PACIFIC FACILITIES SERVICE OFFICE
UNITED STATES POSTAL SERVICE

September 28, 2012

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 Second Semi-Annual 2012 Groundwater Monitoring Report are true and correct.

Sincerely:

Emmy Andrews
Facilities Environmental Specialist

Attachments

Cc: Gary Gunderson, TRC

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Second Semi-Annual 2012
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

September 27, 2012
Project No. 180497.2

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September 27, 2012
180497.2

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

RE: SECOND SEMI-ANNUAL 2012 GROUNDWATER MONITORING REPORT USPS OAKLAND VMF 1675 7TH STREET OAKLAND, CALIFORNIA

Dear Ms. Andrews:

The attached report summarizes the results of the second semi-annual 2012 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 *October 20, 2011 Agreement for Environmental Services Contract# 052571-09-J-0041 (Work Order #28.00).*

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

Gary E. Gunderson, P.E.
Senior Project Manager

GEG: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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SECOND SEMI-ANNUAL 2012 GROUNDWATER MONITORING REPORT USPS OAKLAND VMF 1675 7TH STREET OAKLAND, CALIFORNIA

1.0 INTRODUCTION

1.1 Purpose

This report presents the results of the second semi-annual 2012 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 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). 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 12,000-gallon 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, Geo/Resource Consultants, Inc. performed a subsurface investigation in which nine borings were drilled and 25 soil samples were collected and analyzed for TPHd, TPHg, and BTEX compounds (GRC, 1993). Five of the drilled borings were converted to 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 at 3 feet beneath the fuel dispenser island at MW-4 (boring B-4 location); 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 at 6 feet beneath the fuel dispenser island near well MW-3 (boring B-8); and benzene (0.04 mg/Kg) was detected in soil at 2.5 feet deep near well MW-2 (boring B-2). TPHd was detected in a groundwater sample

collected from monitoring well MW-4 at a concentration of 580 µg/L. No other petroleum hydrocarbons were detected in any of the other groundwater samples collected during the investigation.

Quarterly groundwater monitoring was initiated at the site in January 1994. Due to the construction of Interstate 880 in the vicinity of the site (Cypress Freeway Reconstruction Project) in December 1994, the 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. MW-5 was abandoned in January 1995. By June 1995, free product was discovered in well MW-4 and removed with absorbent socks and bailers. TPHd concentrations increased from June 1994 to June 1995 in wells MW-1, MW-2, MW-3 and MW-4.

In accordance with a request from the ACDEH, by June 1997, Harding Lawson Associates (HLA) performed a well search, chemical data compilation of groundwater and soil contamination, and a screening Human Health Risk Assessment (HHRA) (Tier I) to evaluate and assess whether site closure was justifiable. Mr. Kayode Kadara (USPS) presented the HLA report to Ms. Jennifer Eberle (ACDEH) in June 1997 and to Mr. Larry Seto (ACDEH) by February 1998. In the report, HLA concluded that "no risk-based remediation is necessary and case closure is recommended". The request for site closure was reviewed and denied by Mr. Seto and Madhulla Logan (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).

Additionally, 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 metals (CAM 17), TPHg, TPHd, BTEX compounds, TPH as motor oil (TPHmo), and chlorinated volatile organic compounds (VOCs) for disposal. Analytical results indicated 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 (TRPH up to 61 mg/Kg); 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 the ACDEH local oversight program (LOP), submitted a letter to Mr. Sean McFadden of the 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 is required or to issue a closure letter. An additional letter sent to Mr. Sean McFadden (USPS) from Mr. Larry Seto (ACDEH) indicated that groundwater had not been tested for methyl-tert butyl ether (MTBE). The letter indicated that in addition to a Tier II RBCA, before site closure could be issued, another groundwater sample must be taken from well MW-4 and analyzed for TPHg, TPHd, BTEX, and MTBE. In another letter dated November 8, 2000, Mr. Larry Seto (ACDEH) indicated receipt of the Tier II HHRA dated October 11, 1999 by Lowney Associates. The letter also indicated that the ACDEH had not received the laboratory analysis for the groundwater sample from MW-4, and that a groundwater sample must be taken from MW-4 before case closure could be issued. In addition, Mr. Tom Peacock would be the new case officer for the site at ACDEH. On November 1, 2000, Lowney Associates collected a groundwater sample from well MW-4, at which

time the well contained 1 to 2 inches of free product. The subsequent Groundwater Quality Evaluation report (January 2001), recommended quarterly groundwater monitoring at the site.

Mr. Barney Chan (ACDEH) responded in a letter on April 9, 2001, directing Mr. Sean McFadden (USPS) to resume quarterly groundwater monitoring, with an addition of polyaromatic hydrocarbons (PAHs) to the list of contaminants to be analyzed (in addition to TPHg, TPHd, BTEX, MTBE). Mr. Chan (ACDEH) also requested clarification of the case by indicating that the 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.

Quarterly groundwater monitoring was initiated by the USPS in March 2002 by Professional Service Industries (PSI), which 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); because of the presence of free product, well MW-4 was analyzed for semi-volatile organic compounds (SVOCs) and PAHs. TPHd was detected in MW-3 (0.54 mg/L). MTBE was also detected in MW-3 (3.8 µg/L) and MW-4 (8.5 µg/L). Additional VOCs and SVOCs were detected in groundwater from MW-4 (sec-butylbenzene, napthalene, n-propylbenzene, anthracene, di-n-octylphalate, flourene, 2-methylnapthalene, naphthalene, phenanthrene, and pyrene), but only naphthalene was above the EPA Region IX Preliminary Remediation Goals (PRG) at 46 µg/L.

As a result of subsequent correspondence between Mr. Chan (ACDEH), Mr. Roland Queyquep (USPS) and Mr. Ross and Mr. Burfield of PSI (consultant for the USPS) during May through August 2002, the ACDEH made the following requests:

- 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. The ACDEH approved the Workplan in their letter dated July 19, 2002. Modifications to the Workplan, including screening and analysis of soil samples from the proposed boring and clarification of the groundwater sampling method and installation of a permanent well, was sent by PSI on August 19, 2002 and approved by the ACDEH in their letter dated August 23, 2002.

Groundwater results from the quarterly sampling program in 2002 by PSI indicated 4.32 inches of free product was observed in MW-4. The free product itself 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 the free product was no longer apparent within the well. In September 2002, well MW-6 was installed approximately 60 feet down-gradient of wells MW-3 and MW-4 by PSI per the ACDEH request for delineation of the plume down-gradient of the fuel island. In general, the analytical results for the 2002 groundwater sampling program indicated no TPHg in any of the wells except MW-4; TPHd was detected in wells MW-1, MW-3, and MW-4, but decreased rapidly from the first to the fourth quarter; BTEX was not detected in any wells except for toluene at low concentrations in MW-6; and MTBE was detected in wells MW-1 through MW-4, ranging from 4 to 7 µg/L.

By 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, 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 identifies potential vapor intrusion as one of the main impediments to obtaining case closure.

In December 2010, TRC conducted a groundwater monitoring event at the site. Since the wells at the site had not been sampled in eight years, TRC redeveloped the five wells at the site prior to sampling and surveyed wells afterwards. As discussed above, MW-5 had been decommissioned in 1994 to allow for construction. Laboratory analyses of groundwater from monitoring wells MW-1, MW-3, and MW-4 detected TPHd as dissolved phase hydrocarbons above the laboratory reporting limits and environmental screening levels (ESLs) ranging from 161 to 6,620 µg/L. TPHmo was detected in wells MW-2 and MW-4 above the laboratory reporting limits and ESLs. TPHg and BTEX compounds were not detected above the laboratory reporting limits or ESLs. MTBE was detected in groundwater from wells MW-3, MW-4, and MW-6, but was well below the groundwater ESL of 5 µg/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 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 to the ACDEH 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. TRC submitted the *Workplan for Soil Vapor Investigation* to ACDEH on March 19, 2012. Submittal is documented on ACDEH and Geotracker databases. TRC is currently awaiting ACDEH's response to the workplan.

During the 1st 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 µg/L for TPHg and middle distillates. The concentrations had increased since the fourth quarter of 2010 from below reporting limits to 290 µg/L of TPHg and 6,620 to 14,000 µg/L of TPHd in well MW-4. However, TPHg and TPHd were not detected in groundwater in any other wells during the monitoring event.

1.3 Scope of Work

The scope of work for this investigation was outlined in our agreement with the USPS dated *October 20, 2011 Agreement for Environmental Services Contract# 052571-09-J-0041, (Work Order #28.00)*, and included the following tasks:

- Measurement of the shallow groundwater flow direction beneath the site;
- Purge groundwater and record field parameters of 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), naphthalene and ethanol by EPA Test Methods 8015M and 8260B;
- Preparation of this second semi-annual 2012 groundwater monitoring report.

2.0 GROUNDWATER QUALITY EVALUATION

2.1 Groundwater Flow Evaluation

On August 15, 2012, groundwater elevation data was collected during well sampling. The general flow direction in the shallow water-bearing zone is towards the southwest (S49°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 also are presented in Appendix A - Table B.

Table 1. Groundwater Elevations in Site Wells

Monitoring Well	Latitude+	Longitude+	Date	Top of Casing Elevation (feet msl)	Depth to Groundwater ** (ft bgs)	Groundwater Elevation (feet msl)	Groundwater Flow Direction
MW-1	37°48'19.16"N	122°18'6.01"W	8/15/2012	11.44	7.40	4.04	S49°W
MW-2	37°48'18.84"N	122°18'5.74"W	8/15/2012	12.06	7.98	4.08	S49°W
MW-3	37°48'18.64"N	122°18'6.54"W	8/15/2012	12.48	8.89	3.59	S49°W
MW-4	37°48'18.50"N	122°18'6.15"W	8/15/2012	12.83	9.14	3.69	S49°W
MW-6	37°48'18.08"N	122°18'6.73"W	8/15/2012	11.93	8.79	3.14	S49°W

** 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.

TOC = top of casing (from PSI 2002)

ft bgs = feet below ground surface

feet msl = feet mean sea level

2.2 Groundwater Quality

On August 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, naphthalene and ethanol 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.

Table 2a. Analytical Results of Selected Groundwater Samples
(concentrations in micrograms per liter [µg/L])

Well No.	Date	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
MW-1	8/15/2012	<50	<52	<100	<0.5	<0.5	<0.5	<1.0	<0.5
MW-2	8/15/2012	<50	<52	<100	<0.5	<0.5	<0.5	<1.0	<0.5
MW-3	8/15/2012	<50	57	<110	<0.5	<0.5	<0.5	<1.0	2.8
MW-4	8/15/2012	**180**	**4,500**	**130**	<0.5	<0.5	<0.5	<1.0	2.0
MW-6	8/15/2012	<50	<52	<100	<0.5	<0.5	<0.5	<1.0	0.60
Groundwater ESL (1)		100	100	100	1	40	30	20	5
MCL(2)		NE	NE	NE	1	150	300	1,750	13

Notes

(1) Environmental Screening Level-Table A, CRWQCB, SF Bay Region, rev. May 2008.

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

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

µg/L = 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 [µg/L])

Well No.	Date	TBA	DIPE	ETBE	TAME	1,2-DCA	Naphthalene
MW-1	8/15/2012	<4.0	<0.5	<0.5	<0.5	<0.5	<1.0
MW-2	8/15/2012	<4.0	<0.5	<0.5	<0.5	<0.5	<1.0
MW-3	8/15/2012	<4.0	<0.5	<0.5	<0.5	<0.5	<1.0
MW-4	8/15/2012	< 4.0	<0.5	<0.5	<0.5	<0.5	<1.0
MW-6	8/15/2012	<4.0	<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
(1) Environmental Screening Level-Table A, CRWQCB, SF Bay Region, rev. May 2008.
(2) Drinking water Maximum Contaminant Levels–California DHS, June 26, 2009
µg/L = 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	pH	Specific Conductivity	Temperature	Dissolved Oxygen	Oxidation Reduction Potential
			(µS/cm)	(°C)	(mg/L)	(mV)
MW-1	8/15/2012	6.45	1720	22.00	8.78	-64.3
MW-2	8/15/2012	6.83	1710	21.80	9.66	-133.0
MW-3	8/15/2012	6.82	1928	19.30	11.21	-74.8
MW-4	8/15/2012	6.50	1690	19.80	10.63	-259.9
MW-6	8/15/2012	6.51	919	21.60	8.08	-56.3

Notes
mg/L = milligrams per liter
mV = millivolts
µS/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 August 15, 2012. A minor sheen appears on the groundwater from the well, but no SPH has been present for approximately six months of observation. 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-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-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-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-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	--

Notes

Bold = Measurable product thickness
-- = no product thickness measured
** 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)
ft bgs = feet below ground surface
feet msl = feet mean sea level

3.0 CONCLUSIONS

3.1 Discussion of General Groundwater Quality

Groundwater samples were collected during the second semi-annual 2012 monitoring event from wells MW-1 through MW-4, and MW-6. Also, a total of 20 gallons of groundwater containing dissolved-phase 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 is towards the southwest and appears generally consistent with prior measurements.

Concentrations of TPHg (180 µg/L), TPHd (4,500 µg/L), and TPHmo (130 µg/L) detected in monitoring well MW-4 exceeded the environmental screening level (ESL) of 100 µg/L. However, concentrations of TPHd have decreased by a factor of 10 since February 2012, TPHg has decreased significantly, and TPHmo concentration is 130 µg/L, only slightly above the ESL of 100 µg/L. TPHg and TPHd were not detected in groundwater in any other wells during this monitoring event.

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 from wells MW-3 (2.8 µg/L), MW-4 (2.0 µg/L), and MW-6 (0.6 µg/L), but were below the groundwater ESL of 5 µg/L.

3.2 Recommendations

Based on the results obtained during this second semi-annual 2012 groundwater monitoring event, we recommend presenting a case for closure of this Site to the ACDEH due to the absence of SPH from well MW-4 for the past six months and the apparent stability of the dissolved-phase contaminant plume. In addition, 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 for the following reasons:

- All eight General Criteria in the Policy have been met, with the exception of construction of a Conceptual Site Model (CSM). TRC proposes to include the CSM in a closure package that will be submitted to the ACDEH for review.

- The dissolved TPH plume is stable, and SPH has not been observed since February 2012.

- Although TPH were detected in soil samples collected from MW-3 (180 mg/Kg of TPHg) and MW-4 (2,400 mg/Kg of TPHd) (GRC,1993) 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 media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk." The well (MW-3) that is closest to the VMF offices 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 was lower than the acceptable target risk of 1E-05.

- Benzene and ethylbenzene detected in on-site soil (GRC,1993) is below the screening criteria set forth in Table 1 of the Policy.

TRC respectfully requests the ACDEH to re-evaluate the Site for closure based on the reasons listed above. If acceptable, TRC proposes to forego implementation of the soil vapor investigation that was proposed in the *Workplan for Soil Vapor Investigation* dated March 19, 2012, due the insignificant risk posed by the TPH in soil and the stated Case Closure Policy regarding soil vapor potential at active fueling sites. TRC proposes instead to prepare a CSM and closure package for review by the ACDEH.

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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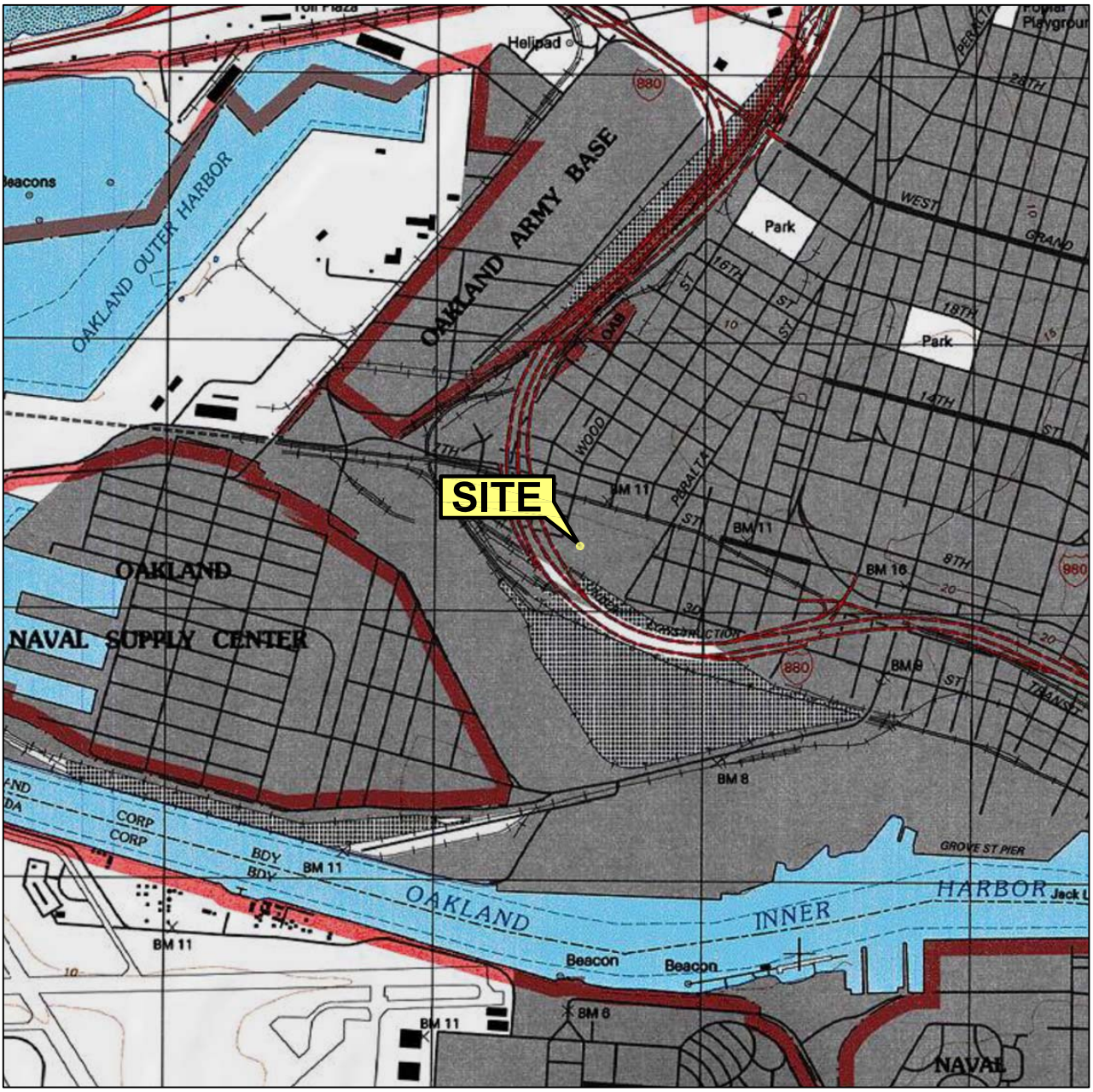
Geo/Resource Consultants, Inc., December 3, 1993. *Site Characterization Report, U.S. Postal Service Vehicle Maintenance Facility, 1675 7th Street, Oakland, California.*

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.*

FIGURES



1 MILE 3/4 1/2 1/4 0 1 MILE

SCALE 1 : 24,000

N

SOURCE:
United States Geological Survey
7.5 Minute Topographic Maps:
Oakland West Quadrangle

VICINITY MAP

United States Postal Service
Vehicle Maintenance Facility
1675 7th Street
Oakland, California

TRC 180497.2 **FIGURE 1**

FILE NAME: N:\CAD\USPS Oakland\2nd Half 2012 GW QMS Report\Fig1_Vicinity Map.dwg | Layout Tab: 8x11

AERIAL PHOTO SOURCE: Google Earth, October 2009.

GROUNDWATER ELEVATION CONTOUR MAP
August 15, 2012

United States Postal Service
Vehicle Maintenance Facility
1675 7th Street
Oakland, California

TRC | 180497.2 | **FIGURE 2**

FILE NAME: N:\CAD\USPS Oakland\2nd Half 2012 GW QMS Report\Fig2_GW_Aug12.dwg | Layout Tab: 8x11

AERIAL PHOTO SOURCE: Google Earth, October 2009.

DISSOLVED-PHASE HYDROCARBON CONCENTRATIONS
August 15, 2012
United States Postal Service
Vehicle Maintenance Facility
1675 7th Street
Oakland, California

TRC | 180497.2 | **FIGURE 3**

FILE NAME: N:\CAD\USPS Oakland\2nd Half 2012 GW QMS Report\Fig3_Diss-HC_Aug12.dwg | Layout Tab: 8x11

AERIAL PHOTO SOURCE: Google Earth, October 2009.

DISSOLVED-PHASE TPHd ISOCONCENTRATION CONTOUR MAP
August 15, 2012
United States Postal Service
Vehicle Maintenance Facility
1675 7th Street
Oakland, California

TRC | 180497.2 | **FIGURE 4**

FILE NAME: N:\CAD\USPS Oakland\2nd Half 2012 GW QMS Report\Fig4_TPHd_Aug12.dwg | Layout Tab: 8x11

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	**8/15/2012**	**<50**	**<52**	**<0.5**	**<0.5**	**<0.5**	**<1.0**	**<0.5**
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
MW-2	3/1/1994	<50	<50	<0.5	<0.5	<0.5	<1.0	NA
MW-2	6/1/1994	<50	<50	<0.5	<0.5	<0.5	<1.0	NA
MW-2	2/22/1995	<50	280	<0.5	<0.5	<0.5	<1.0	NA
MW-2	6/6/1995	<50	570	<0.5	<0.5	<0.5	<1.0	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
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-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-4	9/1/1993	<50	580	<0.5	<0.5	<0.5	<0.5	NA
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

Monitoring Well	Date	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
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
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
MW-4	11/15/1996	600	13,000	0.78	<0.5	0.94	<1.0	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-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 abandoned in January 1995 (PSI 2003)**							
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**

< 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		No product	15.55	-7.25
MW-1	2/22/95		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		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		No product	8.61	0.67
MW-3	3/11/02		No product	8.43	0.85
MW-3	6/18/02		No product	8.64	0.64
MW-3	9/26/02	12.48**	No product	9.51	2.97
MW-3	12/5/02	12.48**	No product	9.91	2.57
MW-4	9/93	8.73	No product	4.55	4.18
MW-4	1/26/94		No product	4.60	4.13
MW-4	2/94		No product	3.95	4.78
MW-4	3/94		No product	8.96	-0.23
MW-4	4/94		No product	8.96	-0.23
MW-4	5/94		No product	14.24	-5.51
MW-4	6/94		No product	17.28	-8.55
MW-4	2/22/95		No product	7.93	0.80
MW-4	6/6/95		No product	8.48	0.25
MW-4	8/16/95		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 Abandoned 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 Teflon™ 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.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: _____

Date 8-15-12 Page 1 of 1

Report To

Attn: Jacob Zapeda
Company: TRC
Address: 101 2nd Street, Suite 300
Phone: 925.260.0427 Email: jzapeda@trcsolutions.com
Bill To: TRC
Sampled By: Jacob Zapeda
Attn:
Phone: 925.260.0427

Analysis Request

Sample ID	Date	Time	Mat	Preserv	TPH EPA 8260B X Gas w/ BTEX X MTBE	TEPH EPA 8015M* X Silica Gel X Diesel X Motor Oil ☐ Other	EPA 8260B: ☐ Gas ☐ BTEX X 5 Oxygenates X DCA, EDB X Ethanol & Naphthalene	(HVOCs) EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other:	Low Level Metals by EPA 200.8/6020 (ICP-MS):	☐ W.E.T (STLC) ☐ TCLP	☐ Hex. Chrom (Specify Method) ☐ pH (24h hold time for H_2O)	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	Number of Containers
MW-1	8-15-12	08:30	W	Y	X	X	X														5
MW-2	8-15-12	09:25																			5
MW-3	8-15-12	10:00																			5
MW-4	8-15-12	11:45																			5
MW-6	8-15-12	11:00																			5
TALSF TB	8-15-12	—	W	—																	1

Project Info.

Project Name: USPS Oakland
Project#: 180497.2
PO#: 4652
Credit Card#:

Sample Receipt

of Containers:
Head Space:
Temp: 8.2 °C
Conforms to record:

TAT: (5 Day) 3 Day 2 Day 1 Day
Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 X EDD X State Tank Fund EDF
Special Instructions / Comments: X Global ID T0600100443

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature] Time: 12:57	Signature: Time:	Signature: Time:
Printed Name: Jacob Zapeda Date: 8-15-12	Printed Name: Date:	Printed Name: Date:
Company: TRC	Company:	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: [signature] Time: 1257	Signature: Time:	Signature: Time:
Printed Name: [signature] Date: 8-15-12	Printed Name: Date:	Printed Name: Date:
Company: TASI	Company:	Company:

See Terms and Conditions on reverse
*TestAmerica SF reports 8015M from C_5-C_{24} (industry norm). Default for 8015B is C_{10}-C_{28}

Rev. 09/11

GROUNDWATER SAMPLING RECORD

Project No.: 180497.2 Date: 8-15-12

Project Name: USPS Oakland VMF Measured By: JPZ/NJB

Weather: foggy, cool Page 1 of 1

Well Name: MW-1

Sample Number: MW-1 0830

Chain-of-Custody No.:

Measuring Point: 17.00

Screened Interval (ft):

(a) Initial Water Level (ft)	7.40
(b) Measured Total Depth (ft)	20.11
(c) Height of Water Column (ft) = b – a	12.71
(d) Casing Diameter (in)	4"
(e) Casing Volume (gal) = 0.041 × c × d²	8.3 gal

WELLHEAD CONDITIONS	
Casing:	OK
Lock:	OK
Standing Water:	No
Comments/Required Maintenance:	bolts

INSTRUMENTS		CALIBRATION NOTES
Water Level:	YSI 556 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. (°C) °F	pH	Specific Cond. (µmhos/cm)	DO (mg/L)	ORP Redox (mV)	Color	Turbidity	Salinity	Comments
~8:00	17.00	7.40	1.0	69.40	6.15	2016	13.92	-11.7	gray-clear			
			2.5	70.73	6.39	1777	12.39	-34.4	"			
			4.0	71.84	6.45	1756	11.79	-50.2	"			
			5.5	72.41	6.47	1715	11.36	-57.2	"			
			7.0	72.83	6.50	1736	10.40	-64.0	"			
			10.0	72.70	6.51	1965	7.96	-65.8	"			
			15.0	72.14	6.47	1830	8.88	-59.6	"			
			20.0	71.80	6.46	1777	9.78	-69.9	"			
			24.0	71.60	6.49	1720	8.78	-64.3	"			

TRC

GROUNDWATER SAMPLING RECORD

Project No.: 180497.2
Project Name: USPS Oakland VMF
Weather: foggy, cool

Date: 8-15-12
Measured By: JPZ/NB
Page 1 of 1

Well Name: MW-2
Sample Number: MW-2 0925
Chain-of-Custody No.:
Measuring Point: 15.5
Screened Interval (ft):

(a) Initial Water Level (ft)	7.98
(b) Measured Total Depth (ft)	18.68
(c) Height of Water Column (ft) = b – a	10.70
(d) Casing Diameter (in)	4
(e) Casing Volume (gal) = 0.041 × c × d²	7.0

WELLHEAD CONDITIONS	
Casing:	OK
Lock:	OK
Standing Water:	none
Comments/Required Maintenance:	bolts

INSTRUMENTS		CALIBRATION NOTES
Water Level:	YSI 556 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. (°C) °F	pH	Specific Cond. (µmhos/cm)	DO (mg/L)	ORP Redox (mV)	Color	Turbidity	Salinity	Comments
~900	15.5	7.98	1.5	72.14	6.36	1759	8.09	-41.2	Clear			
			5.0	72.88	6.37	1805	8.42	-80.4	Clear			
			8.0	72.64	6.34	1773	8.75	-105.1	Clear			
			14.0	71.75	6.34	1728	9.35	-132.4	Clear			
			20.0	71.27	6.83	1710	9.66	-133.0	Clear			

TRC

GROUNDWATER SAMPLING RECORD

Project No.: 180497.2
Project Name: USPS Oakland VMF
Weather: foggy, cool

Date: 8-15-12
Measured By: JPZ / NB
Page 1 of 1

Well Name: MW-3
Sample Number: MW-3 10:00
Chain-of-Custody No.:
Measuring Point: 17.00
Screened Interval (ft):

(a) Initial Water Level (ft)	8.89
(b) Measured Total Depth (ft)	20.01
(c) Height of Water Column (ft) = b – a	11.12
(d) Casing Diameter (in)	4
(e) Casing Volume (gal) = 0.041 × c × d²	7.2

WELLHEAD CONDITIONS	
Casing:	OK
Lock:	OK
Standing Water:	none
Comments/Required Maintenance:	none

INSTRUMENTS		CALIBRATION NOTES
Water Level:	YSI 556 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. (°C)	pH	Specific Cond. (µmhos/cm)	DO (mg/L)	Redox (mV)	Color	Turbidity	Salinity	Comments
~930	17.00	8.89	1.0	66.67	6.86	1911	13.73	1.8	Clear			
		"	4.0	66.59	6.79	1876	11.09	-4.8	Clear			
		"	9.0	66.61	6.71	1805	11.88	-7.3	Clear			
		"	15.0	66.76	6.76	1890	11.24	-45.6	Clear			
		"	19.0	66.70	6.82	1928	11.21	-74.8	Clear			

TRC

GROUNDWATER SAMPLING RECORD

Project No.: 180497.2 Date: 8-15-12

Project Name: USPS Oakland VMF Measured By: JPZ/NB

Weather: foggy, cool Page 1 of 1

Well Name: MW-4

Sample Number: MW-4 11:45

Chain-of-Custody No.:

Measuring Point: 17.00

Screened Interval (ft):

(a) Initial Water Level (ft)	9.14
(b) Measured Total Depth (ft)	20.72
(c) Height of Water Column (ft) = b – a	11.58
(d) Casing Diameter (in)	4
(e) Casing Volume (gal) = 0.041 × c × d²	7.6

WELLHEAD CONDITIONS	
Casing:	4" PVC
Lock:	none
Standing Water:	none
Comments/Required Maintenance:	none

INSTRUMENTS		CALIBRATION NOTES
Water Level:	YSI 556 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. (°C) °F	pH	Specific Cond. (µmhos/cm)	DO (mg/L)	Redox (mV)	Color	Turbidity	Salinity	Comments
~1100	17.00	~~9.14~~ ~~17.00~~	1.0	67.07	6.54	1649	12.74	-266.0				sulfurous odor
			5.0	67.97	6.48	1664	10.76	-311.6				
			9.0	68.00	6.46	1658	10.37	-308.4				
			12.0	67.92	6.46	1672	10.33	-297.7				
			17.0	67.69	6.50	1690	10.63	-259.9				

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TRC

GROUNDWATER SAMPLING RECORD

Project No.: 180497.2 Date: 8-15-17
Project Name: USPS Oakland VMF Measured By: VPZ/NB
Weather: foggy, cool Page 1 of 1

Well Name: MW-6
Sample Number: MW-6 1100
Chain-of-Custody No.:
Measuring Point: 18.00
Screened Interval (ft):

(a) Initial Water Level (ft)	8.79
(b) Measured Total Depth (ft)	19.49
(c) Height of Water Column (ft) = b – a	10.70
(d) Casing Diameter (in)	2
(e) Casing Volume (gal) = 0.041 × c × d²	1.75

WELLHEAD CONDITIONS
Casing: 2" pvc ok
Lock: none
Standing Water: none
Comments/Required Maintenance: lock

INSTRUMENTS		CALIBRATION NOTES
Water Level:	YSI 556 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. (°C)	pH	Specific Cond. (µmhos/cm)	DO (mg/L)	ORP Redox (mV)	Color	Turbidity	Salinity	Comments
1030	18.00	8.79	0.5	70.79	6.83	1043	17.1	37.3	brownish			
			1.5	72.98	6.55	993	8.59	7.8	brownish			
			3.0	79.50	6.55	995	6.75	-50.9	clear			
			4.0	80.13	6.52	944	6.84	-78.8	clear			
			5.5	77.05	6.51	919	8.08	-56.3	clear			

TRC

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.

TestAmerica

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: 720-43966-1
Client Project/Site: USPS Oakland VMF

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

Attn: Mr. Jacob Zepeda

Authorized for release by:
8/21/2012 9:06:15 AM

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

Table of Contents

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

TestAmerica Job ID: 720-43966-1

Glossary

Abbreviation	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
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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

TestAmerica Job ID: 720-43966-1

Job ID: 720-43966-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-43966-1

Comments
No additional comments.

Receipt
The samples were received on 8/15/2012 12:57 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 8.2º C.

Except:

Sample ID- TALSFTB- marked for 8051B SGC- no sample containers received.

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.

Detection Summary

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

TestAmerica Job ID: 720-43966-1

Client Sample ID: MW-1 — Lab Sample ID: 720-43966-1

No Detections

Client Sample ID: MW-2 — Lab Sample ID: 720-43966-2

No Detections

Client Sample ID: MW-3 — Lab Sample ID: 720-43966-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	2.8		0.50		ug/L	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	57		53		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-4 — Lab Sample ID: 720-43966-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C5-C12	180		50		ug/L	1		8260B	Total/NA
MTBE	2.0		0.50		ug/L	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	4500		53		ug/L	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	130		110		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-6 — Lab Sample ID: 720-43966-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.60		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: TALSFTB — Lab Sample ID: 720-43966-6

No Detections

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

TestAmerica Job ID: 720-43966-1

Client Sample ID: MW-1
Date Collected: 08/15/12 08:30
Date Received: 08/15/12 12:57

Lab Sample ID: 720-43966-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			08/16/12 12:56	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/16/12 12:56	1
Ethylbenzene	ND		0.50		ug/L			08/16/12 12:56	1
Ethanol	ND		250		ug/L			08/17/12 20:28	1
MTBE	ND		0.50		ug/L			08/16/12 12:56	1
TAME	ND		0.50		ug/L			08/16/12 12:56	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/16/12 12:56	1
Toluene	ND		0.50		ug/L			08/16/12 12:56	1
EDB	ND		0.50		ug/L			08/16/12 12:56	1
Xylenes, Total	ND		1.0		ug/L			08/16/12 12:56	1
1,2-DCA	ND		0.50		ug/L			08/16/12 12:56	1
TBA	ND		4.0		ug/L			08/16/12 12:56	1
DIPE	ND		0.50		ug/L			08/16/12 12:56	1
Naphthalene	ND		1.0		ug/L			08/16/12 12:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*67 - 130*		*08/16/12 12:56*	*1*
4-Bromofluorobenzene	*103*		*67 - 130*		*08/17/12 20:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*75 - 138*		*08/16/12 12:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 138*		*08/17/12 20:28*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*08/16/12 12:56*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*08/17/12 20:28*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		52		ug/L		08/15/12 20:58	08/16/12 20:32	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/15/12 20:58	08/16/12 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.03*		*0 - 5*	*08/15/12 20:58*	*08/16/12 20:32*	*1*
p-Terphenyl	*80*		*31 - 150*	*08/15/12 20:58*	*08/16/12 20:32*	*1*

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

TestAmerica Job ID: 720-43966-1

Client Sample ID: MW-2
Date Collected: 08/15/12 09:25
Date Received: 08/15/12 12:57

Lab Sample ID: 720-43966-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			08/16/12 14:22	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/16/12 14:22	1
Ethylbenzene	ND		0.50		ug/L			08/16/12 14:22	1
Ethanol	ND		250		ug/L			08/17/12 20:57	1
MTBE	ND		0.50		ug/L			08/16/12 14:22	1
TAME	ND		0.50		ug/L			08/16/12 14:22	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/16/12 14:22	1
Toluene	ND		0.50		ug/L			08/16/12 14:22	1
EDB	ND		0.50		ug/L			08/16/12 14:22	1
Xylenes, Total	ND		1.0		ug/L			08/16/12 14:22	1
1,2-DCA	ND		0.50		ug/L			08/16/12 14:22	1
TBA	ND		4.0		ug/L			08/16/12 14:22	1
DIPE	ND		0.50		ug/L			08/16/12 14:22	1
Naphthalene	ND		1.0		ug/L			08/16/12 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*67 - 130*		*08/16/12 14:22*	*1*
4-Bromofluorobenzene	*102*		*67 - 130*		*08/17/12 20:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*75 - 138*		*08/16/12 14:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*75 - 138*		*08/17/12 20:57*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*08/16/12 14:22*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/17/12 20:57*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		52		ug/L		08/15/12 20:58	08/16/12 20:57	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/15/12 20:58	08/16/12 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.0005*		*0 - 5*	*08/15/12 20:58*	*08/16/12 20:57*	*1*
p-Terphenyl	*72*		*31 - 150*	*08/15/12 20:58*	*08/16/12 20:57*	*1*

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

TestAmerica Job ID: 720-43966-1

Client Sample ID: MW-3
Date Collected: 08/15/12 10:00
Date Received: 08/15/12 12:57

Lab Sample ID: 720-43966-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			08/16/12 14:51	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/16/12 14:51	1
Ethylbenzene	ND		0.50		ug/L			08/16/12 14:51	1
Ethanol	ND		250		ug/L			08/17/12 21:27	1
MTBE	**2.8**		0.50		ug/L			08/16/12 14:51	1
TAME	ND		0.50		ug/L			08/16/12 14:51	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/16/12 14:51	1
Toluene	ND		0.50		ug/L			08/16/12 14:51	1
EDB	ND		0.50		ug/L			08/16/12 14:51	1
Xylenes, Total	ND		1.0		ug/L			08/16/12 14:51	1
1,2-DCA	ND		0.50		ug/L			08/16/12 14:51	1
TBA	ND		4.0		ug/L			08/16/12 14:51	1
DIPE	ND		0.50		ug/L			08/16/12 14:51	1
Naphthalene	ND		1.0		ug/L			08/16/12 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*67 - 130*		*08/16/12 14:51*	*1*
4-Bromofluorobenzene	*101*		*67 - 130*		*08/17/12 21:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*75 - 138*		*08/16/12 14:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*75 - 138*		*08/17/12 21:27*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*08/16/12 14:51*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*08/17/12 21:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**57**		53		ug/L		08/15/12 20:58	08/16/12 21:21	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		08/15/12 20:58	08/16/12 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.002*		*0 - 5*	*08/15/12 20:58*	*08/16/12 21:21*	*1*
p-Terphenyl	*65*		*31 - 150*	*08/15/12 20:58*	*08/16/12 21:21*	*1*

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

TestAmerica Job ID: 720-43966-1

Client Sample ID: MW-4
Date Collected: 08/15/12 11:45
Date Received: 08/15/12 12:57

Lab Sample ID: 720-43966-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			08/16/12 15:20	1
Gasoline Range Organics (GRO) -C5-C12	180		50		ug/L			08/16/12 15:20	1
Ethylbenzene	ND		0.50		ug/L			08/16/12 15:20	1
Ethanol	ND		250		ug/L			08/17/12 22:25	1
MTBE	2.0		0.50		ug/L			08/16/12 15:20	1
TAME	ND		0.50		ug/L			08/16/12 15:20	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/16/12 15:20	1
Toluene	ND		0.50		ug/L			08/16/12 15:20	1
EDB	ND		0.50		ug/L			08/16/12 15:20	1
Xylenes, Total	ND		1.0		ug/L			08/16/12 15:20	1
1,2-DCA	ND		0.50		ug/L			08/16/12 15:20	1
TBA	ND		4.0		ug/L			08/16/12 15:20	1
DIPE	ND		0.50		ug/L			08/16/12 15:20	1
Naphthalene	ND		1.0		ug/L			08/16/12 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*		*67 - 130*		*08/16/12 15:20*	*1*
4-Bromofluorobenzene	*100*		*67 - 130*		*08/17/12 22:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*75 - 138*		*08/16/12 15:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*75 - 138*		*08/17/12 22:25*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*08/16/12 15:20*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/17/12 22:25*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	4500		53		ug/L		08/15/12 20:58	08/16/12 21:46	1
Motor Oil Range Organics [C24-C36]	130		110		ug/L		08/15/12 20:58	08/16/12 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*5*		*0 - 5*	*08/15/12 20:58*	*08/16/12 21:46*	*1*
p-Terphenyl	*54*		*31 - 150*	*08/15/12 20:58*	*08/16/12 21:46*	*1*

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

TestAmerica Job ID: 720-43966-1

Client Sample ID: MW-6
Date Collected: 08/15/12 11:00
Date Received: 08/15/12 12:57

Lab Sample ID: 720-43966-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			08/16/12 15:49	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/17/12 21:56	1
Ethylbenzene	ND		0.50		ug/L			08/16/12 15:49	1
Ethanol	ND		250		ug/L			08/17/12 21:56	1
MTBE	**0.60**		0.50		ug/L			08/16/12 15:49	1
TAME	ND		0.50		ug/L			08/16/12 15:49	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/16/12 15:49	1
Toluene	ND		0.50		ug/L			08/16/12 15:49	1
EDB	ND		0.50		ug/L			08/16/12 15:49	1
Xylenes, Total	ND		1.0		ug/L			08/16/12 15:49	1
1,2-DCA	ND		0.50		ug/L			08/16/12 15:49	1
TBA	ND		4.0		ug/L			08/16/12 15:49	1
DIPE	ND		0.50		ug/L			08/16/12 15:49	1
Naphthalene	ND		1.0		ug/L			08/16/12 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*67 - 130*		*08/16/12 15:49*	*1*
4-Bromofluorobenzene	*102*		*67 - 130*		*08/17/12 21:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*75 - 138*		*08/16/12 15:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 138*		*08/17/12 21:56*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/16/12 15:49*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/17/12 21:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		52		ug/L		08/15/12 20:58	08/16/12 22:10	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		08/15/12 20:58	08/16/12 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.003*		*0 - 5*	*08/15/12 20:58*	*08/16/12 22:10*	*1*
p-Terphenyl	*67*		*31 - 150*	*08/15/12 20:58*	*08/16/12 22:10*	*1*

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

TestAmerica Job ID: 720-43966-1

Client Sample ID: TALSFTB
Date Collected: 08/15/12 00:00
Date Received: 08/15/12 12:57

Lab Sample ID: 720-43966-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			08/16/12 12:27	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/16/12 12:27	1
Ethylbenzene	ND		0.50		ug/L			08/16/12 12:27	1
Ethanol	ND		250		ug/L			08/17/12 19:00	1
MTBE	ND		0.50		ug/L			08/16/12 12:27	1
TAME	ND		0.50		ug/L			08/16/12 12:27	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/16/12 12:27	1
Toluene	ND		0.50		ug/L			08/16/12 12:27	1
EDB	ND		0.50		ug/L			08/16/12 12:27	1
Xylenes, Total	ND		1.0		ug/L			08/16/12 12:27	1
1,2-DCA	ND		0.50		ug/L			08/16/12 12:27	1
TBA	ND		4.0		ug/L			08/16/12 12:27	1
DIPE	ND		0.50		ug/L			08/16/12 12:27	1
Naphthalene	ND		1.0		ug/L			08/16/12 12:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*67 - 130*		*08/16/12 12:27*	*1*
4-Bromofluorobenzene	*102*		*67 - 130*		*08/17/12 19:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*75 - 138*		*08/16/12 12:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*75 - 138*		*08/17/12 19:00*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*08/16/12 12:27*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*08/17/12 19:00*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-119191/4
Matrix: Water
Analysis Batch: 119191

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			08/16/12 08:37	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/16/12 08:37	1
Ethylbenzene	ND		0.50		ug/L			08/16/12 08:37	1
MTBE	ND		0.50		ug/L			08/16/12 08:37	1
TAME	ND		0.50		ug/L			08/16/12 08:37	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/16/12 08:37	1
Toluene	ND		0.50		ug/L			08/16/12 08:37	1
EDB	ND		0.50		ug/L			08/16/12 08:37	1
Xylenes, Total	ND		1.0		ug/L			08/16/12 08:37	1
1,2-DCA	ND		0.50		ug/L			08/16/12 08:37	1
TBA	ND		4.0		ug/L			08/16/12 08:37	1
DIPE	ND		0.50		ug/L			08/16/12 08:37	1
Naphthalene	ND		1.0		ug/L			08/16/12 08:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*67 - 130*		*08/16/12 08:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*75 - 138*		*08/16/12 08:37*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*08/16/12 08:37*	*1*

Lab Sample ID: LCS 720-119191/10
Matrix: Water
Analysis Batch: 119191

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	497		ug/L		99	62 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*113*		*75 - 138*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCS 720-119191/5
Matrix: Water
Analysis Batch: 119191

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	27.0		ug/L		108	79 - 130
Ethylbenzene	25.0	27.2		ug/L		109	80 - 120
m-Xylene & p-Xylene	50.0	54.4		ug/L		109	70 - 142
MTBE	25.0	27.6		ug/L		110	62 - 130
TAME	25.0	28.0		ug/L		112	79 - 130
Ethyl t-butyl ether	25.0	28.0		ug/L		112	70 - 130
Toluene	25.0	26.4		ug/L		106	78 - 120
EDB	25.0	27.0		ug/L		108	70 - 130
1,2-DCA	25.0	29.3		ug/L		117	61 - 132
TBA	500	526		ug/L		105	70 - 130
DIPE	25.0	30.1		ug/L		120	69 - 134

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-119191/5
Matrix: Water
Analysis Batch: 119191

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Naphthalene			25.0	22.8		ug/L		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*104*		*75 - 138*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 720-119191/11
Matrix: Water
Analysis Batch: 119191

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			500	490		ug/L		98	62 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*112*		*75 - 138*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 720-119191/6
Matrix: Water
Analysis Batch: 119191

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			25.0	26.8		ug/L		107	79 - 130	1	20
Ethylbenzene			25.0	26.7		ug/L		107	80 - 120	2	20
m-Xylene & p-Xylene			50.0	53.8		ug/L		108	70 - 142	1	20
MTBE			25.0	27.5		ug/L		110	62 - 130	0	20
TAME			25.0	28.1		ug/L		112	79 - 130	0	20
Ethyl t-butyl ether			25.0	28.0		ug/L		112	70 - 130	0	20
Toluene			25.0	26.2		ug/L		105	78 - 120	1	20
EDB			25.0	27.2		ug/L		109	70 - 130	1	20
1,2-DCA			25.0	29.3		ug/L		117	61 - 132	0	20
TBA			500	529		ug/L		106	70 - 130	1	20
DIPE			25.0	30.3		ug/L		121	69 - 134	1	20
Naphthalene			25.0	23.8		ug/L		95	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 138*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: 720-43966-1 MS
Matrix: Water
Analysis Batch: 119191

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	ND		25.0	27.1		ug/L		108	60 - 140		

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 720-43966-1 MS
Matrix: Water
Analysis Batch: 119191

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	ND		25.0	26.4		ug/L		105	60 - 140
m-Xylene & p-Xylene	ND		50.0	53.0		ug/L		106	60 - 140
MTBE	ND		25.0	29.6		ug/L		119	60 - 138
TAME	ND		25.0	30.6		ug/L		122	60 - 140
Ethyl t-butyl ether	ND		25.0	30.6		ug/L		122	60 - 140
Toluene	ND		25.0	26.0		ug/L		104	60 - 140
EDB	ND		25.0	28.5		ug/L		114	60 - 140
1,2-DCA	ND		25.0	30.8		ug/L		123	60 - 140
TBA	ND		500	526		ug/L		105	60 - 140
DIPE	ND		25.0	32.8		ug/L		131	60 - 140
Naphthalene	ND		25.0	23.6		ug/L		94	56 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*110*		*75 - 138*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: 720-43966-1 MSD
Matrix: Water
Analysis Batch: 119191

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	26.7		ug/L		107	60 - 140	2	20
Ethylbenzene	ND		25.0	25.6		ug/L		103	60 - 140	3	20
m-Xylene & p-Xylene	ND		50.0	51.5		ug/L		103	60 - 140	3	20
MTBE	ND		25.0	28.7		ug/L		115	60 - 138	3	20
TAME	ND		25.0	29.7		ug/L		119	60 - 140	3	20
Ethyl t-butyl ether	ND		25.0	30.0		ug/L		120	60 - 140	2	20
Toluene	ND		25.0	25.5		ug/L		102	60 - 140	2	20
EDB	ND		25.0	27.2		ug/L		109	60 - 140	5	20
1,2-DCA	ND		25.0	29.8		ug/L		119	60 - 140	3	20
TBA	ND		500	517		ug/L		103	60 - 140	2	20
DIPE	ND		25.0	32.5		ug/L		130	60 - 140	1	20
Naphthalene	ND		25.0	22.8		ug/L		91	56 - 140	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*108*		*75 - 138*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 720-119315/4
Matrix: Water
Analysis Batch: 119315

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			08/17/12 16:34	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			08/17/12 16:34	1
Ethylbenzene	ND		0.50		ug/L			08/17/12 16:34	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-119315/4
Matrix: Water
Analysis Batch: 119315

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		250		ug/L			08/17/12 16:34	1
MTBE	ND		0.50		ug/L			08/17/12 16:34	1
TAME	ND		0.50		ug/L			08/17/12 16:34	1
Ethyl t-butyl ether	ND		0.50		ug/L			08/17/12 16:34	1
Toluene	ND		0.50		ug/L			08/17/12 16:34	1
EDB	ND		0.50		ug/L			08/17/12 16:34	1
Xylenes, Total	ND		1.0		ug/L			08/17/12 16:34	1
1,2-DCA	ND		0.50		ug/L			08/17/12 16:34	1
TBA	ND		4.0		ug/L			08/17/12 16:34	1
DIPE	ND		0.50		ug/L			08/17/12 16:34	1
Naphthalene	ND		1.0		ug/L			08/17/12 16:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*67 - 130*		*08/17/12 16:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 138*		*08/17/12 16:34*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*08/17/12 16:34*	*1*

Lab Sample ID: LCS 720-119315/5
Matrix: Water
Analysis Batch: 119315

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	26.5		ug/L		106	79 - 130
Ethylbenzene	25.0	26.1		ug/L		104	80 - 120
Ethanol	500	589		ug/L		118	31 - 216
m-Xylene & p-Xylene	50.0	53.0		ug/L		106	70 - 142
MTBE	25.0	28.1		ug/L		112	62 - 130
TAME	25.0	24.1		ug/L		97	79 - 130
Ethyl t-butyl ether	25.0	27.4		ug/L		110	70 - 130
Toluene	25.0	26.1		ug/L		104	78 - 120
EDB	25.0	26.4		ug/L		105	70 - 130
1,2-DCA	25.0	26.8		ug/L		107	61 - 132
TBA	500	538		ug/L		108	70 - 130
DIPE	25.0	27.6		ug/L		110	69 - 134
Naphthalene	25.0	28.8		ug/L		115	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 138*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCS 720-119315/7
Matrix: Water
Analysis Batch: 119315

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	408		ug/L		82	62 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-119315/7
Matrix: Water
Analysis Batch: 119315

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	*102*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 138*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 720-119315/6
Matrix: Water
Analysis Batch: 119315

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			25.0	26.5		ug/L		106	79 - 130	0	20
Ethylbenzene			25.0	26.2		ug/L		105	80 - 120	0	20
Ethanol			500	526		ug/L		105	31 - 216	11	30
m-Xylene & p-Xylene			50.0	53.4		ug/L		107	70 - 142	1	20
MTBE			25.0	28.5		ug/L		114	62 - 130	1	20
TAME			25.0	24.6		ug/L		98	79 - 130	2	20
Ethyl t-butyl ether			25.0	28.2		ug/L		113	70 - 130	3	20
Toluene			25.0	26.0		ug/L		104	78 - 120	0	20
EDB			25.0	26.3		ug/L		105	70 - 130	0	20
1,2-DCA			25.0	26.6		ug/L		106	61 - 132	1	20
TBA			500	521		ug/L		104	70 - 130	3	20
DIPE			25.0	27.6		ug/L		110	69 - 134	0	20
Naphthalene			25.0	29.4		ug/L		118	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	*102*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 138*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 720-119315/8
Matrix: Water
Analysis Batch: 119315

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			500	407		ug/L		81	62 - 120	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*106*		*75 - 138*
Toluene-d8 (Surr)	*102*		*70 - 130*

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

Lab Sample ID: MB 720-119179/1-A
Matrix: Water
Analysis Batch: 119184

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 119179

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		08/15/12 20:58	08/17/12 01:01	1

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

Lab Sample ID: MB 720-119179/1-A
Matrix: Water
Analysis Batch: 119184

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 119179

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		08/15/12 20:58	08/17/12 01:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.05*		*0 - 5*	*08/15/12 20:58*	*08/17/12 01:01*	*1*
p-Terphenyl	*75*		*31 - 150*	*08/15/12 20:58*	*08/17/12 01:01*	*1*

Lab Sample ID: LCS 720-119179/2-A
Matrix: Water
Analysis Batch: 119184

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 119179

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1170		ug/L		47	32 - 119		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*72*		*31 - 150*

Lab Sample ID: LCSD 720-119179/3-A
Matrix: Water
Analysis Batch: 119184

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 119179

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1090		ug/L		44	32 - 119	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*62*		*31 - 150*

GC/MS VOA

Analysis Batch: 119191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43966-1	MW-1	Total/NA	Water	8260B	
720-43966-1 MS	MW-1	Total/NA	Water	8260B	
720-43966-1 MSD	MW-1	Total/NA	Water	8260B	
720-43966-2	MW-2	Total/NA	Water	8260B	
720-43966-3	MW-3	Total/NA	Water	8260B	
720-43966-4	MW-4	Total/NA	Water	8260B	
720-43966-5	MW-6	Total/NA	Water	8260B	
720-43966-6	TALSFTB	Total/NA	Water	8260B	
LCS 720-119191/10	Lab Control Sample	Total/NA	Water	8260B	
LCS 720-119191/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-119191/11	Lab Control Sample Dup	Total/NA	Water	8260B	
LCSD 720-119191/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 720-119191/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 119315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43966-1	MW-1	Total/NA	Water	8260B	
720-43966-2	MW-2	Total/NA	Water	8260B	
720-43966-3	MW-3	Total/NA	Water	8260B	
720-43966-4	MW-4	Total/NA	Water	8260B	
720-43966-5	MW-6	Total/NA	Water	8260B	
720-43966-6	TALSFTB	Total/NA	Water	8260B	
LCS 720-119315/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 720-119315/7	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-119315/6	Lab Control Sample Dup	Total/NA	Water	8260B	
LCSD 720-119315/8	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 720-119315/4	Method Blank	Total/NA	Water	8260B	

GC Semi VOA

Prep Batch: 119179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43966-1	MW-1	Silica Gel Cleanup	Water	3510C SGC	
720-43966-2	MW-2	Silica Gel Cleanup	Water	3510C SGC	
720-43966-3	MW-3	Silica Gel Cleanup	Water	3510C SGC	
720-43966-4	MW-4	Silica Gel Cleanup	Water	3510C SGC	
720-43966-5	MW-6	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-119179/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-119179/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-119179/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 119184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43966-1	MW-1	Silica Gel Cleanup	Water	8015B	119179
720-43966-2	MW-2	Silica Gel Cleanup	Water	8015B	119179
720-43966-3	MW-3	Silica Gel Cleanup	Water	8015B	119179
720-43966-4	MW-4	Silica Gel Cleanup	Water	8015B	119179
720-43966-5	MW-6	Silica Gel Cleanup	Water	8015B	119179
LCS 720-119179/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	119179
LCSD 720-119179/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	119179
MB 720-119179/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	119179

Lab Chronicle

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

TestAmerica Job ID: 720-43966-1

Client Sample ID: MW-1

Lab Sample ID: 720-43966-1

Date Collected: 08/15/12 08:30

Matrix: Water

Date Received: 08/15/12 12:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119191	08/16/12 12:56	AC	TAL SF
Total/NA	Analysis	8260B		1	119315	08/17/12 20:28	LL	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			119179	08/15/12 20:58	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	119184	08/16/12 20:32	DH	TAL SF

Client Sample ID: MW-2

Lab Sample ID: 720-43966-2

Date Collected: 08/15/12 09:25

Matrix: Water

Date Received: 08/15/12 12:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119191	08/16/12 14:22	AC	TAL SF
Total/NA	Analysis	8260B		1	119315	08/17/12 20:57	LL	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			119179	08/15/12 20:58	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	119184	08/16/12 20:57	DH	TAL SF

Client Sample ID: MW-3

Lab Sample ID: 720-43966-3

Date Collected: 08/15/12 10:00

Matrix: Water

Date Received: 08/15/12 12:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119191	08/16/12 14:51	AC	TAL SF
Total/NA	Analysis	8260B		1	119315	08/17/12 21:27	LL	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			119179	08/15/12 20:58	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	119184	08/16/12 21:21	DH	TAL SF

Client Sample ID: MW-4

Lab Sample ID: 720-43966-4

Date Collected: 08/15/12 11:45

Matrix: Water

Date Received: 08/15/12 12:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119191	08/16/12 15:20	AC	TAL SF
Total/NA	Analysis	8260B		1	119315	08/17/12 22:25	LL	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			119179	08/15/12 20:58	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	119184	08/16/12 21:46	DH	TAL SF

Client Sample ID: MW-6

Lab Sample ID: 720-43966-5

Date Collected: 08/15/12 11:00

Matrix: Water

Date Received: 08/15/12 12:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119191	08/16/12 15:49	AC	TAL SF
Total/NA	Analysis	8260B		1	119315	08/17/12 21:56	LL	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			119179	08/15/12 20:58	RU	TAL SF

Lab Chronicle

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

TestAmerica Job ID: 720-43966-1

Client Sample ID: MW-6

Lab Sample ID: 720-43966-5

Date Collected: 08/15/12 11:00

Matrix: Water

Date Received: 08/15/12 12:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Analysis	8015B		1	119184	08/16/12 22:10	DH	TAL SF

Client Sample ID: TALSFTB

Lab Sample ID: 720-43966-6

Date Collected: 08/15/12 00:00

Matrix: Water

Date Received: 08/15/12 12:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	119191	08/16/12 12:27	AC	TAL SF
Total/NA	Analysis	8260B		1	119315	08/17/12 19:00	LL	TAL SF

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 720-43966-1

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

Method Summary

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

TestAmerica Job ID: 720-43966-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF

Protocol References:

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 720-43966-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-43966-1	MW-1	Water	08/15/12 08:30	08/15/12 12:57
720-43966-2	MW-2	Water	08/15/12 09:25	08/15/12 12:57
720-43966-3	MW-3	Water	08/15/12 10:00	08/15/12 12:57
720-43966-4	MW-4	Water	08/15/12 11:45	08/15/12 12:57
720-43966-5	MW-6	Water	08/15/12 11:00	08/15/12 12:57
720-43966-6	TALSFTB	Water	08/15/12 00:00	08/15/12 12:57

720.43966

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 140178

Date 8-15-12 Page 1 of 1

8/21/2012

Report To

Attn: Jacob Zepeda
Company: TRC
Address: 101 2nd Street, Suite 300
Phone: 925.260.0427 Email: jzepeda@trcsolutions.com
Bill To: TRC
Sampled By: Jacob Zepeda
Attn:
Phone: 925.260.0427

Analysis Request

Sample ID	Date	Time	Mat rix	Preserv	TPH EPA ☒ 8260B ☒ MTBE ☒ Gas w/ ☒ BTEX	TEPH EPA 8015M* ☒ Silica Gel ☒ Diesel ☒ Motor Oil ☐ Other	EPA 8260B: ☐ Gas ☐ BTEX ☒ 5 Oxygenates ☒ DCA, EDB ☒ Ethanol + Naphthalene (HVOCs)	EPA 8021 by 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☐ Total	Pesticides ☐ EPA 8081 ☐ 608 PCBs ☐ EPA 8082 ☐ 608	PNAs by ☐ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other:	Low Level Metals by EPA 200.8/6020 (ICP-MS):	☐ W.E.T (STLC) ☐ TCLP	Hex. Chrom.(Specify Method) ☐ pH (24h hold time for H_2O)	☐ Spec. Cond. ☐ Alkalinity ☐ TDS ☐ TSS	Anions : ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4					Number of Containers
MW-1	8-15-12	08:30	W	Y	X	X	X																		5
MW-2	8-15-12	09:25	↓	↓	↓	↓	↓																		5
MW-3	8-15-12	10:00	↓	↓	↓	↓	↓																		5
MW-4	8-15-12	11:45	↓	↓	↓	↓	↓																		5
MW-6	8-15-12	11:00	↓	↓	↓	↓	↓																		5
TAL SF TB	8-15-12	—	W	—	↓	↓	↓																		1

Project Info

Project Name: USPS Oakland
Project#: 180497.2
PO#: 4652
Credit Card#:

Sample Receipt

of Containers:
Head Space:
Temp: 8.2°C a4hrs
Conforms to record:

TAT: (5 Day) 3 Day 2 Day 1 Day
Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☒ EDD ☒ State Tank
Fund EDF
Special Instructions / Comments: ☒ Global ID T0600100443

See Terms and Conditions on reverse
*TestAmerica SF reports 8015M from C_9-C_{24} (industry norm). Default for 8015B is C_{10}-C_{28}

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature	Signature	Signature
Time: 12:57	Time	Time
Printed Name: Jacob Zepeda	Printed Name	Printed Name
Date: 8-15-12	Date	Date
Company: TRC	Company	Company

1) Received by:	2) Received by:	3) Received by:
Signature	Signature	Signature
Time: 1257	Time	Time
Printed Name	Printed Name	Printed Name
Date: 8-15-12	Date	Date
Company: TRC SF	Company	Company

Rev. 09/11

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Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 720-43966-1

Login Number: 43966

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Apostol, Anita

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	