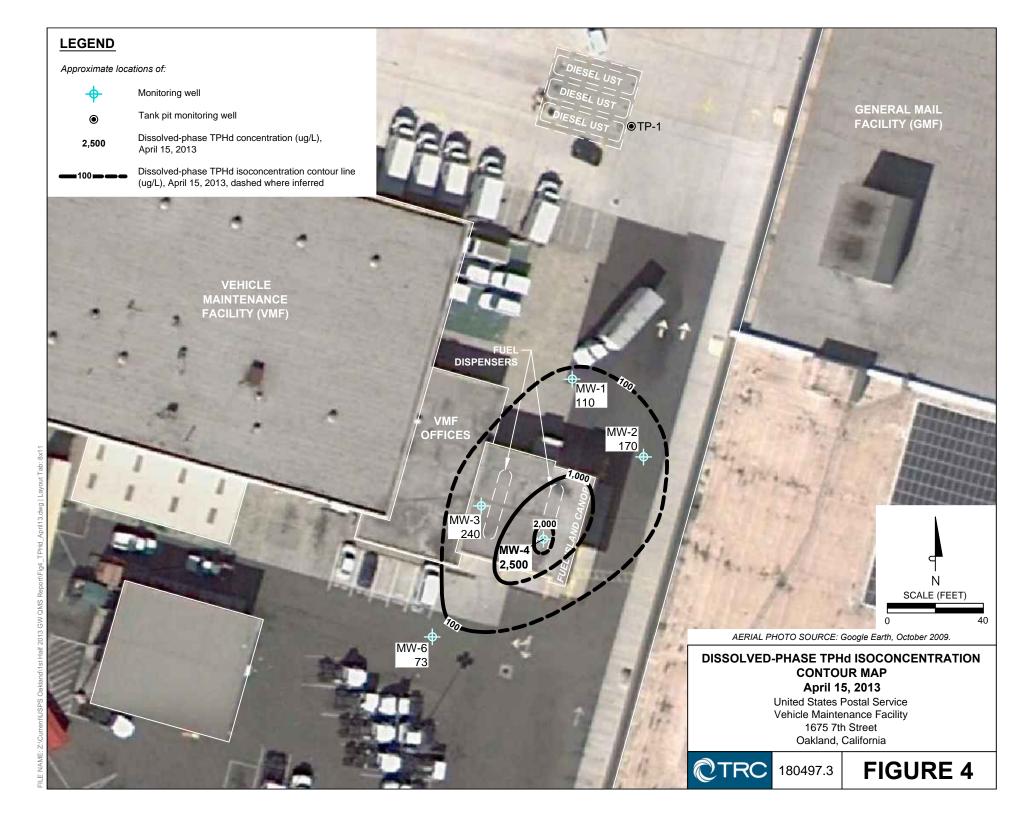
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California







APPENDIX A

HISTORICAL DATA



Table A. Historical Analytical Results of Monitoring Well Groundwater Samples (concentrations in parts per billion)

Monitoring								
Well	Date	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-1	9/1/1993	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-1	1/26/1994	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-1	3/1/1994	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-1	6/1/1994	< 50	73	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-1	2/22/1995	< 50	600	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-1	6/6/1995	< 50	900	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-1	8/16/1995	< 50	810	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-1	11/14/1995	< 50	590	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-1	5/16/1996	NA	900	NA	NA	NA	NA	NA
MW-1	11/15/1996	NA	330	NA	NA	NA	NA	NA
MW-1	3/11/2002	<500	<400	< 0.5	< 0.5	< 0.5	<1.0	<1.0
MW-1	6/19/2002	<50	222	< 0.5	< 0.5	< 0.5	<1.0	1.2
MW-1	9/26/2002	<50	519	< 0.5	< 0.5	< 0.5	<1.0	< 0.5
MW-1	12/5/2002	<50	261	< 0.5	< 0.5	<0.5	<1.0	1.2
MW-1	1/3/2011	<50	161	<1.0	<1.0	<1.0	<2.0	<1.0
MW-1	2/15/2012	<50	<50	< 0.5	< 0.5	< 0.5	<1.0	< 0.5
MW-1 MW-1	8/15/2012 4/15/2013	< 50	<52 110	<0.5 < 100	<0.5 < 0.5	<0.5 < 0.5	<1.0 < 0.5	<0.5 <1.0
MW-2	9/1/1993	<50	<50	<0.5	<0.5	<0.5	<1.0	NA
MW-2	1/26/1994	<50	<50	<0.5	<0.5	<0.5	<1.0	NA NA
MW-2	3/1/1994	<50	<50	<0.5	<0.5	<0.5	<1.0	NA NA
MW-2	6/1/1994	<50	<50	<0.5	<0.5	<0.5	<1.0	NA NA
MW-2	2/22/1995	<50	280	<0.5	<0.5	<0.5	<1.0	NA NA
MW-2	6/6/1995	<50	570	<0.5	<0.5	<0.5	<1.0	NA NA
MW-2	8/16/1995	<50	150	<0.5	<0.5	<0.5	<1.0	NA
MW-2	11/14/1995	<50	<50	<0.5	<0.5	<0.5	<1.0	NA
MW-2	5/16/1996	NA	320	NA	NA	NA	NA	NA
MW-2	11/15/1996	NA	<50	NA NA	NA	NA NA	NA	NA
MW-2	3/11/2002	<50	<400	<0.5	<0.5	<0.5	<1.0	<1.0
MW-2	6/19/2002	<50	<50	<0.5	< 0.5	<0.5	<1.0	0.9
MW-2	9/26/2002	<50	<50	<0.5	< 0.5	<0.5	<1.0	4.2
MW-2	12/5/2002	<50	80.9	<0.5	< 0.5	<0.5	<1.0	1.4
MW-2	1/3/2011	<50	<94	<1.0	<1.0	<1.0	<2.0	<1.0
MW-2	2/15/2012	<50	<51	<0.5	< 0.5	<0.5	<1.0	<0.5
MW-2	8/15/2012	< 50	<52	<0.5	< 0.5	< 0.5	<1.0	< 0.5
MW-2	4/15/2013	< 50	170	< 0.5	< 0.5	< 0.5	< 0.5	<1.0
MW-3	9/1/1993	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-3	1/26/1994	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-3	3/1/1994	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-3	6/1/1994	NS	NS	NS	NS	NS	NS	NS
MW-3	2/22/1995	50	350	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-3	6/6/1995	< 50	380	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-3	8/16/1995	< 50	440	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-3	11/14/1995	< 50	200	0.8	< 0.5	< 0.5	< 0.5	NA
MW-3	5/16/1996	NA	1,100	NA	NA	NA	NA	NA
MW-3	11/15/1996	NA	470	NA	NA	NA	NA	NA
MW-3	3/11/2002	< 500	540	< 0.5	< 0.5	< 0.5	<1.0	3.8
MW-3	6/19/2002	< 50	407	< 0.5	< 0.5	< 0.5	<1.0	4.9
MW-3	9/26/2002	< 50	741	< 0.5	< 0.5	< 0.5	<1.0	4.4
MW-3	12/5/2002	< 50	397	< 0.5	< 0.5	< 0.5	<1.0	5.4
MW-3	1/3/2011	< 50	209	<1.0	<1.0	<1.0	<2.0	2.4
MW-3	2/15/2012	< 50	<58	< 0.5	< 0.5	< 0.5	<1.0	2.4
MW-3	8/15/2012	<50	57	< 0.5	< 0.5	<0.5	<1.0	2.8
MW-3	4/15/2013	<50	240	<100	<0.5	<0.5	<0.5	<1.0
MW-4	9/1/1993	< 50	580	< 0.5	< 0.5	< 0.5	< 0.5	NA



Monitoring Well	Date	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	МТВЕ
MW-4	1/26/1994	<50	850	0.8	< 0.5	<0.5	<0.5	NA
MW-4	3/1/1994	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-4	6/1/1994	<50	260	1.7	<0.5	<0.5	<0.5	NA
MW-4	2/22/1995	140	1.100	1.4	<0.5	<0.5	<0.5	NA
MW-4	6/6/1995	24,000	23,000	<0.5	<0.5	0.5	<0.5	NA
MW-4	8/16/1995	2.000	3,400	1.2	<0.5	1.0	0.8	NA NA
MW-4	11/14/1995	950	7,400	<0.5	<0.5	<0.5	<0.5	NA
MW-4	5/16/1996	<50	2,000	<0.5	< 0.5	<0.5	<1.0	NA NA
MW-4	11/15/1996	600	13.000	0.78	< 0.5	0.94	<1.0	NA NA
MW-4	3/11/2002	NS	NS	<0.5	< 0.5	<0.5	<1.0	8.5
MW-4	6/19/2002	228	235,000	<2.5	<2.5	<2.5	<5.0	14.1
MW-4	9/26/2002	<50	16,400	<0.5	< 0.5	< 0.5	<1.0	6.5
MW-4	12/5/2002	< 50	513	< 0.5	< 0.5	< 0.5	<1.0	9.3
MW-4	1/3/2011	< 50	6,620	<1.0	<1.0	<1.0	<2.0	3.3
MW-4	2/15/2012	290	14,000	< 0.5	< 0.5	< 0.5	<1.0	3.0
MW-4	8/15/2012	180	4,500	< 0.5	< 0.5	< 0.5	<1.0	2.0
MW-4	4/15/2013	83	2,500	210	< 0.5	< 0.5	< 0.5	<1.0
MW-5	9/1/1993	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-5	1/26/1994	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-5	3/1/1994	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-5	6/1/1994	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	NA
MW-5	Well MW-5	abando	ned in Jan	uary 1995 (PSI 20	03)	•		•
MW-6	9/26/2002	< 50	< 50	<0.5	3.8	< 0.5	<1.0	< 0.5
MW-6	12/5/2002	< 50	< 50	< 0.5	< 0.5	< 0.5	<1.0	0.6
MW-6	1/3/2011	< 50	<94	<1.0	<1.0	<1.0	<2.0	0.54
MW-6	2/15/2012	< 50	<52	< 0.5	< 0.5	< 0.5	<1.0	0.87
MW-6	8/15/2012	< 50	<52	< 0.5	< 0.5	< 0.5	<1.0	0.60
MW-6	4/15/2013	< 50	73	<100	< 0.5	< 0.5	< 0.5	<1.0

< Indicates that the compound was not detected at or above the stated laboratory reporting limit

NA Not analyzed NS Not sampled



Table B. Historical Groundwater Elevations in Site Monitoring Wells

Monitoring Well	Date Measured	Historical Top of Casing Elevation (feet msl)	Depth to Product (feet below TOC)	Depth to Groundwater ** (feet below TOC)	Groundwater Elevation (feet msl)
MW-1	9/93	8.30	No product	3.90	4.40
MW-1	1/26/94		No product	3.64	4.66
MW-1	2/94		No product	3.37	4.93
MW-1	3/94		No product	7.51	0.79
MW-1	4/94		No product	10.74	-2.44
MW-1	5/94		No product	12.98	-4.68
MW-1	6/94	1	No product	15.55	-7.25
MW-1	2/22/95	1	No product	6.98	1.32
MW-1	6/6/95		No product	7.51	0.79
MW-1	8/16/95		No product	8.11	0.19
MW-1	11/14/95		No product	9.04	-0.74
MW-1	5/16/96		No product	7.00	1.30
MW-1	3/11/02		No product	6.82	1.48
MW-1	6/18/02		No product	7.16	1.14
MW-1	9/26/02	11.44**	No product	8.07	3.37
MW-1	12/5/02	11.44**	No product	8.32	3.12
MW-2	9/93	8.86	No product	4.55	4.31
MW-2	1/26/94	1	No product	4.69	4.17
MW-2	2/94		No product	3.98	4.88
MW-2	3/94		No product	8.14	0.72
MW-2	4/94		No product	10.60	-1.74
MW-2	5/94		No product	13.47	-4.61
MW-2	6/94		No product	15.50	-6.64
MW-2	2/22/95		No product	7.66	1.20
MW-2	6/6/95		No product	8.06	0.80
MW-2	8/16/95		No product	8.77	0.09
MW-2	11/14/95		No product	9.66	-0.80
MW-2	5/16/96		No product	7.58	1.28
MW-2	3/11/02		No product	7.45	1.41
MW-2	6/18/02		No product	7.73	1.13
MW-2	9/26/02	12.06**	No product	8.64	3.42
MW-2	12/5/02	12.06**	No product	9.04	3.02
MW-3	9/93	9.28	No product	5.00	4.28
MW-3	1/26/94		No product	5.04	4.24
MW-3	2/94		No product	4.62	4.66
MW-3	3/94		No product	9.54	-0.26
MW-3	4/94		No product	11.69	-2.41
MW-3	5/94		No product	14.85	-5.57
MW-3	6/94		No product	17.30	-8.02
MW-3	2/22/95		No product	8.64	0.64
MW-3	6/6/95		No product	9.07	0.21
MW-3	8/16/95		No product	9.66	-0.38
MW-3	11/14/95	-	No product	10.46	-1.18
MW-3	5/16/96 3/11/02	-	No product	8.61	0.67
MW-3 MW-3			No product	8.43 8.64	0.85
MW-3	6/18/02 9/26/02	12.48**	No product	9.51	0.64 2.97
MW-3 MW-3	12/5/02	12.48**	No product No product	9.51 9.91	2.97
MW-4	9/93	8.73	No product	4.55	4.18
MW-4	1/26/94	0.73	No product	4.60	4.13
MW-4	2/94	1	No product	3.95	4.13
MW-4	3/94	1	No product	8.96	-0.23
MW-4	4/94	1	No product	8.96	-0.23
MW-4	5/94	1	No product	14.24	-5.51
MW-4	6/94		No product	17.28	-8.55
MW-4	2/22/95	1	No product	7.93	0.80
MW-4	6/6/95	1	No product	8.48	0.25
MW-4	8/16/95	1	8.92	9.08	-0.20*



Monitoring Well	Date Measured	Historical Top of Casing Elevation (feet msl)	Depth to Product (feet below TOC)	Depth to Groundwater ** (feet below TOC)	Groundwater Elevation (feet msl)
MW-4	11/14/95		9.82	9.92	-1.0*
MW-4	5/16/96		No product	7.88	0.85
MW-4	3/11/02		Product		
MW-4	6/18/02		Product		
MW-4	9/26/02	12.83**	No product	9.74	3.09
MW-4	12/5/02	12.83**	No product	10.23	2.60
MW-5	9/93	8.23	No product	3.63	4.60
MW-5	1/26/94		No product	3.70	4.53
MW-5	2/94		No product	3.23	5.00
MW-5	3/94		No product	7.76	0.47
MW-5	4/94		No product	10.19	-1.96
MW-5	5/94		No product	11.46	-3.23
MW-5	6/94		No product	14.25	-6.02
	•	Well MW-5 Aban	doned January	1995	
MW-6	9/26/02	11.93**	No product	9.33	2.60
MW-6	12/5/02	11.93**	No product	9.73	2.20

^{*} Groundwater elevation corrected for free product.



^{**} Top of Casing appears to have been re-surveyed by PSI, 2002

⁻⁻ No historical data

APPENDIX B

GROUNDWATER SAMPLING PROTOCOL AND RECORDS

Groundwater Sampling: The static water levels in all of the site wells were initially measured to the nearest 0.01 foot using an electronic depth sounder. A TeflonTM bailer or submersible pump was then placed in the middle of the water column and used to purge a minimum of three well-casing volumes of water from each well. After purging each well volume, pH, temperature, and conductivity measurements were recorded. In general, these measurements stabilize (consecutive readings within 10 percent) after three to four well volumes. If, after the third well volume, the pH and conductivity did not stabilize, additional well volumes were removed until these measurements did stabilize. If the yield was low and the well was pumped dry, the well was allowed to recharge to the 80 percent level before sampling. Samples were collected in appropriate sample bottles, labeled, and immediately placed in an ice-chilled chest for delivery to a state-certified analytical laboratory for analysis.

All well development and sampling equipment was cleaned in a solution of laboratory grade detergent and distilled water, or steam cleaned, before use at each sampling point. Well sampling records are attached as part of this Appendix.



Project No.: (80497.3	Date: 4-19	5-13				
Project Name: USPS Oak and	VUF Measured By:	72				
Weather: Clean, cool	Page\ of					
Well Name: MW-1	(a) Initial Water Level (ft)	6,61				
Sample Number: 945	(b) Measured Total Depth (ft) 20.11					
Chain-of-Custody No.:	(c) Height of Water Column (ft) = $b - a$					
Measuring Point:	(d) Casing Diameter (in)					
Screened Interval (ft):	(e) Casing Volume (gal) = $0.041 \times c \times d^2$ 8.3 =					
	8					
WEL	LHEAD CONDITIONS					
Casing: OK - but no belts on lid.						
Lock: Ok	Ti					
Standing Water: No						
Comments/Required Maintenance: bultz	Sec 1.d.					

INSTRUM	ENTS	CALIBRATION NOTES
Water Level:	YS1 56 MPS	
Temperature:		
pH:		
Specific Conductance:		
Dissolved Oxygen:		· M
Redox Potential:	V	
Turbidity:		
Salinity:		

u S/cm

Time -	Intake Depth (ft bmp)	Depth to Water (ft bmp)	Cum. Vol. Purged (gal)	Temp.	Нq	Specific Cond. (µmhos/ cm)	DO (mg/L)	Redox (mV)	Color	Turbidity	Salinity	Comments
9.05	8.0	6.61	1.0	16.93	6.16	2273	4.18	235.4	clean	_	J	no eder
		u	3.0	16.79	6.37	2180	2.30	243.1	Clear		= .	
		t (5.0	16.82	6.4	2 2198	1.84	245.6		القر	jan .	
		11	7.0	16.25	6,53	2291	1.82		· alean			
		ϵ_0	9.0	16.46	6155	2327	1,94	287.4	Clean	. 6		
			120	16,48	6.55	2314	1,54	283.4	Clean		. 7	
		C ₁	15,0	16.20	6.53	2267	1.49		Clean			
		(1	18.0	16,01	6.57	2139	1.98	307.2	Clear			
		N.	22.0	15.78	6.57	2079	1.34	2755	clea		T.	
					,							



Project No.: 180497	Date: <u>U-15 · 13</u>							
Project Name: USPS Oak	Jand VMF Measured By:							
Weather: cka,cco	Page of							
Well Name: $MW-2$ (a) Initial Water Level (ft) 7.18 Sample Number: 10.40 (b) Measured Total Depth (ft) 18.67 Chain-of-Custody No.:(c) Height of Water Column (ft) = b - a 11.57 Measuring Point:(d) Casing Diameter (in) 4 Screened Interval (ft):(e) Casing Volume (gal) = $0.041 \times c \times d^2$ 7.55								
	WELLHEAD CONDITIONS							
Casing: UK								
Lock: Uk								
Standing Water:								
Comments/Required Maintenance:	NOW							
INSTRUMENTS	CALIBRATION NOTES							
	II, MPS							
Temperature:								
pH:								
Specific Conductance:								
Dissolved Oxygen:								
Redox Potential:	4							
Turbidity:								
Salinity:								

Time	Intake Depth (ft bmp)	Depth to Water (ft bmp)	Cum. Vol. Purged (gal)	Temp.	рĦ	Specific Cond. (µmhos/ cm)	DO (mg/L)	Redox (mV)	Color	Turbidity	Salinity	Comment
0:05	9.0	7.18	2.0	15.52	6.39	1837	1:48	249.3	Clean	_	_	
		U	5.0	15.97	6.39	1859	1.29	2505	Clea			
	,,,	61		15,22	6.38	1860	1.38	244	Clean	"Grey		
		- C(16.0		6.41	1879	1.82	242.5	Clean	Grea -		
			19.0	14.93	6.40	1818	1.83	238.9	Clan	Gray -	_	10
,		(1	22.0	15.27	637	1781	1.69	2464	Clea	Grey -	<u></u>	N
		100								,		14 1
												Pris.



Project No.: \(\sum \) Project Name: \(\sum \) Weather: \(\sum \) Well Name: \(Sample \) Number:	S Oakland VI ear, cool MW-3	Date: Measured By: Page (a) Initial Water Level (ft) (b) Measured Total Depth (ft)		8,12
Chain-of-Custody No.:	inches	(c) Height of Water Column	(tt) = b - a	11.58
Measuring Point:		(d) Casing Diameter (in)	10	7
Screened Interval (ft):		(e) Casing Volume (gal) = 0	.041×c×d²	7.8
	WEI	LHEAD CONDITIONS		
Casing: ()\				
Lock: U/L		78		
Standing Water: V				
Comments/Required Maint	enance: ucul			
				la Transportation
INSTRUM			BRATION NOTES	3
Water Level:	181 556 A	185	1/4	
Temperature:				
pH:				
Specific Conductance:				
Dissolved Oxygen:				
Redox Potential:	<u> </u>			
Turbidity:				
Salinity:				

Time	Intake Depth (ft bmp)	Depth to Water (ft bmp)	Cum. Vol. Purged (gal)	Temp.	рĦ	Specific Cond. (µmhos/ cm)	DO (mg/L)	Redox (mV)	Color	Turbidity	Salinity	Comment
11:00	9.5	8.12	3.0	16.03	6.81	2044	2.77	241.1	(lear		-	
		¹ L	6.0	16.48	6.81	2042	2.47	252.2	Clea	. —		
		U	9.0	16.42	683	2042	2.37	243.3	Clea			
		11	120	16.70			2.13	2428	Naa		_	
		11	15.0	16.91	680	2021	1.85	246	5 Clas	<u></u>)	
		r i	18.0	16.51	6,81	2035	(.82	2571	Clar	40	27	
		*(23.0	15.88		2018	1.78	2484	Clea			
		·										



Project No.:	180497.3		Date:	4-1	5-13		
Project Name:	USPS Oakland	VMF	Measured By: _	J	PZ		
Weather:C	lear, cool		Page	of of			
Well Name: $MW-U$ (a) Initial Water Level (ft) 8.31 Sample Number:(b) Measured Total Depth (ft) 19.50 Chain-of-Custody No.:(c) Height of Water Column (ft) = b - a 19.50 Measuring Point:(d) Casing Diameter (in) 19.50 Screened Interval (ft):(e) Casing Volume (gal) = $0.041 \times c \times d^2$ 19.50							
	WEI	LHEAI	CONDITIONS				
Casing:			0				
Lock: O/L							
Standing Water: Wes							
Comments/Required Main	ntenance: No loc	ets an	well lid				
INSTRU	MENTS		CALIB	RATION NOT	ES		
Water Level:	VS1 556 1	105	- CALLES				
Temperature:	111101						
pH:							
Specific Conductance:							
Dissolved Oxygen:			(4) (4) (4) (4) (4) (4) (4) (4) (4) (4)				
Redox Potential:	V						
Turbidity:							
Salinity:							

Time	Intake Depth (ft bmp)	Depth to Water (ft bmp)	Cum. Vol. Purged (gal)	Temp.	рН	Specific Cond. (µmhos/ cm)	DO (mg/L)	Redox (mV)	Color	Turbidity	Salinity	Comments
(2:30	10.0	831	1.0	1732	6.40	1456	1.53	-35.5	Grey	Brn -	-	ador, s
		ι ι	4.0	1700	644	1495	2.45	-763	Gre	Bn -	_	
	3	(f	7.0	16.59	6.45	1636	1.80	-64.3	Grey	Bon -	<u> </u>	
		(1	10.0	16.66	6.46	716	1.68	-66.7		11		
		1,	15.0	17.04	6,47	- 1720	1.48	-615	Cle	ar-	= 1	
		i	18.0	16.60	653	1751	1.32	-11.8	Oli	an		
		()_	21.0	16.85	6.47	1735	1.04	-15.0	Che	an		
				1100	- "							
												



Project No.: 80497.	Date: 4-15-13
Project Name: USPS Oakla	WE Measured By:
Weather: clear, cool,	, SUMNY Page of
Well Name: MW-6 Sample Number: 12:2 Chain-of-Custody No.: Measuring Point:	(b) Measured Total Depth (ft) 20.70 (c) Height of Water Column (ft) = $b - a$ 12.72
Screened Interval (ft):	(e) Casing Volume (gar) = 0.041× 0× u-
W	VELLHEAD CONDITIONS
Casing: 014_	
Lock: none	
Standing Water: 10	
Comments/Required Maintenance: LOC	<u>L</u>
	· ·
INSTRUMENTS	CALIBRATION NOTES
Water Level: VS/5	56 MPS
Temperature:	
pH:	
Specific Conductance:	
Dissolved Oxygen:	
Redox Potential:	
Turbidity:	
Salinity:	

Time	Intake Depth (ft bmp)	Depth to Water (ft bmp)	Cum. Vol. Purged (gal)	Temp.	рH	Specific Cond. (µmhos/ cm)	DO (mg/L)	Redox (mV)	Color	Turbidity	Salinity	Comments
12:00	2.0	7.98	1.5	19,47	658	874	2.39	210.1	tibe	n -	1	
		ž (3.0	12.10		977	1.54	211.8	1+6n	1 -	_	
		17	6.0	19.05	6.38	1074	1.40	242,8	Hon	_	~	
		(7a))									1	
					-							





Environmental Instruments Leasing Company

Calibration & Components Checklist YSI Model 556

151 Widel 550	y
Instrument ID # 686 pH, conductivity,	D.O., ORP, Temperature
Component	s
Date Out: 4/12/13	Date In:
Meter: Probe: Batteries: Carrying strap: Manual: Case: Calibration beaker: Flow thru cell: Terms & Conditions:	Meter Probe Batteries Carrying strap Manual Case Calibration beaker Flow thru cell Terms & Conditions
4.01 Buffer pH: 7.01 Buffer pH: 10.01 Buffer pH: 1413 mS/cm cond Temp D.O ORP Barometer pressure	Meter Response 7.01 Meter Response 7.01 Meter Response 9.94 Meter Response 1913 Meter Response 22.97 Meter Response Meter Response 240 Meter Response 758.9 Meter Response
Inspected & Tested By:	Date: 4/12/13
Note: This unit has been tested and is in proper working cleaned and should be returned in the same condition. Of this instrument shall be billed at the current price. If the damaged a service order will be issued and your account malfunction you must notify ELCO within 24 hours or you was in your possession.	Any components missing upon return the unit is returned overly dirty or not will be billed. Should the unit

APPENDIX C

ANALYTICAL RESULTS

The chilled samples were delivered to a state-certified analytical laboratory. Chain of custody documentation was maintained for all samples. Attached are copies of the analytical results and the chain of custody forms.





THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton 1220 Quarry Lane Pleasanton, CA 94566 Tel: (925)484-1919

TestAmerica Job ID: 720-49133-1

Client Project/Site: USPS Oakland VMF

Revision: 1

For:

TRC Solutions, Inc. 167 Filbert St. Oakland, California 94607

Attn: Mr. Jacob Zepeda



Authorized for release by: 4/18/2013 4:52:44 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

----- LINKS -----

Review your project results through
Total Access

Have a Question?



Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Table of Contents

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Definitions/Glossary

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Glossary

These commonly used abbreviations may or may not be present in this report.
Listed under the "D" column to designate that the result is reported on a dry weight basis
Percent Recovery
Contains no Free Liquid
Duplicate error ratio (normalized absolute difference)
Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
Decision level concentration
Minimum detectable activity
Estimated Detection Limit
Minimum detectable concentration
Method Detection Limit
Minimum Level (Dioxin)
Not detected at the reporting limit (or MDL or EDL if shown)
Practical Quantitation Limit
Quality Control
Relative error ratio
Reporting Limit or Requested Limit (Radiochemistry)
Relative Percent Difference, a measure of the relative difference between two points
Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

TestAmerica Pleasanton

Case Narrative

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Job ID: 720-49133-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-49133-1

Comments

No additional comments.

Receipt

The samples were received on 4/15/2013 2:26 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC/MS VOA

No analytical or quality issues were noted.

GC Semi VOA

No analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

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Detection Summary

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Lah Sample ID: 720-49133-1

Client Sample ID: MW-1	Lab Sample ID: 720-49133-1

Analyte	Result Qualifier	RL	MDL Unit	Dil Fac D	Method	Prep Type
Diesel Range Organics [C10-C28]	110	50	ug/L	1	8015B	Total/NA

Lab Sample ID: 720-49133-2 Client Sample ID: MW-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil I	ас	D	Method	Prep Type
Diesel Range Organics [C10-C28]	170		51		ug/L		1		8015B	 Total/NA
Motor Oil Range Organics [C24-C36]	390		100		ug/L		1		8015B	Total/NA

Client Sample ID: MW-3 Lab Sample ID: 720-49133-3

Analyte	Result	Qualifier RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	1.9	0.50		ug/L	1		8260B/CA_LUFT	Total/NA
							MS	
Diesel Range Organics [C10-C28]	240	50		ug/L	1		8015B	Total/NA

Client Sample ID: MW-6 Lab Sample ID: 720-49133-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	0.81		0.50		ug/L	1		8260B/CA_LUFT	Total/NA
								MS	
Diesel Range Organics [C10-C28]	73		51		ug/L	1		8015B	Total/NA

Client Sample ID: MW-4 Lab Sample ID: 720-49133-5

Analyte	Result Q	Qualifier RL	MDL Unit	Dil Fac D	Method	Prep Type
Methyl tert-butyl ether	2.2	0.50	ug/L	1	8260B/CA_LUFT	Total/NA
					MS	
Gasoline Range Organics (GRO)	83	50	ug/L	1	8260B/CA_LUFT	Total/NA
-C5-C12					MS	
Diesel Range Organics [C10-C28]	2500	50	ug/L	1	8015B	Total/NA
Motor Oil Range Organics [C24-C36]	210	99	ug/L	1	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF

TestAmerica Job ID: 720-49133-1

Lab Sample ID: 720-49133-1

Matrix: Water

Client Sample ID: MW-1
Date Collected: 04/15/13 09:45
Date Received: 04/15/13 14:26

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			04/15/13 22:20	1
Benzene	ND		0.50		ug/L			04/15/13 22:20	1
Ethylbenzene	ND		0.50		ug/L			04/15/13 22:20	1
Toluene	ND		0.50		ug/L			04/15/13 22:20	1
Xylenes, Total	ND		1.0		ug/L			04/15/13 22:20	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/15/13 22:20	1
TBA	ND		4.0		ug/L			04/15/13 22:20	1
Naphthalene	ND		1.0		ug/L			04/15/13 22:20	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/15/13 22:20	1
DIPE	ND		0.50		ug/L			04/15/13 22:20	1
TAME	ND		0.50		ug/L			04/15/13 22:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		67 - 130			=		04/15/13 22:20	1
1,2-Dichloroethane-d4 (Surr)	113		75 - 138					04/15/13 22:20	1
Toluene-d8 (Surr)	99		70 - 130					04/15/13 22:20	1

moundar out of Diocor Hange of	·ga····oo (Dito)	()							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	110		50		ug/L		04/15/13 19:03	04/16/13 10:02	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		04/15/13 19:03	04/16/13 10:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	78		23 - 156				04/15/13 19:03	04/16/13 10:02	1

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Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Matrix: Water

Client Sample ID: MW-2 Lab Sample ID: 720-49133-2 Date Collected: 04/15/13 10:40

Date Received: 04/15/13 14:26

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			04/15/13 23:43	1
Benzene	ND		0.50		ug/L			04/15/13 23:43	1
Ethylbenzene	ND		0.50		ug/L			04/15/13 23:43	1
Toluene	ND		0.50		ug/L			04/15/13 23:43	1
Xylenes, Total	ND		1.0		ug/L			04/15/13 23:43	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/15/13 23:43	1
TBA	ND		4.0		ug/L			04/15/13 23:43	1
Naphthalene	ND		1.0		ug/L			04/15/13 23:43	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/15/13 23:43	1
DIPE	ND		0.50		ug/L			04/15/13 23:43	1
TAME	ND		0.50		ug/L			04/15/13 23:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		67 - 130					04/15/13 23:43	1
1,2-Dichloroethane-d4 (Surr)	111		75 - 138					04/15/13 23:43	1
Toluene-d8 (Surr)	99		70 - 130					04/15/13 23:43	1
- Method: 8015B - Diesel Range O	• , ,	. ,							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	170		51		ug/L		04/15/13 19:03	04/16/13 10:26	1
Motor Oil Range Organics [C24-C36]	390		100		ug/L		04/15/13 19:03	04/16/13 10:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	67		23 - 156				04/15/13 19:03	04/16/13 10:26	

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Lab Sample ID: 720-49133-3

Matrix: Water

Client Sample ID: MW-3
Date Collected: 04/15/13 11:30
Date Received: 04/15/13 14:26

p-Terphenyl

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	1.9		0.50		ug/L			04/16/13 00:11	1
Benzene	ND		0.50		ug/L			04/16/13 00:11	1
Ethylbenzene	ND		0.50		ug/L			04/16/13 00:11	1
Toluene	ND		0.50		ug/L			04/16/13 00:11	1
Xylenes, Total	ND		1.0		ug/L			04/16/13 00:11	1
Gasoline Range Organics (GRO)	ND		50		ug/L			04/16/13 00:11	1
-C5-C12									
TBA	ND		4.0		ug/L			04/16/13 00:11	1
Naphthalene	ND		1.0		ug/L			04/16/13 00:11	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/16/13 00:11	1
DIPE	ND		0.50		ug/L			04/16/13 00:11	1
TAME	ND		0.50		ug/L			04/16/13 00:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	88		67 - 130					04/16/13 00:11	1
1,2-Dichloroethane-d4 (Surr)	113		75 - 138					04/16/13 00:11	1
Toluene-d8 (Surr)	99		70 - 130					04/16/13 00:11	1
- Method: 8015B - Diesel Range O	rganics (DRO)	(GC)							
Analyte	• ,	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	240		50		ug/L		04/15/13 19:03	04/16/13 11:06	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		04/15/13 19:03	04/16/13 11:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

23 - 156

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4/18/2013

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF

Client Sample ID: MW-6

Date Collected: 04/15/13 12:20

Date Received: 04/15/13 14:26

TestAmerica Job ID: 720-49133-1

Lab Sample ID: 720-49133-4

Matrix: Water

Method: 8260B/CA_LUFTMS - 8	3260B / CA LUFT	MS							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.81		0.50		ug/L			04/16/13 00:38	1
Benzene	ND		0.50		ug/L			04/16/13 00:38	1
Ethylbenzene	ND		0.50		ug/L			04/16/13 00:38	1
Toluene	ND		0.50		ug/L			04/16/13 00:38	1
Xylenes, Total	ND		1.0		ug/L			04/16/13 00:38	1
Gasoline Range Organics (GRO)	ND		50		ug/L			04/16/13 00:38	1
-C5-C12									
TBA	ND		4.0		ug/L			04/16/13 00:38	1
Naphthalene	ND		1.0		ug/L			04/16/13 00:38	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/16/13 00:38	1
DIPE	ND		0.50		ug/L			04/16/13 00:38	1
TAME	ND		0.50		ug/L			04/16/13 00:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	86		67 - 130			=		04/16/13 00:38	1
1,2-Dichloroethane-d4 (Surr)	110		75 - 138					04/16/13 00:38	1
Toluene-d8 (Surr)	98		70 - 130					04/16/13 00:38	1

Method: 8015B - Diesel Range O	rganics (DRO)	(GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	73		51		ug/L		04/15/13 19:03	04/16/13 11:30	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		04/15/13 19:03	04/16/13 11:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	64		23 - 156				04/15/13 19:03	04/16/13 11:30	1

4/18/2013

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF

TestAmerica Job ID: 720-49133-1

Lab Sample ID: 720-49133-5

Matrix: Water

Client Sample ID: MW-4
Date Collected: 04/15/13 13:25
Date Received: 04/15/13 14:26

Method: 8260B/CA_LUFTMS - 82 Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	2.2		0.50		ug/L			04/16/13 01:06	1
Benzene	ND		0.50		ug/L			04/16/13 01:06	1
Ethylbenzene	ND		0.50		ug/L			04/16/13 01:06	1
Toluene	ND		0.50		ug/L			04/16/13 01:06	1
Xylenes, Total	ND		1.0		ug/L			04/16/13 01:06	1
Gasoline Range Organics (GRO) -C5-C12	83		50		ug/L			04/16/13 01:06	1
ТВА	ND		4.0		ug/L			04/16/13 01:06	1
Naphthalene	ND		1.0		ug/L			04/16/13 01:06	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/16/13 01:06	1
DIPE	ND		0.50		ug/L			04/16/13 01:06	1
TAME	ND		0.50		ug/L			04/16/13 01:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		67 - 130			=		04/16/13 01:06	1
1,2-Dichloroethane-d4 (Surr)	109		75 - 138					04/16/13 01:06	1
Toluene-d8 (Surr)	97		70 - 130					04/16/13 01:06	1

wethod: 8015B - Diesei Range Or	ganics (DRO)	(GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2500		50		ug/L		04/15/13 20:00	04/16/13 11:30	1
Motor Oil Range Organics [C24-C36]	210		99		ug/L		04/15/13 20:00	04/16/13 11:30	1
Surrogate p-Terphenyl	%Recovery	Qualifier	23 ₋ 156				Prepared 04/15/13 20:00	Analyzed 04/16/13 11:30	Dil Fac

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TestAmerica Job ID: 720-49133-1

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-134402/5

Matrix: Water

Analysis Batch: 134402

Client Sample ID: Method Blank Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			04/15/13 19:30	1
Benzene	ND		0.50		ug/L			04/15/13 19:30	1
Ethylbenzene	ND		0.50		ug/L			04/15/13 19:30	1
Toluene	ND		0.50		ug/L			04/15/13 19:30	1
Xylenes, Total	ND		1.0		ug/L			04/15/13 19:30	1
Gasoline Range Organics (GRO)	ND		50		ug/L			04/15/13 19:30	1
-C5-C12									
TBA	ND		4.0		ug/L			04/15/13 19:30	1
Naphthalene	ND		1.0		ug/L			04/15/13 19:30	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/15/13 19:30	1
DIPE	ND		0.50		ug/L			04/15/13 19:30	1
TAME	ND		0.50		ug/L			04/15/13 19:30	1

MB MB

Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	87	67 - 130	_		04/15/13 19:30	1
1,2-Dichloroethane-d4 (Surr)	107	75 - 138			04/15/13 19:30	1
Toluene-d8 (Surr)	97	70 - 130			04/15/13 19:30	1

Lab Sample ID: LCS 720-134402/6

Matrix: Water

Analysis Batch: 134402

Client Sample ID: Lab Control Sample Prep Type: Total/NA

7a., C.C = a.c 10 1 10 =							
	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Methyl tert-butyl ether	25.0	26.4		ug/L		106	62 - 130
Benzene	25.0	24.3		ug/L		97	79 _ 130
Ethylbenzene	25.0	24.8		ug/L		99	80 _ 120
Toluene	25.0	24.6		ug/L		98	78 ₋ 120
m-Xylene & p-Xylene	50.0	49.4		ug/L		99	70 _ 142
o-Xylene	25.0	23.9		ug/L		96	70 - 130
TBA	500	471		ug/L		94	70 - 130
Naphthalene	25.0	24.5		ug/L		98	70 - 130
Ethyl t-butyl ether	25.0	21.7		ug/L		87	70 - 130
DIPE	25.0	25.1		ug/L		100	69 - 134
TAME	25.0	21.8		ug/L		87	79 - 130

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	108		67 - 130
1,2-Dichloroethane-d4 (Surr)	98		75 - 138
Toluene-d8 (Surr)	103		70 - 130

Lab Sample ID: LCS 720-134402/8

Matrix: Water

Analysis Batch: 134402

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)	500	436		ug/L		87	62 - 120	
-C5-C12								

TestAmerica Pleasanton

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

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Spike

25.0

25.0

25.0

25.0 50.0

25.0

500 25.0

25.0

25.0

25.0

22.4

25.8

22.1

ug/L

ug/L

ug/L

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-134402/8

Matrix: Water

Analysis Batch: 134402

Client Sample ID: Lab Control Sample Prep Type: Total/NA

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	105		67 - 130
1,2-Dichloroethane-d4 (Surr)	101		75 - 138
Toluene-d8 (Surr)	108		70 - 130

Lab Sample ID: LCSD 720-134402/7

Matrix: Water

Methyl tert-butyl ether

m-Xylene & p-Xylene

Analyte

Benzene Ethylbenzene

Toluene

o-Xylene TBA

DIPE

TAME

Naphthalene

Ethyl t-butyl ether

Analysis Batch: 134402

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

70 - 130

69 - 134

79 - 130

Client Sample ID: Lab Control Sample Dup

3

Prep Type: Total/NA

LCSD	LCSD				%Rec.		RPD
Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
26.9		ug/L		108	62 - 130	2	20
24.0		ug/L		96	79 - 130	1	20
24.9		ug/L		99	80 - 120	0	20
24.9		ug/L		100	78 - 120	1	20
49.6		ug/L		99	70 - 142	0	20
24.0		ug/L		96	70 - 130	0	20
480		ug/L		96	70 _ 130	2	20
24.4		ug/L		97	70 - 130	1	20

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103

89

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	108		67 - 130
1,2-Dichloroethane-d4 (Surr)	97		75 - 138
Toluene-d8 (Surr)	104		70 - 130

Lab Sample ID: LCSD 720-134402/9

Matrix: Water

Analysis Batch: 134402

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)	500	427		ug/L		85	62 - 120	2	20

-C5-C12

	LCSD LCSD	
Surrogate	%Recovery Qualifier	r Limits
4-Bromofluorobenzene	105	67 - 130
1,2-Dichloroethane-d4 (Surr)	101	75 - 138
Toluene-d8 (Surr)	109	70 - 130

Lab Sample ID: 720-49133-1 MS

Matrix: Water

Analysis Batch: 134402

•	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Methyl tert-butyl ether	ND		25.0	30.5		ug/L		122	60 - 138	
Benzene	ND		25.0	24.2		ug/L		97	60 - 140	
Ethylbenzene	ND		25.0	23.4		ug/L		94	60 - 140	
Toluene	ND		25.0	23.3		ug/L		93	60 - 140	

TestAmerica Pleasanton

Client Sample ID: MW-1

Prep Type: Total/NA

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TestAmerica Job ID: 720-49133-1

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-49133-1 MS

Matrix: Water

Analysis Batch: 134402

Client Sample ID: MW-1 Prep Type: Total/NA

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
m-Xylene & p-Xylene	ND		50.0	47.0		ug/L		94	60 - 140	
o-Xylene	ND		25.0	22.9		ug/L		92	60 - 140	
TBA	ND		500	453		ug/L		91	60 - 140	
Naphthalene	ND		25.0	24.4		ug/L		97	56 - 140	
Ethyl t-butyl ether	ND		25.0	24.9		ug/L		100	60 - 140	
DIPE	ND		25.0	28.1		ug/L		113	60 - 140	
TAME	ND		25.0	25.2		ug/L		101	60 - 140	

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	108		67 - 130
1,2-Dichloroethane-d4 (Surr)	106		75 - 138
Toluene-d8 (Surr)	106		70 - 130

Lab Sample ID: 720-49133-1 MSD

Matrix: Water

Analysis Batch: 134402

Client Sample ID: MW-1 Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Methyl tert-butyl ether	ND		25.0	28.8		ug/L		115	60 - 138	6	20
Benzene	ND		25.0	24.7		ug/L		99	60 - 140	2	20
Ethylbenzene	ND		25.0	23.9		ug/L		96	60 - 140	2	20
Toluene	ND		25.0	23.7		ug/L		95	60 - 140	2	20
m-Xylene & p-Xylene	ND		50.0	47.6		ug/L		95	60 - 140	1	20
o-Xylene	ND		25.0	23.3		ug/L		93	60 - 140	2	20
TBA	ND		500	462		ug/L		92	60 - 140	2	20
Naphthalene	ND		25.0	23.1		ug/L		93	56 - 140	5	20
Ethyl t-butyl ether	ND		25.0	24.8		ug/L		99	60 - 140	1	20
DIPE	ND		25.0	28.2		ug/L		113	60 - 140	0	20
TAME	ND		25.0	24.6		ug/L		98	60 - 140	2	20

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	110		67 - 130
1,2-Dichloroethane-d4 (Surr)	102		75 ₋ 138
Toluene-d8 (Surr)	106		70 - 130

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-134366/1-A

Matrix: Water

Analysis Batch: 134352

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 134366

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		04/15/13 11:50	04/16/13 00:29	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		04/15/13 11:50	04/16/13 00:29	1
	МВ	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
p-Terphenyl	104		23 - 156				04/15/13 11:50	04/16/13 00:29	1

TestAmerica Pleasanton

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QC Sample Results

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 720-13 Matrix: Water Analysis Batch: 134352	4366/2-A						Client	Sample	Prep Ty	ntrol Sample pe: Total/NA atch: 134366
_			Spike	LCS	LCS				%Rec.	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Diesel Range Organics [C10-C28]			2500	1800		ug/L		72	40 - 150	
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
p-Terphenyl	109		23 - 156							

Lab Sample ID: LCSD /20-134366/3-A				Cile	ent Sam	ו :upie ו	Lab Contro	ı Sampı	e Dup
Matrix: Water							Prep T	ype: To	tal/NA
Analysis Batch: 134352							Prep I	Batch: 1	34366
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Diesel Range Organics	2500	1840		ug/L		74	40 - 150	2	35
[C10-C28]									
	Matrix: Water Analysis Batch: 134352 Analyte Diesel Range Organics	Matrix: Water Analysis Batch: 134352 Spike Analyte Added Diesel Range Organics 2500	Matrix: Water Analysis Batch: 134352 Spike LCSD Analyte Added Result Diesel Range Organics 2500 1840	Matrix: Water Analysis Batch: 134352 Spike LCSD LCSD Analyte Added Result Qualifier Diesel Range Organics 2500 1840	Matrix: Water Analysis Batch: 134352 Spike LCSD LCSD Analyte Added Result Qualifier Unit Diesel Range Organics 2500 1840 ug/L	Matrix: Water Analysis Batch: 134352 Spike LCSD LCSD Analyte Added Result Diesel Range Organics 2500 1840 Unit ug/L D	Matrix: Water Analysis Batch: 134352 Spike LCSD LCSD Analyte Added Result Qualifier Unit Ug/L D %Rec Ug/L Diesel Range Organics 2500 1840 ug/L 74	Matrix: Water Prep T Analysis Batch: 134352 Spike LCSD LCSD CSD KRec. Analyte Added Result Diesel Range Organics Qualifier Unit Ug/L D MRec Limits Value Diesel Range Organics 2500 1840 Ug/L 74 40 - 150	Matrix: Water Prep Type: Tot Prep Batch: 1 Analysis Batch: 134352 Spike LCSD LCSD CSD KRec. Analyte Added Result Diesel Range Organics Qualifier Unit Ug/L D MRec Limits RPD WRec RPD WRec

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
p-Terphenyl	109		23 - 156

TestAmerica Job ID: 720-49133-1

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF

GC/MS VOA

Analysis Batch: 134402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49133-1	MW-1	Total/NA	Water	8260B/CA_LUFT	
				MS	
720-49133-1 MS	MW-1	Total/NA	Water	8260B/CA_LUFT	
				MS	
720-49133-1 MSD	MW-1	Total/NA	Water	8260B/CA_LUFT	
				MS	
720-49133-2	MW-2	Total/NA	Water	8260B/CA_LUFT	
				MS	
720-49133-3	MW-3	Total/NA	Water	8260B/CA_LUFT	
700 40400 4	MM 0	TatalALA	14/-1	MS	
720-49133-4	MW-6	Total/NA	Water	8260B/CA_LUFT	
720-49133-5	MW-4	Total/NA	Water	MS	
720-49133-3	IVI V V	Total/NA	vvalei	8260B/CA_LUFT MS	
LCS 720-134402/6	Lab Control Sample	Total/NA	Water	8260B/CA LUFT	
200 720 10110270	Eas Control Campio	1000/101	Water	MS	
LCS 720-134402/8	Lab Control Sample	Total/NA	Water	8260B/CA LUFT	
				MS	
LCSD 720-134402/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA LUFT	
				MS	
LCSD 720-134402/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA LUFT	
				MS	
MB 720-134402/5	Method Blank	Total/NA	Water	8260B/CA_LUFT	
				MS	

GC Semi VOA

Analysis Batch: 134352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-134366/2-A	Lab Control Sample	Total/NA	Water	8015B	134366
LCSD 720-134366/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	134366
MB 720-134366/1-A	Method Blank	Total/NA	Water	8015B	134366

Prep Batch: 134366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49133-1	MW-1	Total/NA	Water	3510C	
720-49133-2	MW-2	Total/NA	Water	3510C	
720-49133-3	MW-3	Total/NA	Water	3510C	
720-49133-4	MW-6	Total/NA	Water	3510C	
720-49133-5	MW-4	Total/NA	Water	3510C	
LCS 720-134366/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-134366/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-134366/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 134435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49133-1	MW-1	Total/NA	Water	8015B	134366
720-49133-3	MW-3	Total/NA	Water	8015B	134366
720-49133-4	MW-6	Total/NA	Water	8015B	134366

Analysis Batch: 134436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49133-2	MW-2	Total/NA	Water	8015B	134366

TestAmerica Pleasanton

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QC Association Summary

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

GC Semi VOA (Continued)

Analysis Batch: 134436 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49133-5	MW-4	Total/NA	Water	8015B	134366

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Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Client Sample ID: MW-1

Lab Sample ID: 720-49133-1

Matrix: Water

Date Collected: 04/15/13 09:45 Date Received: 04/15/13 14:26

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS			134402	04/15/13 22:20	PD	TAL PLS
Total/NA	Prep	3510C			134366	04/15/13 19:03	AM	TAL PLS
Total/NA	Analysis	8015B		1	134435	04/16/13 10:02	DH	TAL PLS

Client Sample ID: MW-2

Lab Sample ID: 720-49133-2

Matrix: Water

Date Collected: 04/15/13 10:40 Date Received: 04/15/13 14:26

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS			134402	04/15/13 23:43	PD	TAL PLS
Total/NA	Prep	3510C			134366	04/15/13 19:03	AM	TAL PLS
Total/NA	Analysis	8015B		1	134436	04/16/13 10:26	DH	TAL PLS

Client Sample ID: MW-3

Lab Sample ID: 720-49133-3

Matrix: Water

Date Collected: 04/15/13 11:30 Date Received: 04/15/13 14:26

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	134402	04/16/13 00:11	PD	TAL PLS
Total/NA	Prep	3510C			134366	04/15/13 19:03	AM	TAL PLS
Total/NA	Analysis	8015B		1	134435	04/16/13 11:06	DH	TAL PLS

Client Sample ID: MW-6

Lab Sample ID: 720-49133-4

Matrix: Water

Date Collected: 04/15/13 12:20 Date Received: 04/15/13 14:26

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	134402	04/16/13 00:38	PD	TAL PLS
Total/NA	Prep	3510C			134366	04/15/13 19:03	AM	TAL PLS
Total/NA	Analysis	8015B		1	134435	04/16/13 11:30	DH	TAL PLS

Client Sample ID: MW-4

Lab Sample ID: 720-49133-5

Matrix: Water

Date Collected: 04/15/13 13:25

Date Received: 04/15/13 14:26

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	134402	04/16/13 01:06	PD	TAL PLS
Total/NA	Prep	3510C			134366	04/15/13 20:00	AM	TAL PLS
Total/NA	Analysis	8015B		1	134436	04/16/13 11:30	DH	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TestAmerica Pleasanton

Certification Summary

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

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Method Summary

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF TestAmerica Job ID: 720-49133-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTM	8260B / CA LUFT MS	SW846	TAL PLS
S			
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

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Sample Summary

Matrix Water

Water

Water

Water

Water

Client: TRC Solutions, Inc. Project/Site: USPS Oakland VMF

Client Sample ID

MW-1

MW-2

MW-3

MW-6

MW-4

Lab Sample ID

720-49133-1

720-49133-2

720-49133-3

720-49133-4

720-49133-5

TestAmerica Job ID: 720-49133-1

Collected	Received
04/15/13 09:45	04/15/13 14:26
04/15/13 10:40	04/15/13 14:26
04/15/13 11:30	04/15/13 14:26

04/15/13 12:20

04/15/13 13:25

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04/15/13 14:26

04/15/13 14:26

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Reference #: 145406

THE LEADER IN ENVIRONMENTAL RESTING

TESTAMERICA San Francisco Chain of Custody
1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Date 4-15-13 Page / of /

					10 4 20 1 1 1 1									
Report To			An	alysis Re	quest		20.2							
Attn: Jacob Zapada Company: TPC - Sam Francisca Address: (O 2-10 Pt St. + 300 Phone: 925-760 or 12 mail: zapadu Q + resolution 200 Pt St. + 300 Billi To: Sampled By: Jacob Jacob Press 200 Pt St. + 200	Figure Ery outsity In Silica ser Apieset Motor Oil In Other) D Total	Pesucides □ EPA 8081 □ 508 PCBs □ EPA 8082 □ 608 PNAs by □ 8270 □ 8310	CAM17 Metais (EPA 6010/7470/7471) Metals: □ Lead □ LUFT □ RCRA □ Other:	Low Level Metals by EPA 200.8/6020 (ICP-MS)	W.E.T (STLC) TCLP	5 th	Spec Cond. Cl Alkalinity TSS Cl TDS Cl	Anions: D.Cl. D.SO, D.NO, D.F. D.Br. D.NO ₂ D.PO,			Number of Containers	
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MW-6 1220				·····									5	
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PO#. Temp: 3.8°C	ted Name (Date	- P	rinted Name	720-49	11133 Ch	ain of	Custod	ly S			Date		
	npany		- c	Company	·····			Com	pany					
T 5 72h 48h 24h Other: 1) Re	Received by:	14:26	2) Received b	y:			33 R	eceve	gby: 1				
Report: O Routine Theyeld Devel 4 KEDD A State Tank Signa	nature TiBullocic ted Name	14:26 Time 4.1.5.13	- s	Signature		Time		Sign	and e			Time		
Printe Global ID	ted Name	Date	- F	rinted Name		Dat	e	Print	ted Nar	me		Date		
See Terms and Conditions on reverse *TestAmenca SF reports 8015M from C ₆ -C ₂₄ (industry norm). Default for 8015B is C ₁₀ -C ₂₆	THE J Ame	Frica	- c	Company				Com	npany	·	***		_	
October on town of old function and property of the october o			<u> </u>						~			Rev0	2/09	

Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 720-49133-1

Login Number: 49133 List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	