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By Alameda County Environmental Health at 11:20 am, Jul 12, 2013

March 19, 2013

Mr. Keith Nowell Alameda County Health Care Services Environmental Health Services Environmental Protection 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Subject:

Closure Verification Soil and Soil-Vapor Sampling Report _RO0002933

1409 - 1417 12th Street, Oakland, California

Dear Mr. Nowell:

Attached is the Closure Verification Soil and Soil-Vapor Sampling Report for the property located at 1409 – 1417 12th Street, Oakland, California.

Certification

I certify under penalty of law that this document and attachments are prepared under my direction or supervision in accordance with the system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing the violations.

Please contact Joseph Cotton at (510)703-5420 if you have questions or comments.

Sincerely,

Shirley E. Thompson

Philey E. Thompson

Property Owner

SITE CLOSURE VERIFICATION SOIL & SOIL-VAPOR SAMPLING REPORT 1409 – 1417 12th Street OAKLAND, CALIFORNIA

Prepared for

Shirley Thompson 1155 Hopkins Street Berkeley, CA 94702

March 31, 2013

Prepared by



Impact Environmental Services

39120 Argonaut Way, Suite 223 Fremont, California 94538

IES

39120 Argonaut Way, Suite 223 Fremont, CA 94538 Telephone: (510) 703-5420 Fax: (510) 791-0271

SITE CLOSURE VERIFICATION SAMPLING REPORT 1409-1417 12TH STREET OAKLAND CALIFORNIA

ACEH File No. RO2933

On behalf of Mrs. Shirley E. Thompson, Impact Environmental Services nefarious (Impact) is presenting this Site Verification Closure Report for 1409-1417 12th Street in Oakland, California (Figure 1). This report presents the results of soil and soil-vapor sampling to verify that site petroleum hydrocarbon contamination in soil has been reduced using Dual-Phase Vacuum Enhanced Extraction to a concentration to validate petitioning the Alameda County Environmental Health Services (ACEH) for corrective action closure. The investigation was conducted to satisfy ACEH closure requirements related to the unauthorized fuel release at the subject property¹.

SITE CONTACT INFORMATION

The site address and contact information for the subject property is as follows:

Site Address: Contact Information:

1409-1417 12th Street Mrs. Shirley E. Thompson
Oakland, CA Edward C. & Shirley E. Thompson Trust

APN 004-063-06 1155 Hopkins Street

Berkeley, CA 94702-1359

SITE BACKGROUND

Site Description

The Subject Property is located in a predominately residential area in the western section of the city of Oakland, Alameda County, California (Figure 1). The subject Property comprises the Alameda County assessor parcel 004-063-06 and is bordered to the north by 12th Street

¹ Alameda County Environmental Health, "Fuel Leak Case No. RO2933, 1409-1417 12th Street, Oakland, California CA 94607-2003_Request for Work Plan", February 26, 2007.

and residential development, to the south by a vacant lot, on the east by Mandela Parkway, and to the west by a residential development (Figure 2). The property is located approximately 1-mile southeast of San Francisco Bay and 1-mile north of Oakland Inner Harbor. The elevation of the site is approximately 17 feet above mean sea level (USGS West Oakland 7.5 Minute Quadrangle). Portions of the site are paved with asphalt and the remainder is covered by grass and soil. Several mounds of soil up to 2 feet high are present in the southeast portion of the subject property.

Historical Site Operation

Historical records indicate that the property was occupied by a service station from circa 1957 to the circa 1969. The subject property was either vacant or occupied by residential dwellings from at least 1902 to circa 1956. Sanborn maps from 1957, 1958, 1961 and 1967 appear to show three underground fuel storage tanks (USTs) located in the southeast corner of the service station. The 1961 Sanborn map appears to show a fourth UST or AST along the west property boundary. Communications with Oakland Fire Department Hazardous Materials Division, confirmed that no records of UST removal exist for the Subject Property².

Geologic Setting

The Subject Property is located in the East Bay Plain of the San Francisco Bay Area. This region is dominated by northwest trending topography enclosed in the Coast Range Province of California. The site is located in a "Merritt Sand Outcrop" groundwater subarea, which has a maximum thickness of 65 feet, and the local gradient is directed toward the west to southwest³. Soil beneath the property consists primarily of silty-sand to at least 16 feet bgs. Groundwater is first encountered between 10.5 and 13.5 below ground surface (bgs) and stabilizes at approximately 11 feet bgs. A perched groundwater zone was present at approximately 5-feet bgs over most of the site. The direction of groundwater flow in the surrounding area is highly varaible⁴. The direction of groundwater flow at the site is currently unknown.

² Personal Communication, LeRoy Griffin, Oakland Fire Department Hazardous Materials Division, May 25, 2006.

³ Hickenbottom and Muir, Geohydrology and Groundwater Quality Overview of the East Bay Plain Area, Alameda County, California, 205 (J) Report, 1988.

⁴ Personal Communication, Steven Plunkett, Alameda County Environmental Health, March 30, 2007.

HISTORICAL ENVIRONMENTAL ASSESSMENT

Previous Phased Environmental Investigations

The 1409-1417 12th Street site has been the subject of numerous environmental investigations^{5,6,7.8,9} beginning in 1999. The suspected source of on-site contamination is believed to be from residual fuel from former underground storage tanks (USTs) associated with service station operations. Petroleum hydrocarbons have been detected in on-site soil, soil-vapor, and groundwater samples at concentrations that exceed environmental screening levels (ESLs)¹⁰ for residential land-use. Significant concentrations of (total petroleum hydrocarbons (TPH) as gasoline (TPHg) up to 20,000 milligrams per kilogram (mg/kg) and volatile organic compounds (VOCs) to 120 mg/kg were detected in soil samples collected from the site. TPHg was detected in groundwater samples at a maximum concentration of 52,000μg/L. Benzene, toluene, ethylbenzene, and total xylenes (BTEX) were detected in groundwater at maximum concentrations of 8,700μg/L, 2,200μg/L, 2,000μg/L, 7,200μg/L, respectively. 1, 2-Dichloroethane was detected at a maximum concentration of 570μg/L. Soil-vapor samples collected from the site were found to contain TPHg at a maximum concentration of 52,000μg/m³, benzene as high as 1,200 μg/m³, and vinyl chloride to 260μg/m³.

In March 2008, eleven groundwater-monitoring wells (MW-1 through MW-8 and GW-1 through GW-3) were installed at the subject property. Shallow groundwater elevations occur from 9 to 11 feet below ground surface. In general, shallow groundwater flow is toward the south towards San Francisco Bay.

A dual-phase vacuum extraction (DPE) pilot test was conducted at the subject property in October 2008. The pilot test was conducted to evaluate DPE technology as a viable method to cleanup petroleum hydrocarbons from soil and groundwater at the site. The results of pilot test indicated that DPE was a viable technology for mitigating petroleum hydrocarbons from unsaturated soil and groundwater from the subject property.

⁵ Blymer Engineers, Inc., Subsurface Investigation Vacant Parcel 1409-1417 12th Street, Oakland, California, August 25, 1999.

⁶ Impact Environmental Services, Phase I Environmental Site Assessment 1409-1417 12th Street Oakland California, August 25, 2006 (revised December 13, 2006).

⁷ Impact Environmental Services, Site Characterization Report 1409-1417 12th Street Oakland California, June 5, 2007.

⁸ Impact Environmental Services, Remediation Workplan Site 1409-1417 12th Street Oakland California, October 17, 2007.

⁹ Impact Environmental Services, Groundwater Well Installation & Initial Quarterly Groundwater Monitoring Report for 1409 - 1417 Street, Oakland, California, October 9, 2008.

¹⁰ San Francisco Bay Regional Water Quality Control Board, Screening For Environmental Concerns at Sites with Contaminated Soil and Groundwater-Interim Final, May 2008.

In March 2008, eleven groundwater-monitoring wells (MW-1 through MW-8 and GW-1 through GW-3) were installed at the subject property. Shallow groundwater elevations occur from 9 to 11 feet below ground surface. In general, shallow groundwater flow is toward the south towards San Francisco Bay.

A dual-phase vacuum extraction (DPE) pilot test was conducted at the subject property in October 2008. The pilot test was conducted to evaluate DPE technology as a viable method to cleanup petroleum hydrocarbons from soil and groundwater at the site. The results of pilot test indicated that DPE was a viable technology for mitigating petroleum hydrocarbons from unsaturated soil and groundwater from the subject property.

In January 2009, eight dual phase extraction wells (DPE-1, DPE-1B, DPE-2, DPE-2B, DPE-3, DPE-5, DPE-6, and DPE-7) were installed at the property under the direction of IMPACT. In addition, existing wells GW-1, GW-3, and MW-8 were converted for dual use as both groundwater monitoring and DPE wells.

In February 2009, IMPACT and its subcontractor's OTG Environmental Engineering were retained to design the DPE system for the site. In April 2009, Ashby Excavation and Construction was retained by IMPACT to construct the DPE containment building. Mako Industries Inc. was contracted by IMPACT to build the liquid-ring, high vacuum extraction and thermal oxidizer treatment system trailer. Ashby completed the containment building and underground DPE groundwater/vapor recovery piping in October 2009. Pacific Gas & Electric completed gas and electric connections to the site in November 2009. Piping from the eleven DPE wells were connected to a central manifold located within the containment building. Final connections were made to the DPE trailer, manifold, thermal oxidizer system, and liquid-phase granular activated carbon vessels in December 2009.

On January 13, 2010, the remediation system was turned on after laboratory results of the Day 1 samples met the discharge requirements. The discharge of the treated water began on January 13, 2010. The remediation system ran continuously for another five days and was then sampled again on January 18 following the NPDES permit requirement. The Day 5 samples were delivered to Torrent Laboratory under 24-hr turnaround time analysis. The remediation system ran continuously from January 18, 2010 through July 23, 2010, except on occasions when the DPE unit was automatically turned off (tripped) due to low pressure of natural gas supply from PG&E.

On May 5, 2011 the DPE System was restarted and monthly NPDES groundwater sampling was resumed. Groundwater-soil vapor extraction wells DPE-1 and DPE-2 were disconnected from the DPE collection network and used as bleeder wells to supplement air flow to the nearby subsurface. The DPE system ran continuously from May 5, 2011 through October 31, 2011, except on occasions when the DPE system tripped. The DPE system was shut down on October 31, 2011 to evaluate remediation effectiveness on groundwater quality. In addition, periodic manual hydrogen peroxide treatment was resumed at wells MW-8, GW-1, GW-3, DPE-1B, and DPE-3 following the shutdown of the DPE system. Semiannual groundwater monitoring for 2011 was performed in the months of June and December.

SCOPE OF WORK FOR SITE VERIFICATION CLOSURE SAMPLING

This report describes our efforts to evaluate the presence of residual petroleum hydrocarbons in soil and groundwater following significant treatment of soil and groundwater using a dual-phase vacuum enhanced extraction in conjunction with manual hydrogen peroxide treatment of groundwater. Historical results from on-site wells appear to indicate that concentrations of constituents of concern in groundwater are below or almost achieving environmental screening limits for residential development. Closure verification soil and soil-vapor samples were collected to evaluate whether the dual-phase vacuum extraction removed sufficient petroleum hydrocarbons to allow IMPACT to petition for corrective action closure for the subject site. IMPACT anticipates petitioning for corrective action closure of the site upon completion of the following scope of work.

- Installing eight exploratory borings near source areas where petroleum hydrocarbon contamination has been previously documented to evaluate the effectiveness of DPE remediation;
- Installing seven semi-permanent soil-vapor wells near source areas where petroleum hydrocarbon contamination has been previously documented to evaluate the effectiveness of DPE remediation;

- Collecting and analyzing soil and soil-vapor samples for petroleum hydrocarbons and select volatile organic compounds for comparison with RWQCB's environmental screening levels (ESLs)¹¹ for residential land-use.
- Evaluating historical groundwater well sample results for comparison with RWQCB's ESLs for residential land-use.
- Preparing this Site Remediation Verification Closure Report.

Pre-Field Activities

Prior to drilling, IMPACT obtained a drilling permit to install the exploratory borings and install soil-vapor wells from Alameda County Public Works Department. The drilling permit is presented in Appendix A. Underground Service Alert (USA) cleared the perimeter of the site for underground utilities. C-Cruz Underground Utility Locators (C-Cruz) of Milpitas, California cleared boring and soil-vapor well locations for underground utilities.

Drilling and Sampling Methods

Environmental Control Associates (ECA), a licensed driller from Aptos, California, completed the borings using direct-push drilling methods. Borings were advanced using the Enviro-Core sampling system. The Enviro-Core system consists of 2.5-inch-diameter steel drive casing and a 1.8-inch-diameter inner sample barrel that are simultaneously pushed, driven, or vibrated into the ground. Continuous soil cores were collected in butyrate tubes inside the inner sample barrel. After being advanced to the desired interval (usually three to four-feet), the inner sample barrel was retrieved while the drive casing was left in place to prevent borehole collapse. After retrieving the inner core barrel, the samples were removed for chemical analyses or lithologic identification. Periodic soil samples were screened in the field using an organic vapor meter (OVM) and visual and olfactory methods to evaluate the presence of hydrocarbons in the soil. Soil samples were not retrieved from soil-vapor pilot borings.

Eight closure verification exploratory borings (CSB-1 through CSB-8) and seven closure verification soil-vapor wells were completed at the site on May 8th through May 10th.

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¹¹ San Francisco Bay Regional Water Quality Control Board, Screening For Environmental Concerns at Sites with Contaminated Soil and Groundwater-Interim Final, May 2008.

Closure verification soil boring locations are shown on Figure 3. Soil samples were collected from exploratory borings at every few feet from 5-feet and generally from 5, 7, 10 12, 15, and in some borings as deep as 18-feet bgs. All eight exploratory verification soil borings were completed to depths between 15 and 18-feet bgs. Soil samples were analyzed for TPHd and TPHmo by EPA Method 8015; TPHg, BTEX and fuel oxygenates by EPA Method 8260. Soil samples for laboratory analysis were properly containerized, labeled, and preserved upon collection. The soil core from each boring was logged according to the Unified Soil Classification System (USCS) by a professional geologist certified by the State of California. Boring logs are presented in Appendix B. Chain-of-custody documentation accompanied the samples to the laboratory for analysis.

All down-hole equipment was triple-rinsed before use and between borings. Following completion of sample collection, each boring was grouted to the surface with bentonite-cement slurry using a tremie pipe.

Soil-Vapor Sample Collection

On May 16th and 17th, IES collected nine soil vapor samples at the locations shown on Figure Soil-vapor sampling was conducted in accordance with the Department of Toxic Substance Control California Environmental Protection Agency (DTSC) guidance document¹². Closure verification soil-vapor well locations are presented on Figure 4. Soilvapor wells were installed to a depth of 5-feet bgs. Soil-vapor probes were installed using a direct-push sampling rig. The probes were installed by pushing a hollow rod with a retractable tip to the target sampling depth of 5 feet bgs. After reaching the target sampling depth, the sampling rod was withdrawn 6 inches, exposing a screened interval immediately above the retractable tip. Before retraction, the screened interval was pre-connected to polyethylene tubing that extended to the surface. The lower 9-inches of the borehole were filled with aquarium gravel and the remaining boring was filled to the surface with bentonite to inhibit surface air intrusion. The soil-vapor well was completed with a locking well box. Diflouroethane was used along the sampling train to provide leak detection material. The sampling train volume was purged three times at a rate of approximately 100 milliliters per minute (ml/min) using a 100-ml syringe. A 6-liter Summa canister was used to collect a sample at a rate of 100 to 200 ml/min. Summa canisters were labeled and transported (non-

¹² DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air-Interim Final, February 7, 2005.

chilled) to Torrent Labs of Milpitas, California under chain-of-custody control and documentation. After completion of sampling, the rod was withdrawn and the boring was backfilled with neat cement mixed with 4% bentonite.

Soil-vapor samples were analyzed for TPHg by modified EPA Method TO-3 and BTEX and MTBEs by EPA Method TO-15.

SITE CHARACTERIZATION RESULTS

Closure Verification Soil Sample Results

Forty-six closure verification soil samples were collected from eight borings at depths ranging from 5 to 18 feet bgs. The locations of the closure verification soil borings are shown on Figure 3. Soil samples results are summarized in Tables 1 and associated laboratory CARs are presented in Appendix C. Sample results are discussed later in the following sections.

Closure Verification Soil-Vapor Sample Results

Seven soil-vapor samples (CSV-1 through CSV-7) were collected from the locations shown on Figure 4. Verification closure soil-vapor sample results are summarized in Table 2 and laboratory CARs are presented in Appendix B. Soil-vapor sample results are discussed later in the following sections.

Quality Control Results

Quality control (QC) sample results and laboratory QC data were evaluated to assess the acceptability of the analytical data. Laboratory QC results are included with the certified analytical reports (CAR) presented in Appendix C. All laboratory analyses occurred within EPA recommended sample holding times and all sample containers were received in acceptable condition by the laboratory. Based on the laboratory QA/QC summaries, all method blanks, laboratory control samples (LCS), matrix spikes (MS), and matrix spike duplicates (MSD) were within laboratory control limits. No laboratory QA/QC issues were noted during this investigation, with the following exception. In samples where TPHd was detected in closure verification soil samples, the samples exhibited chromatographic patterns which did not resemble the diesel standard. Notes describing laboratory quality control

issues are included at the end of each CAR. Laboratory QC results indicate that the soil and soil-vapor results are valid and data are acceptable for the intended use.

DISCUSSION OF RESULTS

The results of closure verification soil and soil-vapor samples were compared to RWQCB ESLs for a residential land-use where shallow groundwater is a source of drinking water. The RWQCB developed ESLs for residential land-use scenarios to provide a measure of whether corrective action closure, additional investigation, remedial action, or a more detailed risk assessment should be pursued.

Three soil samples from boring CSB1 and one soil sample from boring CSB6 contained several constituents of concern above their respective ESLs.

The soil sample from a depth of 7 feet bgs in boring CSB1 contained 1,900mg/kg TPHg, 180mg/kg TPHd, 3,100mg/kg ethylbenzene, and 30,900mg/kg total xylenes. The soil sample from a depth of 10 feet bgs in boring CSB1 contained 3,300mg/kg TPHg, 550mg/kg TPHd, 990mg/kg ethylbenzene, and 85,000mg/kg total xylenes. The soil sample from a depth of 12 feet bgs in boring CSB1 contained 2,600mg/kg TPHg, 490mg/kg TPHd, 25,000mg/kg ethylbenzene, and 105,000mg/kg total xylenes. The soil sample from a depth of 10 feet bgs in boring CSB6 contained 10,000mg/kg TPHg and 3,500mg/kg of TPHd. All remaining soil samples did not contain constituents of concern at or above respective ESLs.

Closure verification soil-vapor samples did not contain constituents of concern at or above respective ESLs.

LOW-RISK GROUNDWATER CASE CLOSURE CRITERIA

Based on the information presented above, the site does not meet all the RWQCB criteria for a low-risk fuel site. As described in the January 5, 1996 RWQCB-SF memorandum Regional Board Supplemental Instructions to State Water Board December 8, 1995, Interim Guidance on Required Cleanup at Low-Risk Fuel Sites, a low-risk groundwater case has the following general characteristics:

- 1) The unauthorized release is located in the service area of a public water system.
- 2) The unauthorized release consists only of petroleum.
- 3) The unauthorized release primary release from the UST system has been stopped.

- 4) Free-product has been removed to the maximum extent practicable.
- 5) A conceptual site model that assesses the nature, extent, and mobility of the release has been developed.
- 6) Soil and groundwater has been tested for MTBE and results reported accordingly.
- 7) Nuisance conditions as defined by the Water Code section 130505 does not exist at the site,
- 8) The dissolved petroleum hydrocarbon plume must be stable and not migrating,
- 9) Secondary sources have been removed to the extent practicable.

All of the low-risk groundwater case characteristics for the site have been achieved with the exception of secondary source removal. Closure verification soil samples collected from borings CSB-1 and CSB indicate that secondary sources in the form of soil contaminated with petroleum hydrocarbons and groundwater in wells GW-1 and DPE-3 are present in the subsurface at concentrations above ESLs. It appears that elevated concentrations of petroleum hydrocarbons in soil are negatively impacting groundwater and preventing the site from achieving environmental screening levels for petroleum hydrocarbons in groundwater.

Groundwater remediation via DPE and hydrogen peroxide dosing in select wells at the site has significantly reduced petroleum hydrocarbons in groundwater. Constituents of concern are below respective ESLs in all but a few wells and appear to be relatively stable and contained within the boundaries of the subject property.

CONCLUSIONS

Based on the results of soil and soil-vapor results collected from closure verification sampling efforts, the following are IMPACTs conclusions regarding the current environmental disposition at the subject property.

- Based on the comparison of site data with ESLs, it appears the potential human health risks at
 the site include exposure from direct-contact with petroleum-impacted soils (i.e., during
 construction activities) near wells DPE-1B/GW-1 (CSB6) and DPE-3/GW-3 (CSB-1).
- Closure verification soil-vapor samples did not contain constituents of concern at or above respective ESLs.
- It appears that elevated concentrations of petroleum hydrocarbons in soil are negatively impacting groundwater and preventing the site from achieving associated environmental screening levels for petroleum hydrocarbons in groundwater.

RECOMMENDATIONS

IMPACT recommends the following tasks be completed to move the site towards environmental corrective action closure and protect potential receptors.

- Impact recommends that soil in two separate hot-spot areas in the vicinity of wells GW-1 (Excavation Area 1) and DPE-3 (Excavation Area 2) be excavated and transported off-site to an appropriate landfill facility. The locations of the proposed areas of excavation are shown on Figure 11.
- Impact also recommends that the excavated soil be segregated in the field using screening methods including staining, odor, and PID readings of soil. Soil will be placed in separate stockpiles based on the level of TPH contamination and sampled for reuse in accordance with RWQCB guidelines. The stockpiles will also be sampled for disposal in accordance with local landfill requirements. It is estimated that soil from Excavation 1 will need to be excavated to a depth of approximately 12 to 13 feet and soil from Excavation 2 will need to be excavated to a depth of approximately 14 to 15 feet bgs.
- Impact recommends that groundwater monitoring wells and DPE wells within and near the proposed excavations be decommissioned in accordance with the California Well Standards. These wells include MW-8, GW-1, DPE-1B, and DPE-5 in Excavation Area 1 and wells GW-3 and DPE-3 in Excavation Area 2.
- Impact further recommends that Oxygen Releasing Compound (ORC) be placed in the lower section of the excavations prior to being backfilled to grade with clean reused soil and clean imported soil.
- Impact recommends continuing groundwater monitoring on all remaining groundwater monitoring wells and DPE wells for 2 remaining quarters following excavation of TPH-impacted soils.

PERJURY STATEMENT

I declare, under penalty of perjury, that the information and/or recommendations contained in this document or report is true and correct to the best of my knowledge.

Impact Environmental

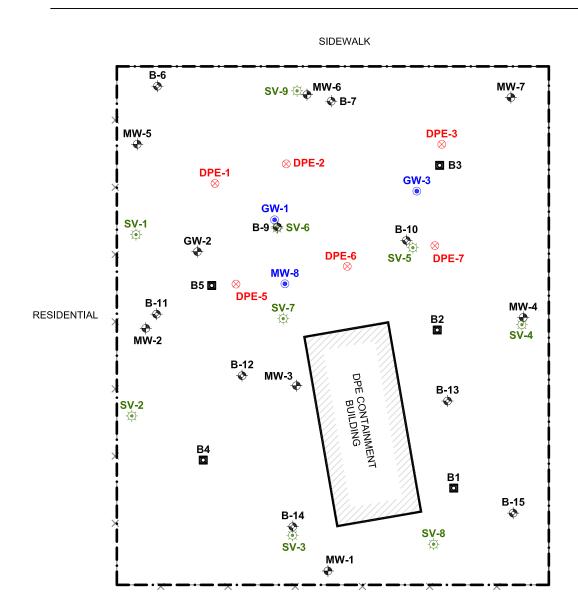
Joseph A Cotton, P.G. 7378

Principal Geologist

Impact Environmental Services 39120 Aronaut Way, Suite 223 Fremont, CA 94538 Figure 1 1409 to 1417 12TH STREET OAKLAND, CALIFORNIA

SITE LOCATION MAP

12TH STREET



MANDELA PARKWAY

SIDEWALK

EXPLANATION:

— Approximate Property Boundary

GW-3

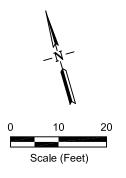
DPE/Monitoring Well Location (Dual-Use Well)

DPE-1 ⊗ DPE Well Location

B-14 ♦ Exploratory Boring Location

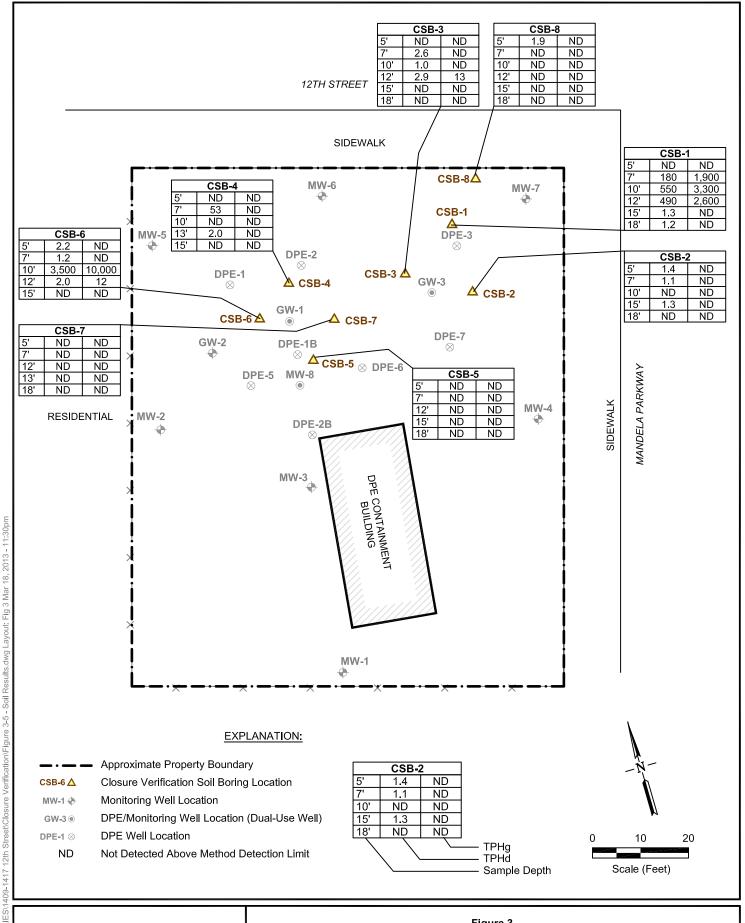
B4 ☐ Geoprobe Location

SV-2
Soil Vapor Sample Location



Impact Environmental Services 39120 Aronaut Way, Suite 223 Fremont, CA 94538 **Figure 2** 1409 to 1417 12TH STREET OAKLAND, CALIFORNIA

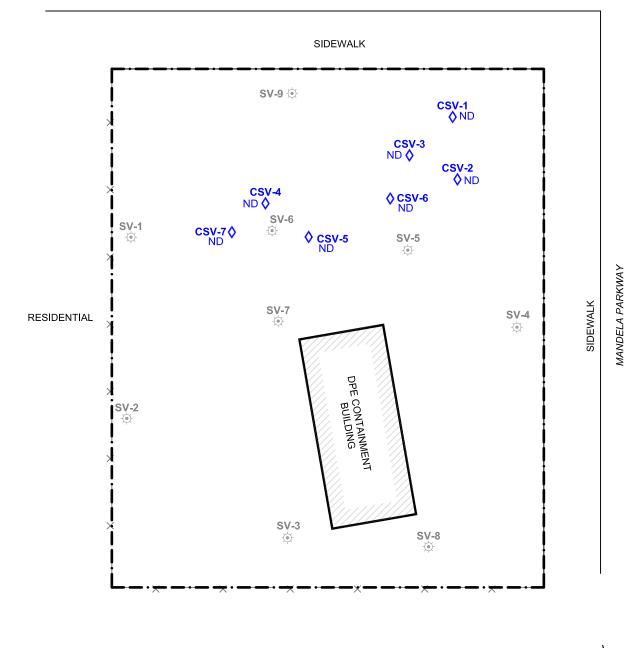
SITE PLAN



Impact Environmental Services 39120 Aronaut Way, Suite 223 Fremont, CA 94538 Figure 3 1409 to 1417 12TH STREET OAKLAND, CALIFORNIA

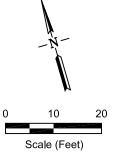
CLOSURE VERIFICATION SOIL SAMPLE RESULTS

12TH STREET



EXPLANATION:

ND All Compounds Not Detected Above Method Detection Limit

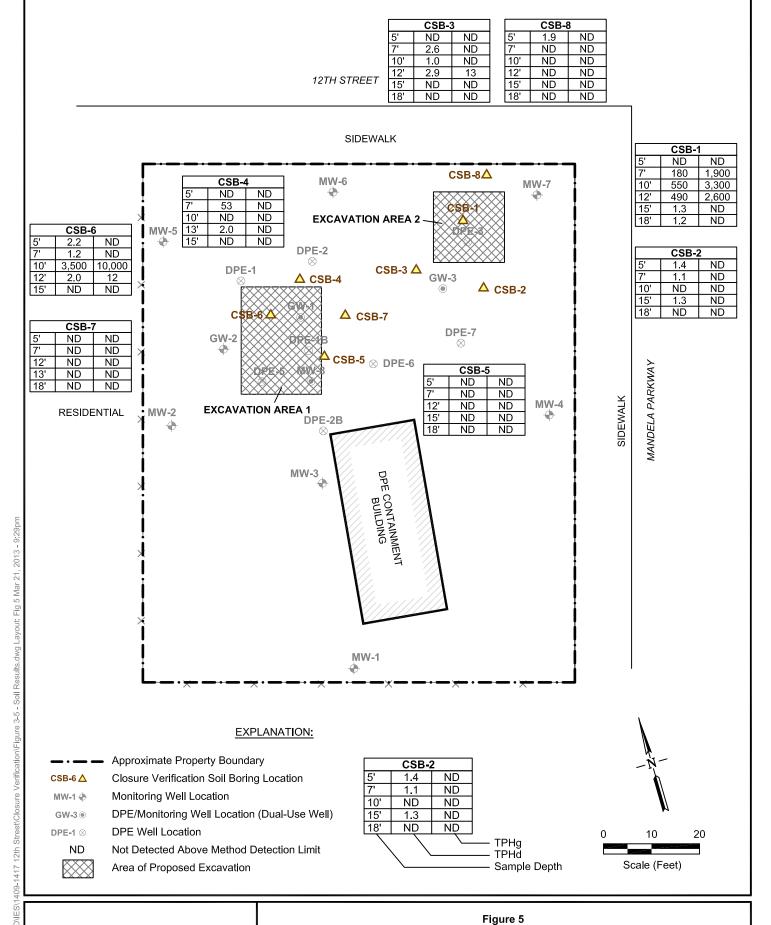


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Figure 4

1409 to 1417 12TH STREET OAKLAND, CALIFORNIA

CLOSURE VERIFICATION SOIL VAPOR SAMPLE RESULTS



Impact Environmental Services 39120 Aronaut Way, Suite 223 Fremont, CA 94538 1409 to 1417 12TH STREET OAKLAND, CALIFORNIA

Table 1
Soil Analytical Results
Site Closure Verification Soil Samples
1409-1417 12th Street Oakland, California

			Total Po	etroleum Hydro	leum Hydrocarbons BTEX Fuel Oxygenates and Lead Scavengers							ngers				
Sample ID	Date	Sample	ТРНд	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Total Xylene	TBA	MTBE	DIPE	ETBE	1,2-DCA	TAME	1,2-DBE
_	Sampled	Depth	(mg/kg)	(mg/kg)	(mg/kg)	(ukg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
CSB1-5	05/10/12	5	< 0.98	<1.0	<5.0	<4.8	<4.8	<4.8	<4.8	<97	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB1-7	05/10/12	7	1,900	180Y	< 5.0	<1,300	<1,300	3,100	30,900	<25,000	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300
CSB1-10	05/10/12	10	3,300	550Y	< 5.0	<830	<830	990	85,000	<830	<830	<830	<830	<830	<830	830
CSB1-12	05/10/12	12	2,600	490Y	< 5.0	<1,300	<1,300	25,000	105,000	<25,000	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300
CSB1-12A	05/10/12	12.5	55	40Y	< 5.0	<5.0	< 5.0	< 5.0	<5.0	<99	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CSB1-15	05/10/12	15	< 0.99	1.3Y	< 5.0	<4.8	<4.8	<4.8	<4.8	<96	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB1-18	05/10/12	18	< 0.95	1.2Y	< 5.0	<4.7	4.7	<4.7	<4.7	<95	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7
CSB2-5	05/10/12	5	<1.1	1.4Y	< 5.0	<5.0	< 5.0	< 5.0	< 5.0	<100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CSB2-7	05/10/12	7	<1.1	1.1Y	< 5.0	<4.8	<4.8	<4.8	<4.8	<96	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB2-10	05/10/12	10	< 0.96	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CSB2-15	05/10/12	15	<1.0	1.3Y	< 5.0	<4.8	<4.8	<4.8	<4.8	<95	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB2-18	05/10/12	18	< 0.93	<1.0	< 5.0	<4.7	4.7	<4.7	<4.7	<93	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7
CSB3-5	05/10/12	5	< 0.95	<1.0	< 5.0	<5.0	< 5.0	< 5.0	< 5.0	<100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CSB3-7	05/10/12	7	<1.0	2.6Y	7.4	<4.7	4.7	<4.7	<4.7	<93	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7
CSB3-10	05/10/12	10	< 0.95	1.0Y	< 5.0	<5.0	< 5.0	< 5.0	< 5.0	<100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CSB3-12	05/10/12	12	13Y	2.9Y	< 5.0	<4.9	<4.9	<4.9	<4.9	<98	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB3-15	05/10/12	15	< 0.98	<1.0	< 5.0	<4.6	4.6	4.6	<4.6	<92	4.6	4.6	4.6	4.6	4.6	<4.6
CSB3-18	05/10/12	18	< 0.92	<1.0	< 5.0	<4.7	4.7	<4.7	<4.7	<95	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7
CSB4-5	05/10/12	5	<1.0	<1.0	< 5.0	<4.9	<4.9	<4.9	<4.9	<98	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB4-7	05/10/12	7	< 0.94	53Y	< 5.0	<4.9	<4.9	<4.9	<4.9	<98	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB4-10	05/10/12	10	< 0.94	1.1Y	< 5.0	<4.9	<4.9	<4.9	<4.9	<98	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB4-12	05/10/12	12	< 0.97	<1.0	< 5.0	<4.8	<4.8	<4.8	<4.8	<97	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB4-13	05/10/12	13	< 0.96	1.0Y	< 5.0	<4.8	<4.8	<4.8	<4.8	<95	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB4-15	05/10/12	15	< 0.96	<1.0	< 5.0	<4.6	4.6	4.6	<4.6	<91	4.6	4.6	4.6	4.6	4.6	<4.6
Residential ESL f	,	,	83	83	370	0.000044	0.0093	0.0023	0.011	0.000075	0.000023	No ESL	No ESL	0.00022	No ESL	0.0016
Residential ESL f	idential ESL for Shallow Soil (NDWS) 83 83 370					0.00012	0.0029	0.0023	0.0023	0.10	0.0084	No ESL	No ESL	`0.0000045	No ESL	0.0011

Table 1
Soil Analytical Results
Site Closure Verification Soil Samples
1409-1417 12th Street Oakland, California

			Total Pe	Total Petroleum Hydrocarbons BTEX							Fuel	Oxygenates an	nd Lead Scaver	igers		
Sample ID	Date	Sample	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	TBA	MTBE	DIPE	ETBE	1,2-DCA	TAME	1,2-DBE
	Sampled	Depth	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CSB5-5	05/10/12	5	<1.0	<1.0	<5.0	<4.9	<4.9	<4.9	<4.9	<97	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB5-7	05/10/12	7	< 0.93	<1.0	< 5.0	<4.9	<4.9	<4.9	<4.9	<97	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB5-10	05/10/12	10	<1.1	<.99	< 5.0	<4.9	<4.9	<4.9	<4.9	<97	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB5-12	05/10/12	12	< 0.93	<1.0	< 5.0	<4.9	<4.9	<4.9	<4.9	<97	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB5-15	05/10/12	15	< 0.94	<.99	< 5.0	<4.7	<4.7	<4.7	<4.7	<95	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7
CSB5-18	05/10/12	18	< 0.99	<.99	< 5.0	<4.8	<4.8	<4.8	<4.8	<96	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB6-5	05/10/12	5	<1.0	2.2Y	27	<4.8	<4.8	<4.8	<4.8	<96	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB6-7	05/10/12	7	< 0.99	1.2Y	< 5.0	<4.8	<4.8	<4.8	<4.8	<96	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB6-10	05/10/12	10	10,000	3,500Y	<100	<13,000	<13,000	<13,000	<13,000	<250,000	<13,000	<13,000	<13,000	<13,000	<13,000	<13,000
CSB6-13	05/10/12	13	12Y	2.0Y	< 5.0	<4.7	<4.7	<4.7	<4.7	<95	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7
CSB6-15	05/10/12	15	<1.0	<1.0	< 5.0	<4.9	<4.9	<4.9	<4.9	<98	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB7-5	05/10/12	5	< 0.94	<1.0	< 5.0	<4.4	<4.4	<4.4	<4.4	<88	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4
CSB7-7	05/10/12	7	< 0.98	<1.0	< 5.0	<4.9	<4.9	<4.9	<4.9	<98	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9
CSB7-10	05/10/12	10	< 0.93	<.99	< 5.0	<4.8	<4.8	<4.8	<4.8	<97	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
CSB5-13	05/10/12	13	<1.0	<.99	< 5.0	<4.4	<4.4	<4.4	<4.4	<88	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4
CSB5-15	05/10/12	15	< 0.95	<1.0	< 5.0	<4.5	<4.5	<4.5	<4.5	<91	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5
CSB8-5	05/10/12	5	< 0.97	1.9Y	9.8	<4.4	<4.4	<4.4	<4.4	<89	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4
CSB8-7	05/10/12	7	<1.1	<1.0	< 5.0	<4.3	<4.3	<4.3	<4.3	<87	<4.3	<4.3	<4.3	<4.3	<4.3	<4.3
CSB8-10	05/10/12	10	< 0.98	<1.0	< 5.0	<4.6	4.6	4.6	<4.6	<91	4.6	4.6	4.6	4.6	4.6	<4.6
CSB8-12	05/10/12	12	< 0.93	<1.0	< 5.0	<4.5	<4.5	<4.5	<4.5	<91	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5
CSB8-15	05/10/12	15	< 0.95	<1.0	< 5.0	<4.5	<4.5	<4.5	<4.5	<91	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5
CSB8-18	05/10/12	18	< 0.93	<.99	< 5.0	<4.6	4.6	4.6	<4.6	<92	4.6	4.6	4.6	4.6	4.6	<4.6
Residential ESL f	ridential ESL for Shallow Soil (DWS) 83 83 370					0.000044	0.0093	0.0023	0.011	0.000075	0.000023	No ESL	No ESL	0.00022	No ESL	0.0016
Residential ESL f	for Shallow Soil (NDWS)	83	83	2,500	0.00012	0.0029	0.0023	0.0023	0.10	0.0084	No ESL	No ESL	`0.0000045	No ESL	0.0011

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015

TPHd= Total Petroleum Hydrocarbons as diesel by EPA Method 8015

TPHmo= Total Petroleum Hydrocarbons as motor oil by EPA Method 8015

Benzene, methyl-tert-butyl ether, toluene, ethylbenzene, and xylenes by EPA Method 8020

mg/kg = Milligrams per kilogram, equivalent to parts per million (ppm)

ESL= San Francisco Bay Regional Water Quality Control Board, Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater, February 2005.

Y= Sample exhibits chromatographic pattern which does not resemble diesel pattern.

Table 2
Soil Gas Analytical Results_
Site Closure Verification Report
1409- 1417 12th Street Oakland, California

Sample ID	CSV-1 (ug/m ³) 05/16/07	CSV-2 (ug/m³) 05/16/07	CSV-3 (ug/m³) 05/16/07	CSV-4 (ug/m³) 05/16/07	CSV-5 (ug/m³) 05/16/07	CSV-6 (ug/m³) 05/17/07	CSV-7 (ug/m ³) 05/16/07	Residential ESL
TPHg	<180	<180	<180	<180	<180	< 180	<180	10,000
Benzene	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	84
Toluene	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	< 0.95	63,000
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	980
m,p-Xylenes	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	21,000
o-Xylenes	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	21,000
MTBE	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	< 0.87	9,400
1,1 Diflouroethane	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA

Abbreviations and Methods:

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method modified TO-3

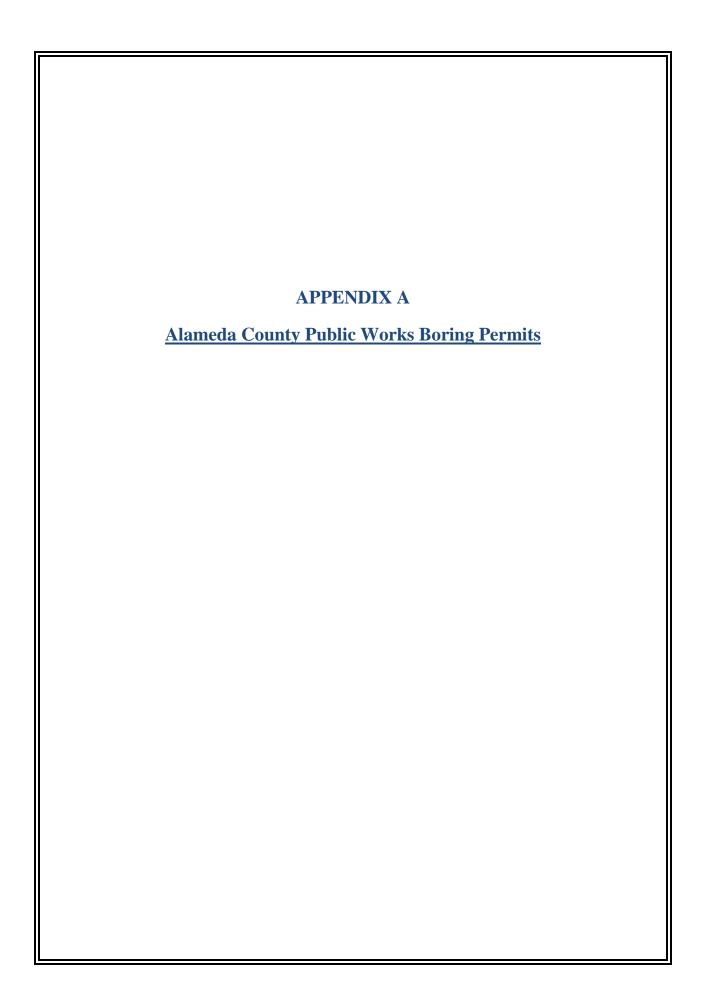
VOC = Volatile Organic Compounds by EPA Method TO-15

ug/m³= Micrograms per cubic meter, equivalent to parts per billion by volume (ppbv)

ESL= San Francisco Bay Regional Water Quality Control Board, Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater, February 2005.

^{1,2,4-}TMB= 1,2,4-Trimethylbenzene

^{1,2,4-}TMB= 1,2,4-Trimethylbenzene



Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 05/01/2012 By jamesy Permit Numbers: W2012-0298 to W2012-0299 Permits Valid from 05/03/2012 to 05/07/2012

Application Id: 1334997003644 City of Project Site:Oakland

Site Location: 1409-1417 12th Street, Oakland, CA
Project Start Date: 05/03/2012 Completion Date:05/07/2012

Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: IMPACT ENVIRONMENTAL - JOSEPH **Phone:** 510-703-5420

COTTON

39120 Argonaut Way, #223, FREMONT, CA 94538 Mrs. Shirley E. Thompson 1155 HOPKINS STREET, BERKELEY, CA 94702

Property Owner: Mrs. Shirley E. Thompson **Phone:** 510-504-8948

Client: Mrs. Shirley E. Thompson Phone: 510-504-8948

1155 HOPKINS STREET, BERKELEY, CA 94702

Contact: Phone: 510-703-5420

Cell: 510-703-5420

Total Due: \$530.00
Receipt Number: WR2012-0123 Total Amount Paid: \$530.00

Payer Name : Joseph Cotton Paid By: VISA PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 5 Boreholes

Driller: Environmental Control Associates - Lic #: 695970 - Method: DP Work Total: \$265.00

Specifications

 Permit
 Issued Dt
 Expire Dt
 #
 Hole Diam
 Max Depth

 Number
 Boreholes

 W2012 05/01/2012
 08/01/2012
 5
 2.00 in.
 30.00 ft

0298

Specific Work Permit Conditions

- 1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
- 2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
- 3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the

Alameda County Public Works Agency - Water Resources Well Permit

permits and requirements have been approved or obtained.

- 5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
- 6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
- 7. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
- 8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

Remediation Well Construction-Vapor Remediation Well - 5 Wells

Driller: Environmental Control Associates - Lic #: 695970 - Method: DP Work Total: \$265.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2012- 0299	05/01/2012	08/01/2012	CSV-1	2.00 in.	1.00 in.	4.00 ft	5.00 ft
W2012- 0299	05/01/2012	08/01/2012	CSV-2	2.00 in.	1.00 in.	4.00 ft	5.00 ft
W2012- 0299	05/01/2012	08/01/2012	CSV-3	2.00 in.	1.00 in.	4.00 ft	5.00 ft
W2012- 0299	05/01/2012	08/01/2012	CSV-4	2.00 in.	1.00 in.	4.00 ft	5.00 ft
W2012- 0299	05/01/2012	08/01/2012	CSV-5	2.00 in.	1.00 in.	4.00 ft	5.00 ft

Specific Work Permit Conditions

- 1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
- 3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Include permit

Alameda County Public Works Agency - Water Resources Well Permit

number and site map.

- 4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
- 5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
- 6. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).
- 7. Minimum surface seal thickness is two inches of cement grout placed by tremie.
- 8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
- 9. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

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I	APPENDIX B
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I	Boring Logs
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IMPACT E	Enviror	ıme	nta	al			E	BORING LOG	Boring No
Date(s) Installed: Drilling Co./Driller: Drilling Summary:	05/10/13 NA ENVIRONME Direct push a	ENTAL and vibra	CON ate b	ITRO oring	L AS :	s feet bgs	s. Colle	Ground Elevation: T.O.C. Elevation: Coordinates: Drilling Method: Borehole Total Depth: Final Borehole Diameter: ect continuous cores in butyrate liners for ad caps to seal sample. Place sample in	
Sample No.	Sample Interval	PID Reading	Recovery	Sampler	Odor	Depth (ft)	Graphic Log	LITHOLOGY	/REMARKS
		0			No No	- 1- 2- - 3-	FILL	0- 2' (FILL) BASEROCK & CONCRETION 2- 18' SILTY SAND (SM): Dark yellow to medium sand. Trace plastic fines.	
CSB1-5'	No.							Perched groundwater zone at 5-6' bg	ıs
CSB1-7'		35		7	Yes	7- - 8- - 9-		Hydrocarbon odor and color chang	e at 8-11'.
CSB1-10'	CSB1-10' Ye							Sroundwater first encountered at 14' b	ogs. Color change to yellowish brown
CSB1-15'		0			Yes No No	14 — 15 — 16 — 17 —			
, <u> </u>			<u>/</u>	<u>, </u>		18— 19— 20		Total Depth of Boring	g= 18 feet bgs

IMPACT	Enviror	 nmer	ntal			E	BORING LOG	Boring No.
Client: MRS. S	1417 12th ST. , SHIRLEY E. THO		ND, C	Α			Ground Elevation: T.O.C. Elevation:	
Project Number Date(s) Drilled: Date(s) Installed	05/10/13						Coordinates: Drilling Method: Borehole Total Depth:	Direct Push-EnviroCore
Drilling Summa	-	and vibrat	te borii	ng to 18	3 feet bgs	s. Colle	Final Borehole Diameter: ect continuous cores in butyrate liners for d caps to seal sample. Place sample in	
	boring using ne				JII III IGIG	dilu en	и саръ то веаг заптрте. Т тасе заптрте п	plastic zip-lock pay.
Sample No.	Sample Interval	PID Reading	Recovery	Odor	Depth (ft)	Graphic Log	LITHOLOGY	'/REMARKS
				\top			0- 2' (FILL) BASEROCK & CONCRET	E
	$\exists \setminus /$	0		No	1 1	FILL		
		0		No	2- - 3-		2-18' SILTY SAND (SM): Dark yellow to medium sand. Trace plastic fines.	wish brown; moist to very moist; fine
			<u> </u>	+	4-	SM		
CSB2-	5'	0		No	5 - - 6 -		-Perched groundwater zone at 5-6' b	gs
CSB2-	7			No	7- - 8-			
		0		No	9-			
CSB2-1	0'	0	\mathbb{A}	 	10 – – 11 –			
		0		No	12-			
				 	13 — — 14 —		$rac{ extstyle extstyle$	ogs.
CSB2-1	51		$/\!$	No	15 —			
		0			16 – – 17 –			
CSB2-1	8'		$/\!\!\mid$	No	18-			
							Total Depth of Boring	g= 18 feet bgs
					19 — 			

IMPACT	Enviror	ıme	nta	al			E	BORING LOG	Well No. N/A Sheet 1 of1_
Client: MRS. SH Project Number: Date(s) Drilled: Date(s) Installed: Drilling Co./Drilled Drilling Summary cores selecte	05/10/13 NA ENVIRONME	ENTAL and vibra	CON rate bo	ITROI oring nd use	to 18	feet bgs	s. Colle	Ground Elevation: T.O.C. Elevation: Coordinates: Drilling Method: Borehole Total Depth: Final Borehole Diameter: ect continuous cores in butyrate liners for d caps to seal sample. Place sample in	
Sample No.	Sample No. Sample Interval Interval Recovery Sampler							LITHOLOGY	/REMARKS
CSB3-7 CSB3-10 CSB3-12 CSB3-15		0 0 0 0 0 0 12			No N		FILL	2- 18' SILTY SAND (SM): Dark yellow to medium sand. Trace plastic fines. -Perched groundwater zone at 5-6' by -Hydrocarbon odor and color change to -Hydrocarbon odor -Hyd	vish brown; moist to very moist; fine gs to olive green at 11-14'.
CSB3-18			<u> </u>		No	17 — — 18 — — 19 — — 20		Total Depth of Boring	g= 18 feet bgs

IMPACT E	Enviror	ımeı	nta	ય		E	BORING LOG	Boring No. CSB-4 Well No. N/A Sheet 1 of1_
Client: MRS. SHI Project Number: Date(s) Drilled: Date(s) Installed: Drilling Co./Driller: Drilling Summary:	05/10/13 NA ENVIRONME Direct push a	MPSON ENTAL (and vibra y analysi	CONT ate bo	FROL AS	6 feet bgs	s. Colle	Ground Elevation: T.O.C. Elevation: Coordinates: Drilling Method: Borehole Total Depth: Final Borehole Diameter: ect continuous cores in butyrate liners for d caps to seal sample. Place sample in	
Sample No.	Sample Interval	PID Reading	Recovery	Sampler	Depth (ft)	Graphic Log	LITHOLOGY	//REMARKS
CSB4-5'		0		No No No	1 - 1 - 2 - 3 - 4 - 5 - 6 - 6 -	FILL	0- 2' (FILL) BASEROCK &Sandy SILT 2- 11' SILTY SAND with clay (SM): moist; fine to medium sand; 25% fines. -Perched groundwater zone at 5-6' b	Dusky red to dark yellowish brown; 10% plastic fines.
CSB4-7'		13		Yes	7- - 8- - 9- - 10-		-Hydrocarbon odor and color change to	
CSB4-12' CSB4-13' CSB4-15'		6		Yes	- 12— - 13— - 14— - 15—		11- 15' SILTY SAND (SM): Moderate fine to medium sand. Groundwater first encountered at 12. brown	
					16— 17— 18— 18— 19— 20		Total Depth of Borin	g= 16 feet bgs

IMPACT	Enviror	ıme	nta	al			E	BORING LOG	Well No.
Client: MRS. SI Project Number: Date(s) Drilled: Date(s) Installed: Drilling Co./Drilled Drilling Summary cores selected	: Direct push a	ENTAL and vibra	CON ate be	ITROI oring nd use	to 18	feet bgs	s. Colle	Ground Elevation: T.O.C. Elevation: Coordinates: Drilling Method: Borehole Total Depth: Final Borehole Diameter: ect continuous cores in butyrate liners for d caps to seal sample. Place sample in	
Sample No.	Sample	PID Reading	Recovery	Sampler	Odor	Depth (ft)	Graphic Log	LITHOLOGY	//REMARKS
CSB5-12 CSB5-15 CSB5-15		0 0 0 0 0 0 0			No No No No No No No No No		FILL	2- 18' SILTY SAND (SM): Dark yellow to medium sand. Trace plastic fines. -Perched groundwater zone at 5-6' b Groundwater first encountered at 13' b	wish brown; moist to very moist; fine
CSB5-18			<u> </u>	<u> </u>		18— 19— 20		Total Depth of Borin	g= 18 feet bgs

IMPACT	Enviror	ıme	nta	al			E	BORING LOG	Well No. N/A Sheet 1 of1_
Client: MRS. SH Project Number: Date(s) Drilled: Date(s) Installed: Drilling Co./Drilled Drilling Summary cores selecte	05/10/13 NA ENVIRONME Direct push a	ENTAL and vibr	CON rate b	ITROL oring	to 15	feet bgs	s. Colle	Ground Elevation: T.O.C. Elevation: Coordinates: Drilling Method: Borehole Total Depth: Final Borehole Diameter: ect continuous cores in butyrate liners for	
Sample No.	Sample Interval	PID Reading	Recovery	Sampler	Odor	Depth (ft)	Graphic Log	LITHOLOGY	/REMARKS
CSB6-5 CSB6-7 CSB6-10		0			No No Yes Yes	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 12 - 12 - 12 - 12 - 12	FILL	0- 2' (FILL) BASEROCK 2- 18' SILTY SAND (SM): Dark yellow to medium sand. Trace plastic fines. -Perched groundwater zone at 5-7 -Hydrocarbon odor and color change.	" bgs
CSB6-13	/\	5			Yes	12— 13— 14— 14— 15— 16— 17— 18— 19— 20		Sroundwater first encountered at 14' b	ngs. Color change to yellowish brown

IMPACT	Enviror	nmer	nta	ı		E	BORING LOG	Boring No.
Client: MRS. S Project Number Date(s) Drilled: Date(s) Installed Drilling Co./Drille Drilling Summar cores select	r: ENVIRONMI	ENTAL Cand vibrat	ONT	ROL AS	feet bgs	s. Colle	Ground Elevation: T.O.C. Elevation: Coordinates: Drilling Method: Borehole Total Depth: Final Borehole Diameter: ect continuous cores in butyrate liners for d caps to seal sample. Place sample in	
Sample No.	Sample Interval	PID Reading	Recovery	Sampler Odor	Depth (ft)	Graphic Log	LITHOLOGY	//REMARKS
CSB7-		0		No No	- 1- 2- 3- 4- 5-	FILL	0- 2' (FILL) BASEROCK & BRICK 2- 18' SILTY SAND (SM): Dark yellor to medium sand; 15 & non-plastic fines -Perched groundwater zone at 5-6' by	. 0-5%plastic fines.
CSB7-	7	0		No No No	6- - - - - - - - - - - - - - - - - - -			
CSB7-1	+ $/$	0		No	12 — 12 — 13 — 14 — 15		Groundwater first encountered at 13'	
					16 — 17 — 18 — 19 —		Total Depth of Boring	= 15 feet bgs

IMPACT Environmental						E	BORING LOG	Boring No.	
Site: 1409- 1417 12th ST. , OAKLAND, CA Client: MRS. SHIRLEY E. THOMPSON Project Number: Date(s) Drilled: 05/10/13 Date(s) Installed: NA							Ground Elevation: T.O.C. Elevation: Coordinates: Drilling Method: Borehole Total Depth:	Direct Push-EnviroCore	
Drilling Co./Driller: ENVIRONMENTAL CONTROL ASSOCIATES Final Borehole Diameter: 2.5" Drilling Summary: Direct push and vibrate boring to 18 feet bgs. Collect continuous cores in butyrate liners for logging. Cut 1' length cores selected for laboratory analysis and use teflon liners and end caps to seal sample. Place sample in plastic zip-lock bag. Backfill soil boring using neat cement grout.									
Sample No.	Sample Interval	PID Reading	Recovery	Sampler Odor	Depth (ft)	Graphic Log	LITHOLOGY	'/REMARKS	
		0	7	No	1-	FILL	0- 2' (FILL) BASEROCK, BRICK & CO	ONCRETE	
		0		No	2 — — 3 — — 4 —		2-18' SILTY SAND (SM): Dark yellow to medium sand. Trace plastic fines.	wish brown; moist to very moist; fine	
CSB8-3	5,	0		No	5 — 5 — 6 —	SM	-Perched groundwater zone at 5-6' b	ıgs	
CSB8-	<u></u>	0		No	7- - 8-				
CSB8-1	27	0		No	9 — - 10 — - 11 —				
CSB8-1:	2'	0		No	12 — 13 —				
CSB8-1:	55	0		No	14 — — 15 —		Groundwater first encountered at 14'	bgs.	
CSB8-1	3'			No	16— - 17— - 18—				
					19 — 20		Total Depth of Borin	g= 18 feet bgs	

APPENDIX C
Certified Laboratory Analytical Reports





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 236194 ANALYTICAL REPORT

Impact Environmental Project: 1409-1417

39120 Argonaut Way Location: 1409-1417 12th St., Oakland

Fremont, CA 94538 Level : II

Sample ID CSB1-5	<u>Lab ID</u> 236194-001	<u>Sample ID</u> CSB5-10	<u>Lab ID</u> 236194-024
CSB1-7	236194-002	CSB5-10 CSB5-7	236194-025
CSB1-10	236194-003	CSB5-12	236194-026
CSB1-12	236194-004	CSB5-15	236194-027
CSB1-12A	236194-005	CSB5-18	236194-028
CSB1-15	236194-006	CSB6-5	236194-029
CSB1-18	236194-007	CSB6-7	236194-030
CSB2-5	236194-008	CSB6-10	236194-031
CSB2-7	236194-009	CSB6-13	236194-032
CSB2-10	236194-010	CSB6-15	236194-033
CSB3-5	236194-011	CSB7-5	236194-034
CSB3-7	236194-012	CSB7-7	236194-035
CSB3-10	236194-013	CSB7-10	236194-036
CSB3-12	236194-014	CSB7-13	236194-037
CSB3-15	236194-015	CSB7-15	236194-038
CSB3-18	236194-016	CSB8-5	236194-039
CSB4-5'	236194-017	CSB8-7	236194-040
CSB4-10'	236194-018	CSB8-10	236194-041
CSB4-7'	236194-019	CSB8-12	236194-042
CSB4-13	236194-020	CSB8-15	236194-043
CSB4-12	236194-021	CSB8-18	236194-044
CSB4-15	236194-022	CSB2-15	236194-045
CSB5-5	236194-023	CSB2-18	236194-046

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature:

Project Manager

Date: <u>05/22/2012</u>



CASE NARRATIVE

Laboratory number: 236194

Client: Impact Environmental

Project: 1409-1417

Location: 1409-1417 12th St., Oakland

Request Date: 05/14/12 Samples Received: 05/14/12

This data package contains sample and QC results for forty six soil samples, requested for the above referenced project on 05/14/12. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):

Matrix spikes QC640094,QC640095 (batch 186629) were not reported because the concentration of the target analyte in the parent sample was more than four times the amount spiked, rendering the spike recovery not meaningful. Low recovery was observed for gasoline C7-C12 in the MSD of CSB6-13 (lab # 236194-032); the LCS was within limits. High recovery was also observed for gasoline C7-C12 in the MS of CSB6-13 (lab # 236194-032); the LCS was within limits. Response exceeding the instrument's linear range was observed for gasoline C7-C12 in the MS of CSB6-13 (lab # 236194-032); affected data was qualified with "b". High surrogate recoveries were observed for bromofluorobenzene (FID) in CSB6-10 (lab # 236194-031) and the MS of CSB6-13 (lab # 236194-032). No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

High recoveries were observed for diesel C10-C24 in the MS/MSD for batch 186635; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):

CSB1-7 (lab # 236194-002) and CSB6-10 (lab # 236194-031) were diluted due to high hydrocarbons. No other analytical problems were encountered.





LAB	WORK	ORDER	NO

LAB	ORATORY, INC.	www.torrentlab.com	1												
Company Name:	IMPACT ENVIRO	NMENTAL			Env.) H 🔲	Food 🔲	Special	Location	on of Sa	mpling	: 1409	12th St	., Oaklan	d, CA
Address: 39120 A	RGONAUT WAY, #223	3					Purpos	se: Site	e Closu	re Veri	ficatio	n SOil	Sampli	ng	
City: Oxnard		State: Oxnard	Zip (Code: 94	538		Specia	ıl instru	ctions /	Comm	ents:				
Telephone: 510-7	/03-5420	FAX:									·				
REPORT TO: Jose	ph Cotton	SAMPLER: Joseph	1 Cotton				P.O. #	:		EMAI	∟: jac	2146	2@aol	.com	
TURNAROUND TIM	E:	SAMPLE TYPE	:	REPORT	FORMAT:		ez								1
7 Work Days	4 Work Days 1 Work Day 3 Work Days Noon - Nxt	Day Waste Water Ground Water	Air Other	QC Le		TPHg/BTEX/MTBE	TPHd/TPHmo (Silica Gel Cleanup)	Fuel Oxygenates							ANALYSIS REQUESTED
LAB ID CANISTER	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	ТРН	TPH	Fuel							REMARKS
	CSB1-5	5-10-12	Soil	1	Liner	✓	✓	✓							
	CSB1-7	5-10-12	Soil	1	Liner	1	✓	✓.							
	CSB1-10	5-10-12	Soil	1	Liner	1	✓	✓.							
	CSB1-12	5-10-12	Soil	1	Liner	✓	✓	√							
	CSB1-12A	5-10-12	Soil	1	Liner	✓	1	✓							
	CSB1-15	5-10-12	Soil	1	Liner	✓	✓	✓							
	CSB1-18	5-10-12	Soil	1	Liner	✓	✓	√							
	CSB2-5	5-10-12	Soil	1	Liner	✓	✓	✓							
	CSB2-7	5-10-12	Soil	1	Liner	✓	✓	✓						_	
	CSB2-10	5-10-12	Soil	1	Liner	✓	✓	✓							
1 Relinquished By	STAND JOEP	H COTION Date:	MUN	Time:	45 cm	, OH.	ved By:	<u> </u>	in C	Print:	respe		Date:		Time:
- (IX) IN THE	Mewallow		1 1/12/			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1 05 Oct	2 5 /	<u> </u>) A				14//2	
NOTE: Samples	are discarded by the labor		amples on I					ment_			Temp		sampie si °C	Page	
Log In By:	and discourage by the label.	Date:			riewed By:					Da	ite:				Rev.



483 Sinclair Frontage Road Milpitas, CA 95035 Phone: 408.263.5258 FAX: 408.263.8293 www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

 LAB V	VORK	ORDE	R NO	

	T ENVIRONMENTAL		Food Special Loc	cation of Sampling: 1409 12th Str	reet, Oakland, CA
Address: 39120 ARGONAL		**************************************	Purpose: SITE C	CLOSURE VERIFICATION SA	MPLING
City: CA	State: CA	Zip Code: 94538	Special Instruction	ns / Comments:	
Telephone: 510-703-5420	FAX:				
REPORT TO: JOSEPH COT	TTON SAMPLER: JOS	EPH COTTON	P.O. #:	EMAIL: JAC21462@A	OL.COM
TURNAROUND TIME:	SAMPLE TYP	E: REPORT FORMAT: उ	34 63		1
-	Storm Water Waste Water Storn Water Waste Water Ground Water Storn Water Waste Water Ground Water Storn Water Waste Water Ground Water	or Other EDF Second EDD	PHQ/THY THY BIEX		ANALYSIS REQUESTED
LAB ID CANISTER CLIENT	"S SAMPLE I.D. DATE / TIME SAMPLED	MATRIX # OF CONT TYPE	10th		REMARKS
CSR	3-5 5-10-17	SOIL 1 LINER	x x x		
CSE	33-7	5 1 5	XXX		
	33-10)		C X X		
CSB	3-12		XXX		
CSI	33-15		C X X		
CSA	33-18)		XXX		
CSB	4-51		X X X		
CS.	34-101		XXX		
csa	34-7'		$\langle \chi \chi \rangle$		
CSI	34-13 (XXX		
Relinquished by:	Print: Date:	112/12 5045	eceived By:	Print: Date:	Time:
Relinquished By:	Rrint: Date:	Time:	eceived By: (ac) B	Print: Date:	14/12 Time:
	1 1 1	Samples on Ice? Yes NO	lethod of Shipment	Sample se	als intact? Yes NO N/A
NOTE: Samples are disca	rded by the laboratory 30 days from o	date of receipt unless other arrangemer	ts are made.	Temp°C	Page of
Log In By:	Date:	Log In Reviewed By:		Date:	Rev.





CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO

	IMPACT ENVIRO	NMENTAL		Env.] H 🔲	Food 🔲	Special Loca	ation of Samp	ling: 1409	12th Street,	Oakland, CA
Address: 39120 A	ARGONAUT WAY, #22	3				Purpose	e: SITE C	LOSURE VI	ERIFICAT	TION SAMP	LING
City: CA		State: CA	Zip Code:	94538		Special	Instruction	s / Comments	3:		
Telephone: 510-7	703-5420	FAX:									
REPORT TO: JOS	EPH COTTON	SAMPLER: JOSEPH	COTTON		9	P.O. #:		EMAIL:	JAC214	62@AOL	.COM
TURNAROUND TIM	IE:	SAMPLE TYPE:	REPO	RT FORMAT:	\$ 6		D'a				
7 Work Days	4 Work Days 1 Work Day 3 Work Days Noon - Nxt 2 Work Days 2 - 8 Hours	Day Waste Water Ground Water	Other D	Level IV = rel / EDD	PHQ/TRH	Arient P/BRX					ANALYSIS
LAB ID CANISTE	CLIENT'S SAMPLE I.D.	DATE / TIME M	IATRIX # OF	CONT TYPE	N. C.	12	\mathcal{C}				REMARKS
	CSB4-12	5-10-12	SOIL 1	LINER	X	X	人				
	CSB4-15		\supset		メ	X	X				
	C585-5				人	X	X				
	C585-10				1	X	人				
	C5B5-7				X	X	X				
	C5B5-12				X	X	X				
	C535-15		15		X	X	X				
	CSB5-18				X	X	X				
	C586-5))	7 5		X	X	X				
	CSB6-7		((<u> </u>	1	X	X				
Relinquished B	JOSEPH Print:	Date:	Time:	J°.45		ved By:	Mary	Print:	nall	Date:	Time:
	Mallan Mc Mallan	12/4/6	2 9	ZOPP	17	166	1255	=1		glitles	- 6.090 B
	eived in Good Condition?	_	ples on Ice?	_			ment	-		. 00	act? Yes NO
NOTE: Samples Log In By:	are discarded by the labor	atory 30 days from date o Date:	, 'i	ither arranger eviewed Bv:	nents are	e made.		Date:	emp	°C Pa	age of





	LAB	WORK	ORDER	NO
1				

www.torrentlab.com Env. III Food Special Location of Sampling: 1409 12th Street, Oakland, CA Company Name: IMPACT ENVIRONMENTAL Purpose: SITE CLOSURE VERIFICATION SAMPLING Address: 39120 ARGONAUT WAY, #223 Citv: CA State: CA Zip Code: 94538 Special Instructions / Comments: Telephone: 510-703-5420 FAX: EMAIL: JAC21462@AOL.COM SAMPLER: JOSEPH COTTON REPORT TO: JOSEPH COTTON P.O. #: REPORT FORMAT: **TURNAROUND TIME:** SAMPLE TYPE: QC Level IV 10 Work Days 4 Work Days 1 1 Work Day Storm Water Air **ANALYSIS** Waste Water
Ground Water REQUESTED **I** EDF ☐ Other 7 Work Days 3 Work Days Noon - Nxt Day Excel / EDD Soil 5 Work Days 2 - 8 Hours CANISTER DATE / TIME #OF CONT LAB ID CLIENT'S SAMPLE I.D. MATRIX REMARKS SAMPLED CONT **TYPE** SOIL LINER CSBG-10 csB6-13 G536-15 36 37 38 Relinguished by: Print: JOSEPH COTTON Were Samples Received in Good Candition? Yes NO Sample seals intakt2 Samples on Ice? Yes NO Method of Shipment NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made. Page Rev. 1 Date: Log In Reviewed By: ___





LAB	WORK	ORDER	NO

LAB	ORATORY, INC.	www.torrentlab.com	1												
Company Name:	IMPACT ENVIRO	NMENTAL			Env.) H 🔲	Food 🔲	Special	Location	on of Sa	mpling	: 1409	12th St	., Oaklan	d, CA
Address: 39120 A	RGONAUT WAY, #223	3					Purpos	se: Site	e Closu	re Veri	ficatio	n SOil	Sampli	ng	
City: Oxnard		State: Oxnard	Zip (Code: 94	538		Specia	ıl instru	ctions /	Comm	ents:				
Telephone: 510-7	/03-5420	FAX:									·				
REPORT TO: Jose	ph Cotton	SAMPLER: Joseph	1 Cotton				P.O. #	:		EMAI	∟: jac	2146	2@aol	.com	
TURNAROUND TIM	E:	SAMPLE TYPE	:	REPORT	FORMAT:		ez								1
7 Work Days	4 Work Days 1 Work Day 3 Work Days Noon - Nxt	Day Waste Water Ground Water	Air Other	QC Le		TPHg/BTEX/MTBE	TPHd/TPHmo (Silica Gel Cleanup)	Fuel Oxygenates							ANALYSIS REQUESTED
LAB ID CANISTER	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	ТРН	TPH	Fuel							REMARKS
	CSB1-5	5-10-12	Soil	1	Liner	✓	✓	✓							
	CSB1-7	5-10-12	Soil	1	Liner	1	✓	✓.							
	CSB1-10	5-10-12	Soil	1	Liner	1	✓	✓.							
	CSB1-12	5-10-12	Soil	1	Liner	✓	✓	√							
	CSB1-12A	5-10-12	Soil	1	Liner	✓	1	✓							
	CSB1-15	5-10-12	Soil	1	Liner	✓	✓	✓							
	CSB1-18	5-10-12	Soil	1	Liner	✓	✓	√							
	CSB2-5	5-10-12	Soil	1	Liner	✓	✓	✓							
	CSB2-7	5-10-12	Soil	1	Liner	✓	✓	✓						_	
	CSB2-10	5-10-12	Soil	1	Liner	✓	✓	✓							
1 Relinquished By	STAND JOEP	Date:	MUN	Time:	45 cm	, OH.	ved By:	<u> </u>	in C	Print:	respe		Date:		Time:
- (IX) IN THE	Mewallow		1 1/12/			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1 05 Oct	2 5 /	<u> </u>) A				14//2	
NOTE: Samples	are discarded by the labor		amples on I					ment_			Temp		sampie si °C	Page	
Log In By:	and discourage by the label.	Date:			riewed By:					Da	ite:				Rev.



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CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

 LAB V	VORK	ORDE	R NO	

	T ENVIRONMENTAL		Food Special Loc	cation of Sampling: 1409 12th Str	reet, Oakland, CA
Address: 39120 ARGONAL		**************************************	Purpose: SITE C	CLOSURE VERIFICATION SA	MPLING
City: CA	State: CA	Zip Code: 94538	Special Instruction	ns / Comments:	
Telephone: 510-703-5420	FAX:				
REPORT TO: JOSEPH COT	TTON SAMPLER: JOS	EPH COTTON	P.O. #:	EMAIL: JAC21462@A	OL.COM
TURNAROUND TIME:	SAMPLE TYP	E: REPORT FORMAT: उ	34 63		1
-	Storm Water Waste Water Storn Water Waste Water Ground Water Storn Water Waste Water Ground Water Storn Water Waste Water Ground Water	or Other EDF Second EDD	PHQ/THY THY BIEX		ANALYSIS REQUESTED
LAB ID CANISTER CLIENT	"S SAMPLE I.D. DATE / TIME SAMPLED	MATRIX # OF CONT TYPE	10th		REMARKS
CSR	3-5 5-10-17	SOIL 1 LINER	x x x		
CSE	33-7	5 1 5	XXX		
	33-10)		C X X		
CSB	3-12		XXX		
CSI	33-15		C X X		
CSA	33-18)		XXX		
CSB	4-51		X X X		
CS.	34-101		XXX		
csa	34-7'		$\langle \chi \chi \rangle$		
CSI	34-13 (XXX		
Relinquished by:	Print: Date:	112/12 5045	eceived By:	Print: Date:	Time:
Relinquished By:	Rrint: Date:	Time:	eceived By: (ac) B	Print: Date:	14/12 Time:
	1 1 1	Samples on Ice? Yes NO	lethod of Shipment	Sample se	als intact? Yes NO N/A
NOTE: Samples are disca	rded by the laboratory 30 days from o	date of receipt unless other arrangemer	ts are made.	Temp°C	Page of
Log In By:	Date:	Log In Reviewed By:		Date:	Rev.





CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO

	IMPACT ENVIRO	NMENTAL		Env.] H 🔲	Food 🔲	Special Loca	ation of Samp	ling: 1409	12th Street,	Oakland, CA
Address: 39120 A	ARGONAUT WAY, #22	3				Purpose	e: SITE C	LOSURE VI	ERIFICAT	TION SAMP	LING
City: CA		State: CA	Zip Code:	94538		Special	Instruction	s / Comments	3:		
Telephone: 510-7	703-5420	FAX:									
REPORT TO: JOS	EPH COTTON	SAMPLER: JOSEPH	COTTON		9	P.O. #:		EMAIL:	JAC214	62@AOL	.COM
TURNAROUND TIM	IE:	SAMPLE TYPE:	REPO	RT FORMAT:	\$ 6		D'a				
7 Work Days	4 Work Days 1 Work Day 3 Work Days Noon - Nxt 2 Work Days 2 - 8 Hours	Day Waste Water Ground Water	Other D	Level IV = rel / EDD	PHQ/TRH	Arient P/BRX					ANALYSIS
LAB ID CANISTE	CLIENT'S SAMPLE I.D.	DATE / TIME M	IATRIX # OF	CONT TYPE	N. C.	12	\mathcal{C}				REMARKS
	CSB4-12	5-10-12	SOIL 1	LINER	X	X	人				
	CSB4-15		\supset		メ	X	X				
	C585-5				人	X	X				
	C585-10				1	X	人				
	C5B5-7				X	X	X				
	C5B5-12				X	X	X				
	C535-15		15		X	X	X				
	CSB5-18				X	X	X				
	C586-5))	7 5		X	X	X				
	CSB6-7		((<u> </u>	1	X	X				
Relinquished B	JOSEPH Print:	Date:	Time:	J°.45		ved By:	Mary	Print:	nall	Date:	Time:
	Mallan Mc Mallan	12/4/6	2 9	ZOPP	17	166	1255	=1		glitles	- 6.090 B
	eived in Good Condition?	_	ples on Ice?	_			ment	-		. 00	act? Yes NO
NOTE: Samples Log In By:	are discarded by the labor	atory 30 days from date o Date:	, 'i	ither arranger eviewed Bv:	nents are	e made.		Date:	emp	°C Pa	age of





	LAB	WORK	ORDER	NO
1				

www.torrentlab.com Env. III Food Special Location of Sampling: 1409 12th Street, Oakland, CA Company Name: IMPACT ENVIRONMENTAL Purpose: SITE CLOSURE VERIFICATION SAMPLING Address: 39120 ARGONAUT WAY, #223 Citv: CA State: CA Zip Code: 94538 Special Instructions / Comments: Telephone: 510-703-5420 FAX: EMAIL: JAC21462@AOL.COM SAMPLER: JOSEPH COTTON REPORT TO: JOSEPH COTTON P.O. #: REPORT FORMAT: **TURNAROUND TIME:** SAMPLE TYPE: QC Level IV 10 Work Days 4 Work Days 1 1 Work Day Storm Water Air **ANALYSIS** Waste Water
Ground Water REQUESTED **I** EDF ☐ Other 7 Work Days 3 Work Days Noon - Nxt Day Excel / EDD Soil 5 Work Days 2 - 8 Hours CANISTER DATE / TIME #OF CONT LAB ID CLIENT'S SAMPLE I.D. MATRIX REMARKS SAMPLED CONT **TYPE** SOIL LINER CSBG-10 csB6-13 G536-15 36 37 38 Relinguished by: Print: JOSEPH COTTON Were Samples Received in Good Candition? Yes NO Sample seals intakt2 Samples on Ice? Yes NO Method of Shipment NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made. Page Rev. 1 Date: Log In Reviewed By: ___



CHAIN OF CUSTODY

Γ	LAB WORK ORDER NO						
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• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY • www.torrentlab.com Env. | IH | Food | Special | Location of Sampling: 1409 12th Street, Oakland, CA Company Name: IMPACT ENVIRONMENTAL Address: 39120 ARGONAUT WAY, #223 Purpose: SITE CLOSURE VERIFICATION SAMPLING State: CA Zip Code: 94538 City: CA Special Instructions / Comments: Telephone: 510-703-5420 FAX: EMAIL: JAC21462@AOL.COM SAMPLER: JOSEPH COTTON REPORT TO: JOSEPH COTTON P.O. #: REPORT FORMAT: **TURNAROUND TIME:** SAMPLE TYPE: Storm Water QC Level IV EDF 10 Work Days 4 Work Days 1 1 Work Day Air **ANALYSIS** Waste Water
Ground Water Other REQUESTED 7 Work Days 3 Work Days Noon - Nxt Day Excel / EDD 5 Work Days 2 Work Days 2 - 8 Hours Soil CANISTER DATE / TIME #OF CONT LAB ID CLIENT'S SAMPLE I.D. MATRIX REMARKS SAMPLED CONT **TYPE** LINER SOIL CSB3-10|5-10-12 CSB8-15 Date: Wall Received By: , Print: Time: Date: Received By Were Samples Received in Good Condition? Yes NO Samples on Ice? Yes Sample seals intact? Yes NO NO N/A NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made. Temp Log In By: _____ Rev. 1

Log In Reviewed By:

Date:



483 Sinclair Frontage Road Milpitas, CA 95035 Phone: 408.263.5258

CHAIN OF CUSTODY

LAB WORK ORDER NO				

Rev. 1

FAX: 408.263.8293 • NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY • www.torrentlab.com Env. H Food Special Location of Sampling: 1409 12th St., Oakland, CA Company Name: IMPACT ENVIRONMENTAL Purpose: Site Closure Verification Soil Sampling Address: 39120 ARGONAUT WAY, #223 Zip Code: 94538 Special Instructions / Comments: City: CA State: CA Telephone: 510-703-5420 FAX: EMAIL: jac21462@aol.com SAMPLER: Joseph Cotton P.O. #: REPORT TO: Joseph Cotton SAMPLE TYPE: REPORT FORMAT: **TURNAROUND TIME:** TPHd/TPHmo (Silica Gell Cleanup) Storm Water
Waste Water QC Level IV **ANALYSIS** 10 Work Days 4 Work Days 1 1 Work Day REQUESTED ☐ EDF ☐ Other 7 Work Days 3 Work Days Noon - Nxt Day Ground Water Excel / EDD Soil 5 Work Days 2 2 Work Days 2 - 8 Hours CANISTER DATE / TIME #OF CONT REMARKS CLIENT'S SAMPLE I.D. LAB ID **MATRIX** SAMPLED TYPE CONT CSB2-15 5-10-12 Soil 1 Liner CSB2-18 5-10-12 Liner Soil 1 Received By: Time: Print: Print: Joseph Cotton Received By: Sample seals intact? Yes NO N/A Were Samples Received in Good Condition? Yes NO Samples on Ice? Yes NO Method of Shipment NOTE: Samples are disearded by the laboratory 30 days from date of receipt unless other arrangements are made.

Log In Reviewed By:

Date:

Log In By: _____

COOLER RECEIPT CHECKLIST



Login # 236 94 Date Received 51412 Number of coordinate 1997 Date Received 1997 Date Rece	
Date Opened 5 H/2 By (print) 1-CHO (sign)	Longe of
Date Logged in By (print) (sign)	
1. Did cooler come with a shipping slip (airbill, etc)Y Shipping info	ES NO
2A. Were custody seals present? YES (circle) on cooler on samples Name Date	
A 777	ES NO (N/A)
3. Were custody papers dry and intact when received? Y 4. Were custody papers filled out properly (ink, signed, etc)? Y	<
5. Is the project identifiable from custody papers? (If so fill out top of form) (If 6. Indicate the packing in cooler: (if other, describe)	<
☐ Bubble Wrap ☐ Foam blocks ☐ Bags None ☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper 7. Temperature documentation: * Notify PM if temperature exceeds 6°C	
Type of ice used: ✓ Wet ☐ Blue/Gel ☐ None Temp(°C)	
Samples Received on ice & cold without a temperature blank; temp. take	en with IR oun
☐ Samples received on ice directly from the field. Cooling process had beg	
8. Were Method 5035 sampling containers present? If YES, what time were they transferred to freezer?	
125, what time were they transferred to freezer?	_YES (NO)
9. Did all bottles arrive unbroken/unopened?	(ES) NO
9. Did all bottles arrive unbroken/unopened?	VES NO YES NO
9. Did all bottles arrive unbroken/unopened?	(ES) NO YES (NO
9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers?	ES NO YES NO YES NO
9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested?	YES NO YES NO YES NO YES NO
9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? YES	YES NO YES NO YES NO YES NO YES NO YES NO
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9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check?	ES NO YES NO YES NO YES NO YES NO YES NO NO YES NO N
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9. Did all bottles arrive unbroken/unopened? 10. Are there any missing / extra samples? 11. Are samples in the appropriate containers for indicated tests? 12. Are sample labels present, in good condition and complete? 13. Do the sample labels agree with custody papers? 14. Was sufficient amount of sample sent for tests requested? 15. Are the samples appropriately preserved? 16. Did you check preservatives for all bottles for each sample? 17. Did you document your preservative check? 18. Did you change the hold time in LIMS for unpreserved VOAs? 19. Did you change the hold time in LIMS for preserved terracores? 20. Are bubbles > 6mm absent in VOA samples? 21. Was the client contacted concerning this sample delivery? If YES, Who was called? 22. COMMENTS	ES NO YES NO
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Rev 10, 11/11



Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland EPA 5030B Impact Environmental Client: Prep: Project#: 1409-1417 Analysis: EPA 8015B 05/10/12 Matrix: Soil Sampled: 05/14/12 Units: mg/Kg Received: Basis: as received

Field ID: CSB1-5 Diln Fac: 1.000
Type: SAMPLE Batch#: 186587
Lab ID: 236194-001 Analyzed: 05/15/12

 Analyte
 Result
 RL

 Gasoline C7-C12
 ND
 0.98

Surrogate %REC Limits
Bromofluorobenzene (FID) 93 61-136

Field ID: CSB1-7 Diln Fac: 1,000 Type: SAMPLE Batch#: 186629 Lab ID: 236194-002 Analyzed: 05/17/12

 Analyte
 Result
 RL

 Gasoline C7-C12
 1,900
 200

Surrogate %REC Limits
Bromofluorobenzene (FID) 102 61-136

Field ID: CSB1-10 Diln Fac: 1,000 Type: SAMPLE Batch#: 186629 Lab ID: 236194-003 Analyzed: 05/17/12

 Analyte
 Result
 RL

 Gasoline C7-C12
 3,300
 200

Surrogate %REC Limits
Bromofluorobenzene (FID) 106 61-136

Field ID: CSB1-12 Diln Fac: 1,000 Type: SAMPLE Batch#: 186629 Lab ID: 236194-004 Analyzed: 05/17/12

AnalyteResultRLGasoline C7-C122,600200

Surrogate %REC Limits
Bromofluorobenzene (FID) 102 61-136

Page 1 of 13

^{*=} Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit



Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: Impact Environmental EPA 5030B Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB1-12A Diln Fac: 62.50 Type: SAMPLE Batch#: 186629 Lab ID: 236194-005 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 55 13

Surrogate%RECLimitsBromofluorobenzene (FID)9861-136

Field ID: CSB1-15 Diln Fac: 1.000 Type: SAMPLE Batch#: 186587 Lab ID: 236194-006 Analyzed: 05/15/12

AnalyteResultRLGasoline C7-C12ND0.99

Surrogate %REC Limits
Bromofluorobenzene (FID) 92 61-136

Field ID: CSB1-18 Diln Fac: 1.000
Type: SAMPLE Batch#: 186587
Lab ID: 236194-007 Analyzed: 05/15/12

 Analyte
 Result
 RL

 Gasoline C7-C12
 ND
 0.95

Surrogate %REC Limits
Bromofluorobenzene (FID) 84 61-136

Field ID: CSB2-5 Diln Fac: 1.000 Type: SAMPLE Batch#: 186587 Lab ID: 236194-008 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 1.1

Surrogate %REC Limits
Bromofluorobenzene (FID) 90 61-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: Impact Environmental EPA 5030B Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12

Field ID: CSB2-7 Diln Fac: 1.000
Type: SAMPLE Batch#: 186626
Lab ID: 236194-009 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 1.1

Surrogate %REC Limits
Bromofluorobenzene (FID) 90 61-136

as received

Field ID: CSB2-10 Diln Fac: 1.000 Type: SAMPLE Batch#: 186587 Lab ID: 236194-010 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 0.96

Surrogate %REC Limits
Bromofluorobenzene (FID) 89 61-136

Field ID: CSB3-5 Diln Fac: 1.000
Type: SAMPLE Batch#: 186587
Lab ID: 236194-011 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 0.95

Surrogate %REC Limits
Bromofluorobenzene (FID) 89 61-136

Field ID: CSB3-7 Diln Fac: 1.000 Type: SAMPLE Batch#: 186587 Lab ID: 236194-012 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate %REC Limits
Bromofluorobenzene (FID) 92 61-136

ND= Not Detected

RL= Reporting Limit

Page 3 of 13

Basis:

^{*=} Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard



Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: Impact Environmental EPA 5030B Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB3-10 Type: SAMPLE Lab ID: 236194-013

Diln Fac: 1.000 Batch#: 186587 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 0.95

Surrogate %REC Limits
Bromofluorobenzene (FID) 88 61-136

Field ID: CSB3-12 Diln Fac: 1.000 Type: SAMPLE Batch#: 186587 Lab ID: 236194-014 Analyzed: 05/16/12

AnalyteResultRLGasoline C7-C1213 Y0.99

Surrogate%RECLimitsBromofluorobenzene (FID)10761-136

Field ID: CSB3-15 Diln Fac: 1.000 Type: SAMPLE Batch#: 186587 Lab ID: 236194-015 Analyzed: 05/16/12

AnalyteResultRLGasoline C7-C12ND0.98

Surrogate %REC Limits
Bromofluorobenzene (FID) 84 61-136

Field ID: CSB3-18 Diln Fac: 1.000 Type: SAMPLE Batch#: 186587 Lab ID: 236194-016 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 0.92

Surrogate %REC Limits
Bromofluorobenzene (FID) 83 61-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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3.2



Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: Impact Environmental EPA 5030B Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12

Field ID: CSB4-5'
Type: SAMPLE
Lab ID: 236194-017

Basis:

Diln Fac: 1.000 Batch#: 186587 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate %REC Limits
Bromofluorobenzene (FID) 91 61-136

as received

Field ID: CSB4-10' Diln Fac: 1.000 Type: SAMPLE Batch#: 186587 Lab ID: 236194-018 Analyzed: 05/16/12

AnalyteResultRLGasoline C7-C12ND0.94

Surrogate %REC Limits
Bromofluorobenzene (FID) 90 61-136

Field ID: CSB4-7' Diln Fac: 1.000 Type: SAMPLE Batch#: 186626 Lab ID: 236194-019 Analyzed: 05/16/12

 Analyte
 Result
 RL

 Gasoline C7-C12
 ND
 0.94

Surrogate %REC Limits
Bromofluorobenzene (FID) 105 61-136

Field ID: CSB4-13 Diln Fac: 1.000 Type: SAMPLE Batch#: 186626 Lab ID: 236194-020 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 0.96

Surrogate %REC Limits
Bromofluorobenzene (FID) 108 61-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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3.2



Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: Impact Environmental EPA 5030B Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB4-12 Type: SAMPLE Lab ID: 236194-021

Diln Fac: 1.000 Batch#: 186626 Analyzed: 05/16/12

Analyte Result RL
Gasoline C7-C12 ND 0.97

Surrogate %REC Limits
Bromofluorobenzene (FID) 96 61-136

Field ID: CSB4-15 Diln Fac: 1.000 Type: SAMPLE Batch#: 186626 Lab ID: 236194-022 Analyzed: 05/17/12

AnalyteResultRLGasoline C7-C12ND0.96

Surrogate%RECLimitsBromofluorobenzene (FID)10261-136

Field ID: CSB5-5 Diln Fac: 1.000 Type: SAMPLE Batch#: 186626 Lab ID: 236194-023 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate %REC Limits
Bromofluorobenzene (FID) 110 61-136

Field ID: CSB5-10 Diln Fac: 1.000 Type: SAMPLE Batch#: 186626 Lab ID: 236194-024 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 1.1

Surrogate%RECLimitsBromofluorobenzene (FID)10561-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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1.000

186626 05/17/12

Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: Impact Environmental EPA 5030B Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB5-7 Diln Fac: Type: SAMPLE Batch#: Lab ID: 236194-025 Analyzed:

Analyte Result RL
Gasoline C7-C12 ND 0.93

Surrogate %REC Limits

Bromofluorobenzene (FID) 97 61-136

Field ID: CSB5-12 Diln Fac: 1.000 Type: SAMPLE Batch#: 186626 Lab ID: 236194-026 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 0.93

Surrogate %REC Limits
Bromofluorobenzene (FID) 103 61-136

Field ID: CSB5-15 Diln Fac: 1.000 Type: SAMPLE Batch#: 186626 Lab ID: 236194-027 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 0.94

Surrogate %REC Limits
Bromofluorobenzene (FID) 97 61-136

Field ID: CSB5-18 Diln Fac: 1.000 Type: SAMPLE Batch#: 186626 Lab ID: 236194-028 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 0.99

Surrogate %REC Limits
Bromofluorobenzene (FID) 107 61-136

Page 7 of 13

^{*=} Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit



Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: Impact Environmental EPA 5030B Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

 Field ID:
 CSB6-5
 Diln Fac:
 1.000

 Type:
 SAMPLE
 Batch#:
 186626

 Lab ID:
 236194-029
 Analyzed:
 05/17/12

 Analyte
 Result
 RL

 Gasoline C7-C12
 ND
 1.0

Surrogate %REC Limits
Bromofluorobenzene (FID) 107 61-136

Field ID: CSB6-7 Diln Fac: 1.000 Type: SAMPLE Batch#: 186629 Lab ID: 236194-030 Analyzed: 05/16/12

AnalyteResultRLGasoline C7-C12ND0.99

Surrogate %REC Limits
Bromofluorobenzene (FID) 83 61-136

Field ID: CSB6-10 Diln Fac: 1,250 Type: SAMPLE Batch#: 186687 Lab ID: 236194-031 Analyzed: 05/18/12

 Analyte
 Result
 RL

 Gasoline C7-C12
 10,000 Y
 250

Surrogate %REC Limits
Bromofluorobenzene (FID) 155 * 61-136

Field ID: CSB6-13 Diln Fac: 1.000 Type: SAMPLE Batch#: 186687 Lab ID: 236194-032 Analyzed: 05/17/12

 Analyte
 Result
 RL

 Gasoline C7-C12
 12 Y
 0.98

Surrogate %REC Limits
Bromofluorobenzene (FID) 108 61-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: Impact Environmental EPA 5030B Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB6-15 Type: SAMPLE Lab ID: 236194-033

Diln Fac: 1.000 Batch#: 186629 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate %REC Limits
Bromofluorobenzene (FID) 92 61-136

Field ID: CSB7-5 Diln Fac: 1.000
Type: SAMPLE Batch#: 186629
Lab ID: 236194-034 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 0.94

Surrogate %REC Limits
Bromofluorobenzene (FID) 91 61-136

Field ID: CSB7-7 Diln Fac: 1.000 Type: SAMPLE Batch#: 186629

Lab ID: 236194-035 Analyzed: 05/17/12

AnalyteResultRLGasoline C7-C12ND0.98

Surrogate %REC Limits
Bromofluorobenzene (FID) 87 61-136

Field ID: CSB7-10 Diln Fac: 1.000 Type: SAMPLE Batch#: 186629 Lab ID: 236194-036 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 0.93

Surrogate %REC Limits
Bromofluorobenzene (FID) 89 61-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: EPA 5030B Impact Environmental Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB7-13 Type: SAMPLE Lab ID: 236194-037

Diln Fac: 1.000 Batch#: 186629 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate %REC Limits
Bromofluorobenzene (FID) 92 61-136

Field ID: CSB7-15 Diln Fac: 1.000
Type: SAMPLE Batch#: 186687
Lab ID: 236194-038 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 0.95

Surrogate%RECLimitsBromofluorobenzene (FID)9161-136

Field ID: CSB8-5 Diln Fac: 1.000 Type: SAMPLE Batch#: 186687 Lab ID: 236194-039 Analyzed: 05/17/12

AnalyteResultRLGasoline C7-C12ND0.97

Surrogate %REC Limits
Bromofluorobenzene (FID) 90 61-136

Field ID: CSB8-7 Diln Fac: 1.000 Type: SAMPLE Batch#: 186687 Lab ID: 236194-040 Analyzed: 05/17/12

Analyte Result RL
Gasoline C7-C12 ND 1.1

Surrogate %REC Limits
Bromofluorobenzene (FID) 89 61-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: EPA 5030B Impact Environmental Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB8-10 Type: SAMPLE Lab ID: 236194-041

Diln Fac: 1.000 Batch#: 186687 Analyzed: 05/18/12

Analyte Result RL
Gasoline C7-C12 ND 0.98

Surrogate %REC Limits
Bromofluorobenzene (FID) 90 61-136

Field ID: CSB8-12 Diln Fac: 1.000 Type: SAMPLE Batch#: 186687 Lab ID: 236194-042 Analyzed: 05/18/12

Analyte Result RL
Gasoline C7-C12 ND 0.93

Surrogate %REC Limits
Bromofluorobenzene (FID) 91 61-136

Field ID: CSB8-15 Diln Fac: 1.000
Type: SAMPLE Batch#: 186687
Lab ID: 236194-043 Analyzed: 05/18/12

AnalyteResultRLGasoline C7-C12ND0.95

Surrogate %REC Limits
Bromofluorobenzene (FID) 91 61-136

Field ID: CSB8-18 Diln Fac: 1.000 Type: SAMPLE Batch#: 186687 Lab ID: 236194-044 Analyzed: 05/18/12

Analyte Result RL
Gasoline C7-C12 ND 0.93

Surrogate %REC Limits
Bromofluorobenzene (FID) 90 61-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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Total Volatile Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: EPA 5030B Impact Environmental Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB2-15 Diln Fac: 1.000
Type: SAMPLE Batch#: 186687
Lab ID: 236194-045 Analyzed: 05/18/12

Analyte Result RL
Gasoline C7-C12 ND 1.0

Surrogate %REC Limits
Bromofluorobenzene (FID) 90 61-136

Field ID: CSB2-18 Diln Fac: 1.000 Type: SAMPLE Batch#: 186687 Lab ID: 236194-046 Analyzed: 05/18/12

Analyte Result RL
Gasoline C7-C12 ND 0.93

Surrogate %REC Limits
Bromofluorobenzene (FID) 92 61-136

Type: BLANK Batch#: 186587 Lab ID: QC639879 Analyzed: 05/15/12

Diln Fac: 1.000

AnalyteResultRLGasoline C7-C12ND1.0

Surrogate %REC Limits
Bromofluorobenzene (FID) 89 61-136

Type: BLANK Batch#: 186626 Lab ID: QC640052 Analyzed: 05/16/12

Diln Fac: 1.000

Analyte Result RL
Gasoline C7-C12 ND 0.20

Surrogate %REC Limits
Bromofluorobenzene (FID) 93 61-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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Total Volatile Hydrocarbons 1409-1417 12th St., Oakland 236194 Lab #: Location: EPA 5030B Client: Impact Environmental Prep: Analysis: Sampled: EPA 8015B 05/10/12 Project#: 1409-1417 Soil Matrix: Units: mg/Kg Received: 05/14/12 Basis: as received

Type: BLANK Batch#: 186629 Lab ID: QC640070 Analyzed: 05/16/12

Diln Fac: 1.000

AnalyteResultRLGasoline C7-C12ND0.20

Surrogate %REC Limits
Bromofluorobenzene (FID) 90 61-136

Type: BLANK Batch#: 186687 Lab ID: QC640300 Analyzed: 05/17/12

Diln Fac: 1.000

Analyte Result RL
Gasoline C7-C12 ND 0.20

Surrogate %REC Limits
Bromofluorobenzene (FID) 94 61-136

*= Value outside of QC limits; see narrative

Y= Sample exhibits chromatographic pattern which does not resemble standard

ND= Not Detected

RL= Reporting Limit

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Total Volatile Hydrocarbons						
Lab #:	236194	Location:	1409-1417 12th St., Oakland			
Client:	Impact Environmental	Prep:	EPA 5030B			
Project#:	1409-1417	Analysis:	EPA 8015B			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC639878	Batch#:	186587			
Matrix:	Soil	Analyzed:	05/15/12			
Units:	mg/Kg					

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	0.9437	94	79-120

Surrogate %REC	Limits
Bromofluorobenzene (FID) 91	61-136

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Total Volatile Hydrocarbons						
Lab #:	236194	Location:	1409-1417 12th St., Oakland			
Client:	Impact Environmental	Prep:	EPA 5030B			
Project#:	1409-1417	Analysis:	EPA 8015B			
Field ID:	CSB1-5	Diln Fac:	1.000			
MSS Lab ID:	236194-001	Batch#:	186587			
Matrix:	Soil	Sampled:	05/10/12			
Units:	mg/Kg	Received:	05/14/12			
Basis:	as received	Analyzed:	05/15/12			

Type: MS Lab ID: QC639880

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.06286	10.42	8.982	86	31-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	61-136

Type: MSD Lab ID: QC639881

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.20	6.018	59	31-120	38	57



Total Volatile Hydrocarbons						
Lab #:	236194	Location:	1409-1417 12th St., Oakland			
Client:	Impact Environmental	Prep:	EPA 5030B			
Project#:	1409-1417	Analysis:	EPA 8015B			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC640051	Batch#:	186626			
Matrix:	Soil	Analyzed:	05/16/12			
Units:	mg/Kg					

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.053	105	79-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	61-136

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Total Volatile Hydrocarbons						
Lab #:	236194	Location:	1409-1417 12th St., Oakland			
Client:	Impact Environmental	Prep:	EPA 5030B			
Project#:	1409-1417	Analysis:	EPA 8015B			
Field ID:	CSB2-7	Diln Fac:	1.000			
MSS Lab ID:	236194-009	Batch#:	186626			
Matrix:	Soil	Sampled:	05/10/12			
Units:	mg/Kg	Received:	05/14/12			
Basis:	as received	Analyzed:	05/16/12			

Type: MS

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.07808	10.64	9.818	92	31-120

Lab ID: QC640053

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	61-136

Type: MSD Lab ID: QC640054

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.615	8.257	85	31-120	7	57



Total Volatile Hydrocarbons						
Lab #:	236194	Location:	1409-1417 12th St., Oakland			
Client:	Impact Environmental	Prep:	EPA 5030B			
Project#:	1409-1417	Analysis:	EPA 8015B			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC640069	Batch#:	186629			
Matrix:	Soil	Analyzed:	05/16/12			
Units:	mg/Kg					

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.107	111	79-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID) 9		61-136

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Total Volatile Hydrocarbons						
Lab #:	236194	Location:	1409-1417 12th St., Oakland			
Client:	Impact Environmental	Prep:	EPA 5030B			
Project#:	1409-1417	Analysis:	EPA 8015B			
Type:	LCS	Diln Fac:	1.000			
Lab ID:	QC640299	Batch#:	186687			
Matrix:	Soil	Analyzed:	05/17/12			
Units:	mg/Kg					

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.040	104	79-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	94	61-136

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Total Volatile Hydrocarbons					
Lab #:	236194	Location:	1409-1417 12th St., Oakland		
Client:	Impact Environmental	Prep:	EPA 5030B		
Project#:	1409-1417	Analysis:	EPA 8015B		
Field ID:	CSB6-13	Diln Fac:	1.000		
MSS Lab ID:	236194-032	Batch#:	186687		
Matrix:	Soil	Sampled:	05/10/12		
Units:	mg/Kg	Received:	05/14/12		
Basis:	as received	Analyzed:	05/17/12		

Type: MS Lab ID: QC640328

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	12.18	9.709	72.24 >LR	b 619 *	31-120

Surrogate %REC	Limits
Bromofluorobenzene (FID) 137 *	61-136

Type: MSD Lab ID: QC640329

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	9.901	9.604	-26 *	31-120	NC 57

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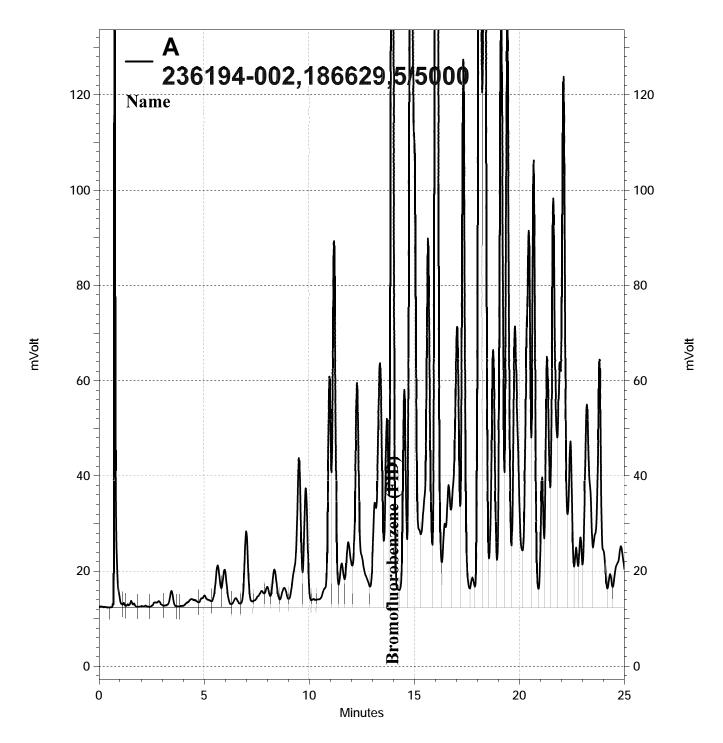
^{*=} Value outside of QC limits; see narrative

b= See narrative

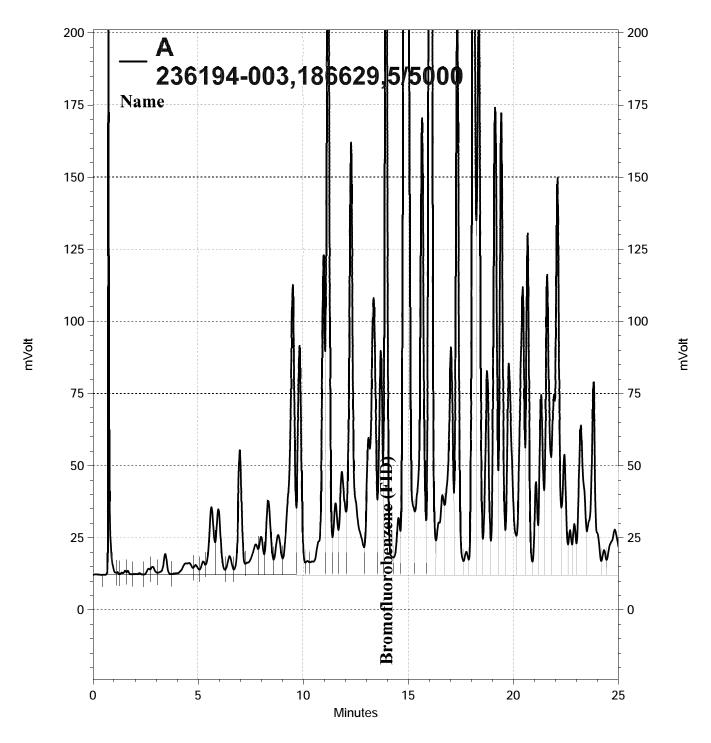
NC= Not Calculated

>LR= Response exceeds instrument's linear range

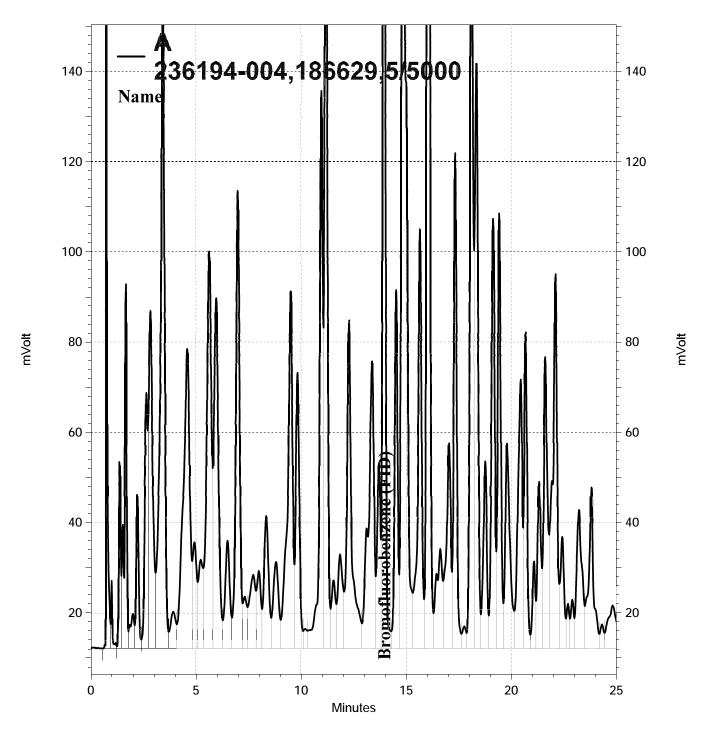
RPD= Relative Percent Difference



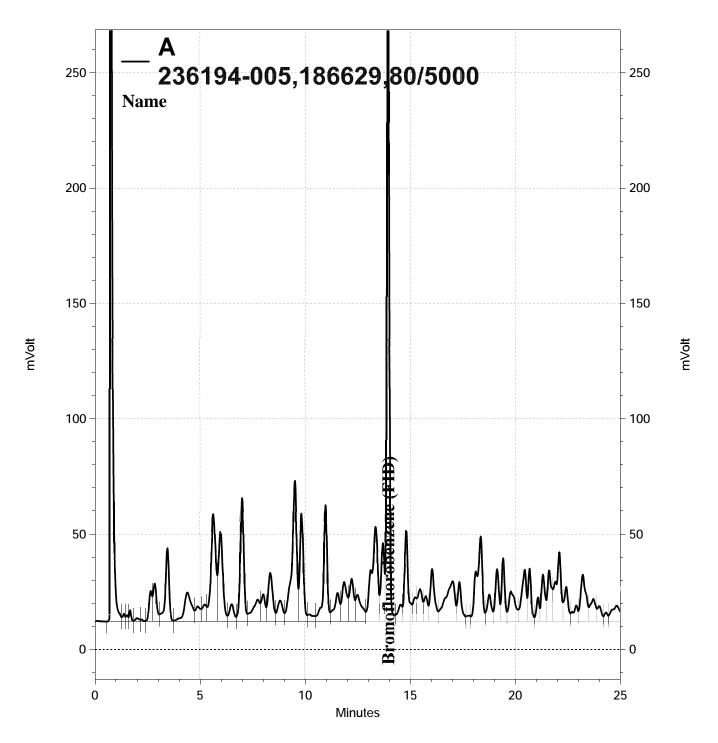
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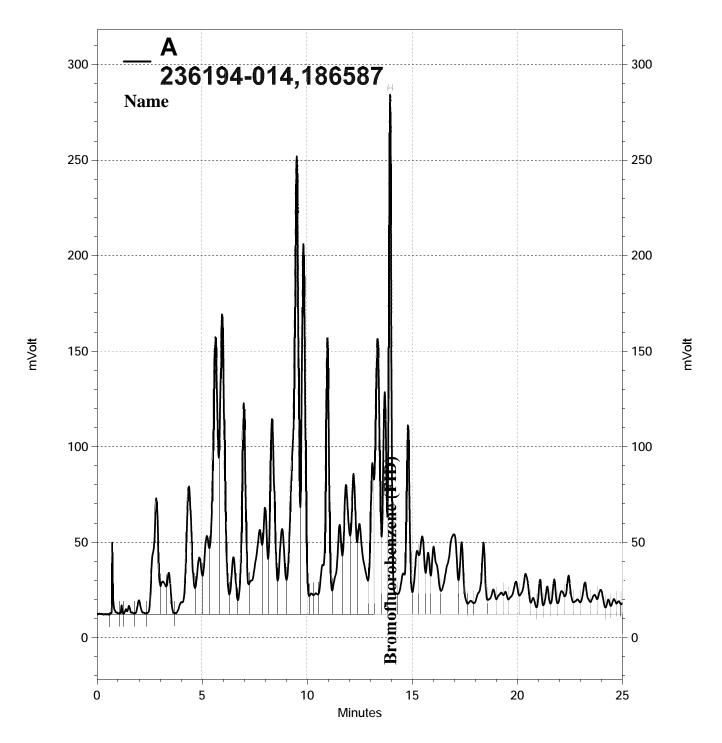
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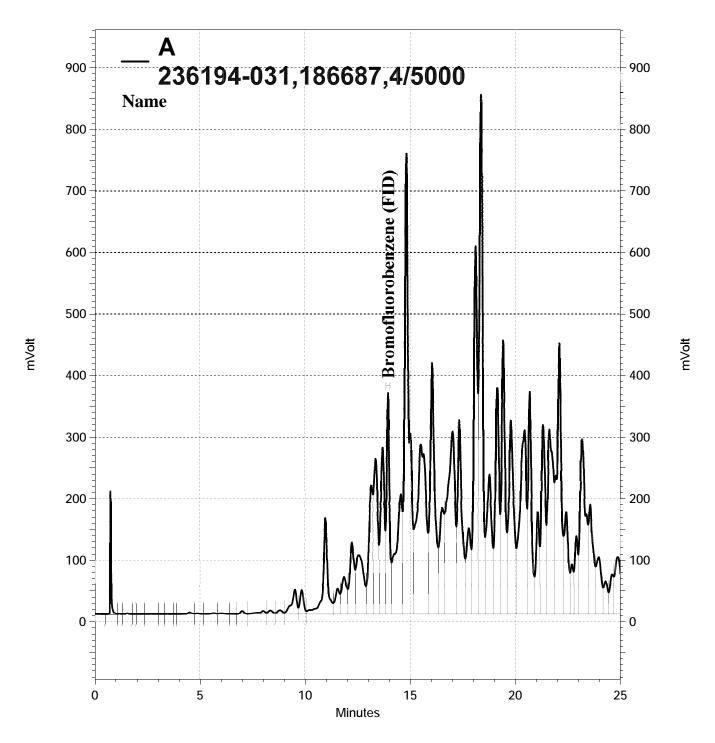
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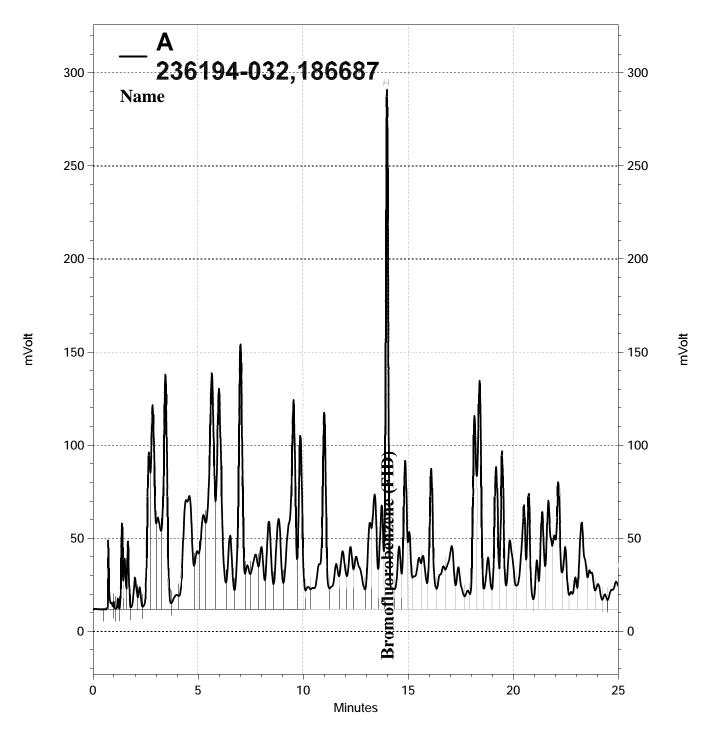
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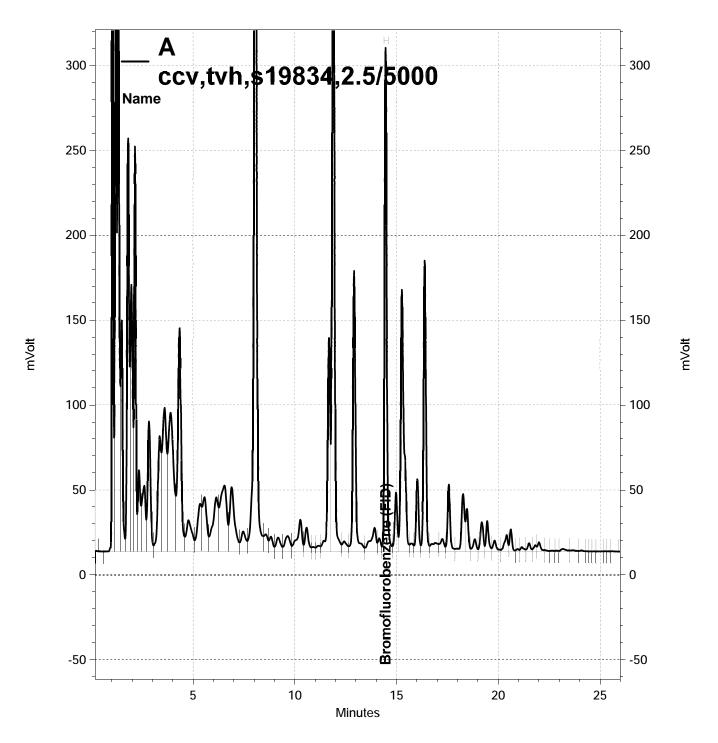
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Total Extractable Hydrocarbons 1409-1417 12th St., Oakland Lab #: 236194 Location: EPA 3550B Client: Impact Environmental Prep: Project#: 1409-1417 Analysis: EPA 8015B Matrix: Soil Sampled: 05/10/12 Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB1-5 Batch#: 186635 Type: SAMPLE Prepared: 05/16/12 05/17/12 Lab ID: 236194-001 Analyzed: Cleanup Method: Diln Fac: 1.000 EPA 3630C

Analyte Result Diesel C10-C24 ND 1.0 Motor Oil C24-C36 5.0 ND

Surrogate %REC Limits o-Terphenyl 111 49-128

Field ID: CSB1-7 Batch#: 186635 Type: SAMPLE Prepared: 05/16/12 05/17/12 Lab ID: 236194-002 Analyzed: 1.000 Diln Fac: Cleanup Method: EPA 3630C

Analyte Result RLDiesel C10-C24 180 Y 1.0 Motor Oil C24-C36 ND 5.0

Surrogate %REC Limits 97 o-Terphenyl

Field ID: CSB1-10 Batch#: 186635 05/16/12 Type: SAMPLE Prepared: Lab ID: 236194-003 Analyzed: 05/17/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Result Analyte Diesel C10-C24 550 Y 1.0 Motor Oil C24-C36 ND 5.0

Surrogate %REC Limits o-<u>Te</u>rphenyl 103

Field ID: CSB1-12 Batch#: 186635 Type: SAMPLE 05/16/12 Prepared: Lab ID: 236194-004 Analyzed: 05/17/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte Result Diesel C10-C24 Motor Oil C24-C36 490 Y 1.0 ND 5.0

%REC Limits Surrogate 49-128 o-Terphenyl

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Field ID: CSB1-12A Batch#: 186635
Type: SAMPLE Prepared: 05/16/12
Lab ID: 236194-005 Analyzed: 05/21/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	40 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Gurrogato	%REC	Timita	
Surrogate	∂KEC	Limits	
o-Ternhenyl	100	49-128	
I O-IELDHEHYI	100	49-140	

Field ID: CSB1-15 Batch#: 186635
Type: SAMPLE Prepared: 05/16/12
Lab ID: 236194-006 Analyzed: 05/21/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.3 Y	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate %REC Limi
o-Terphenyl 73 49-1

Field ID: CSB1-18 Batch#: 186635
Type: SAMPLE Prepared: 05/16/12
Lab ID: 236194-007 Analyzed: 05/21/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.2 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
o-Terphenyl	108	49-128

Field ID: CSB2-5 Batch#: 186635
Type: SAMPLE Prepared: 05/16/12
Lab ID: 236194-008 Analyzed: 05/21/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.4 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	100	49-128	

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Field ID: CSB2-7 Batch#: 186635
Type: SAMPLE Prepared: 05/16/12
Lab ID: 236194-009 Analyzed: 05/21/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.1 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
o-Terphenyl	103	49-128

Field ID: CSB2-10 Batch#: 186656

Type: SAMPLE Prepared: 05/17/12

Lab ID: 236194-010 Analyzed: 05/18/12

Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Field ID: CSB3-5 Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-011 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
o-Terphenyl	108	49-128

Field ID: CSB3-7 Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-012 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	2.6 Y	1.0	
Motor Oil C24-C36	7.4	5.0	

Surrogate	%REC	Limits
o-Terphenyl	97	49-128

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Field ID: CSB3-10 Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-013 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.0 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Gurrogato	%REC	Timita	
Surrogate	∂KEC	Limits	
o-Ternhenyl	100	49-128	
I O-IELDHEHYI	100	49-140	

Field ID: CSB3-12 Batch#: 186656

Type: SAMPLE Prepared: 05/17/12

Lab ID: 236194-014 Analyzed: 05/18/12

Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	2.9 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate %REC Limit
-Terphenyl 106 49-12

Field ID: CSB3-15 Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-015 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	109	49-128	

Field ID: CSB3-18 Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-016 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
o-Terphenyl	96	49-128

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Field ID: CSB4-5' Batch#: 186656

Type: SAMPLE Prepared: 05/17/12

Lab ID: 236194-017 Analyzed: 05/18/12

Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
Bullogate	orec_	птштср	
o-Terphenyl	9.0	49-128	
O ICI DIICII I	<i>J</i> 0	49-140	

Field ID: CSB4-10' Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-018 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.1 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate %REC	Limits
-Terphenyl 103	49-12

Field ID: CSB4-7' Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-019 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	53 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	100	49-128	

Field ID: CSB4-13 Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-020 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.0 Y	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	113	49-128	

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Field ID: CSB4-12 Batch#: 186656 Type: SAMPLE Prepared: 05/17/12 Lab ID: 236194-021 Analyzed: 05/18/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
Bullogate	orec_	птштср	
o-Terphenyl	9.0	49-128	
O ICI DIICII I	<i>J</i> 0	49-140	

Field ID: CSB4-15 186656 Batch#: Prepared: SAMPLE 05/17/12 Type: Lab ID: 236194-022 Analyzed: 05/18/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	. Limit
o-Terphenyl	49-12

Field ID: CSB5-5 Batch#: 186656 Type: SAMPLE Prepared: 05/17/12 05/17/12 Lab ID: 236194-023 Analyzed: 1.000 Diln Fac: Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	114	49-128	

Field ID: CSB5-10 Batch#: 186656 SAMPLE Prepared: 05/17/12 Type: Lab ID: 236194-024 Analyzed: 05/17/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	103	49-128	

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Total Extractable Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: EPA 3550B Impact Environmental Prep: Project#: 1409-1417 EPA 8015B Analysis: Sampled: Matrix: Soil 05/10/12 Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB5-7 Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-025 Analyzed: 05/17/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

 Analyte
 Result
 RL

 Diesel C10-C24
 ND
 1.0

 Motor Oil C24-C36
 ND
 5.0

Surrogate %REC Limits
o-Terphenyl 123 49-128

Field ID: CSB5-12 Batch#: 186656
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-026 Analyzed: 05/17/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

 Analyte
 Result
 RL

 Diesel C10-C24
 ND
 1.0

 Motor Oil C24-C36
 ND
 5.0

Surrogate %REC Limits
O-Terphenyl 107 49-128

Field ID: CSB5-15 Batch#: 186656 Type: SAMPLE Prepared: 05/17/12 236194-027 05/17/12 Lab ID: Analyzed: Diln Fac: 1.000 Cleanup Method: EPA 3630C

 Analyte
 Result
 RL

 Diesel C10-C24
 ND
 0.99

 Motor Oil C24-C36
 ND
 5.0

Surrogate %REC Limits
o-Terphenyl 101 49-128

Field ID: CSB5-18 Batch#: 186656 Type: SAMPLE Prepared: 05/17/12 Lab ID: 236194-028 Analyzed: 05/17/12 Diln Fac: 1.000 EPA 3630C Cleanup Method:

 Analyte
 Result
 RL

 Diesel C10-C24
 ND
 0.99

 Motor Oil C24-C36
 ND
 5.0

Surrogate %REC Limits
O-Terphenyl 101 49-128

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out

ND= Not Detected

RL= Reporting Limit

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Field ID: CSB6-5 Batch#: 186656

Type: SAMPLE Prepared: 05/17/12

Lab ID: 236194-029 Analyzed: 05/21/12

Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	2.2 Y	0.99	
Motor Oil C24-C36	27	5.0	

Surrogate	%REC	Limits	
241103400	<u> </u>		
o-Terphenyl	96	49-128	

Field ID: CSB6-7 Batch#: 186693
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-030 Analyzed: 05/21/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.2 Y	0.99	
Motor Oil C24-C36	ND	5.0	

Field ID: CSB6-10 Batch#: 186693
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-031 Analyzed: 05/21/12
Diln Fac: 20.00 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	3,500 Y	20	
Motor Oil C24-C36	ND	100	

Surrogate	%REC	Limits
o-Terphenyl	DO	49-128

Field ID: CSB6-13 Batch#: 186693
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-032 Analyzed: 05/22/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	2.0 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	113	49-128	

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Total Extractable Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: EPA 3550B Impact Environmental Prep: Project#: 1409-1417 EPA 8015B Analysis: Sampled: Matrix: Soil 05/10/12 Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB6-15 Batch#: 186693 Type: 05/17/12 SAMPLE Prepared: 236194-033 Lab ID: Analyzed: 05/18/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Result Analyte Diesel C10-C24 Motor Oil C24-C36 1.0 ND 5.0 ND

Surrogate %REC Limits o-Terphenyl 49-128

Field ID: CSB7-5 186693 Batch#: SAMPLE Prepared: 05/17/12 Type: Lab ID: 236194-034 Analyzed: 05/18/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte Result RLDiesel C10-C24 ND 1.0 Motor Oil C24-C36 5.<u>0</u> ND

Surrogate %REC Limits o-Terphenyl

Field ID: CSB7-7 Batch#: 186693 Type: SAMPLE Prepared: 05/17/12 236194-035 05/18/12 Lab ID: Analyzed: Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte Result RLDiesel C10-C24 ND 1.0 Motor Oil C24-C36 5.0 ND

%REC Limits Surrogate 109 49-128 o-Terphenyl

Field ID: CSB7-10 Batch#: 186693 Type: SAMPLE Prepared: 05/17/12 Lab ID: 236194-036 Analyzed: 05/18/12 Diln Fac: 1.000 EPA 3630C Cleanup Method:

Result Analyte RL 0.99 Diesel C10-C24 MD Motor Oil C24-C36 ND 5.0

Surrogate %REC Limits o-Terphenyl

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Field ID: CSB7-13 Batch#: 186693
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-037 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
20110980	-9KEC	птштср	
o-Ternhenyl	110	49-128	
0-161 bileilà i	T T O	49-140	

Field ID: CSB7-15 Batch#: 186693
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-038 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surroga
o-Terphenyl

Field ID: CSB8-5 Batch#: 186693
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-039 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.9 Y	1.0	
Motor Oil C24-C36	9.8	5.0	

Surrogate	%REC	Limits
o-Terphenyl	121	49-128

Field ID: CSB8-7 Batch#: 186693
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-040 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	113	49-128	

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out
ND= Not Detected
DI= Deposition Limit

RL= Reporting Limit

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Field ID: CSB8-10 Batch#: 186693 Type: SAMPLE Prepared: 05/17/12 Lab ID: 236194-041 Analyzed: 05/18/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
20110980	- OKLIC	птштср	
o-Terphenyl	117	49-128	
O_{-1}	/	49-140	

Field ID: CSB8-12 186693 Batch#: Prepared: SAMPLE 05/17/12 Type: Lab ID: 236194-042 Analyzed: 05/18/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate %REC	Limits
o-Terphenyl 107	49-128

Field ID: CSB8-15 186693 Batch#: Type: SAMPLE Prepared: 05/17/12 Lab ID: 236194-043 05/18/12 Analyzed: Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	123	49-128	

Field ID: CSB8-18 Batch#: 186693 SAMPLE Prepared: 05/17/12 Type: Lab ID: 236194-044 Analyzed: 05/18/12 Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	0.99	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	114	49-128	

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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Total Extractable Hydrocarbons Lab #: 236194 Location: 1409-1417 12th St., Oakland Client: EPA 3550B Impact Environmental Prep: Analysis: Sampled: Project#: 1409-1417 EPA 8015B 05/10/12 Matrix: Soil Units: mg/Kg Received: 05/14/12 Basis: as received

Field ID: CSB2-15 Batch#: 186693
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-045 Analyzed: 05/19/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	1.3 Y	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
Bullogace	-SKEC	птштср	
o-Terphenyl	111	49-128	
O TELBITETIAT		49-140	

Field ID: CSB2-18 Batch#: 186693
Type: SAMPLE Prepared: 05/17/12
Lab ID: 236194-046 Analyzed: 05/19/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate %REC Limits
erphenyl 110 49-1

Type: BLANK Prepared: 05/16/12
Lab ID: QC640090 Analyzed: 05/17/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C
Batch#: 186635

 Analyte
 Result
 RL

 Diesel C10-C24
 ND
 0.99

 Motor Oil C24-C36
 ND
 5.0

Surrogate	%REC	Limits
o-Terphenyl	114	49-128

Type: BLANK Prepared: 05/17/12
Lab ID: QC640183 Analyzed: 05/18/12
Diln Fac: 1.000 Cleanup Method: EPA 3630C
Batch#: 186656

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits	
o-Terphenyl	116	49-128	

Y= Sample exhibits chromatographic pattern which does not resemble standard

DO= Diluted Out ND= Not Detected RL= Reporting Limit

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Total Extractable Hydrocarbons					
Lab #:	236194	Location:	1409-1417 12th St., Oakland		
Client:	Impact Environmental	Prep:	EPA 3550B		
Project#:	1409-1417	Analysis:	EPA 8015B		
Matrix:	Soil	Sampled:	05/10/12		
Units:	mg/Kg	Received:	05/14/12		
Basis:	as received				

Type: Lab ID: Diln Fac: BLANK 05/17/12 Prepared: QC640330 1.000 Analyzed: 05/18/12 Cleanup Method: EPA 3630C

Batch#: 186693

Analyte	Result	RL	
Diesel C10-C24	ND	1.0	
Motor Oil C24-C36	ND	5.0	

Surrogate	%REC	Limits
o-Terphenyl	109	49-128

ND= Not Detected

RL= Reporting Limit

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Total Extractable Hydrocarbons							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 3550B				
Project#:	1409-1417	Analysis:	EPA 8015B				
Type:	LCS	Diln Fac:	1.000				
Lab ID:	QC640091	Batch#:	186635				
Matrix:	Soil	Prepared:	05/16/12				
Units:	mg/Kg	Analyzed:	05/17/12				

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.93	49.36	99	47-132

Surrogate	%REC	Limits
o-Terphenyl	107	49-128

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Total Extractable Hydrocarbons							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 3550B				
Project#:	1409-1417	Analysis:	EPA 8015B				
Field ID:	ZZZZZZZZZ	Batch#:	186635				
MSS Lab ID:	236196-008	Sampled:	05/14/12				
Matrix:	Soil	Received:	05/14/12				
Units:	mg/Kg	Prepared:	05/16/12				
Basis:	as received	Analyzed:	05/17/12				
Diln Fac:	1.000						

Type: MS Lab ID: QC640092

Analyte	MSS Result	Spiked	Result	%REC Limits
Diesel C10-C24	163.1	50.13	258.5	190 * 32-143

Surrogate	%REC	Limits	
o-Terphenyl	105	49-128	

Type: MSD Lab ID: QC640093

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.38	278.7	230 *	32-143	7	54

	Surrogate	%REC	Limits
	, ,	110	40 100
o-Terp	phenvl	113	49-128

^{*=} Value outside of QC limits; see narrative RPD= Relative Percent Difference Page 1 of 1



Total Extractable Hydrocarbons							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 3550B				
Project#:	1409-1417	Analysis:	EPA 8015B				
Type:	LCS	Diln Fac:	1.000				
Lab ID:	QC640184	Batch#:	186656				
Matrix:	Soil	Prepared:	05/17/12				
Units:	mg/Kg	Analyzed:	05/18/12				

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.79	48.21	97	47-132

Surrogate	%REC	Limits
o-Terphenyl	101	49-128

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	Total Extrac	table Hydrocar	bons
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 3550B
Project#:	1409-1417	Analysis:	EPA 8015B
Field ID:	CSB4-12	Batch#:	186656
MSS Lab ID:	236194-021	Sampled:	05/10/12
Matrix:	Soil	Received:	05/14/12
Units:	mg/Kg	Prepared:	05/17/12
Basis:	as received	Analyzed:	05/18/12
Diln Fac:	1.000		

Type: MS Cleanup Method: EPA 3630C

Lab ID: QC640185

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	0.3979	49.86	45.05	90	32-143

Surrogate	%REC	Limits
o-Terphenyl	96	49-128

Type: MSD Cleanup Method: EPA 3630C

Lab ID: QC640186

Analyte	Spiked	Result	%REC	Limits	RPD I	Lim
Diesel C10-C24	50.30	40.55	80	32-143		54

Surrogate	%REC	Limits
o-Terphenyl	84	49-128



	Total Extra	actable Hydrocar	rbons
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 3550B
Project#:	1409-1417	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC640331	Batch#:	186693
Matrix:	Soil	Prepared:	05/17/12
Units:	mg/Kg	Analyzed:	05/18/12

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.85	53.37	107	47-132

Surrogate	%REC	Limits
o-Terphenyl	126	49-128

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	Total Extra	actable Hydrocar	rbons
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 3550B
Project#:	1409-1417	Analysis:	EPA 8015B
Field ID:	CSB8-10	Batch#:	186693
MSS Lab ID:	236194-041	Sampled:	05/10/12
Matrix:	Soil	Received:	05/14/12
Units:	mg/Kg	Prepared:	05/17/12
Basis:	as received	Analyzed:	05/18/12
Diln Fac:	1.000		

Type: MS Cleanup Method: EPA 3630C

Lab ID: QC640332

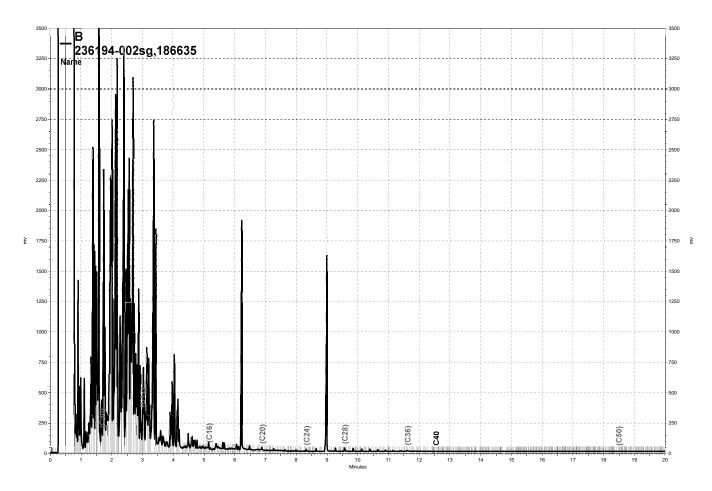
Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	0.8958	49.55	55.34	110	32-143

Surrogate	%REC	Limits
o-Terphenyl	124	49-128

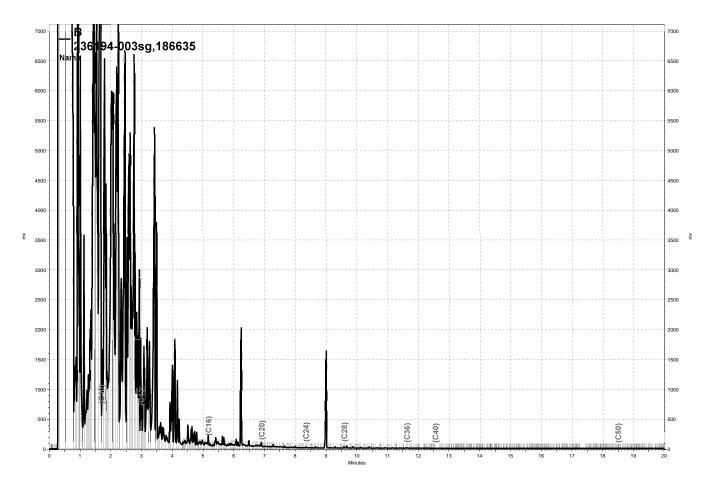
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Lab ID: QC640333

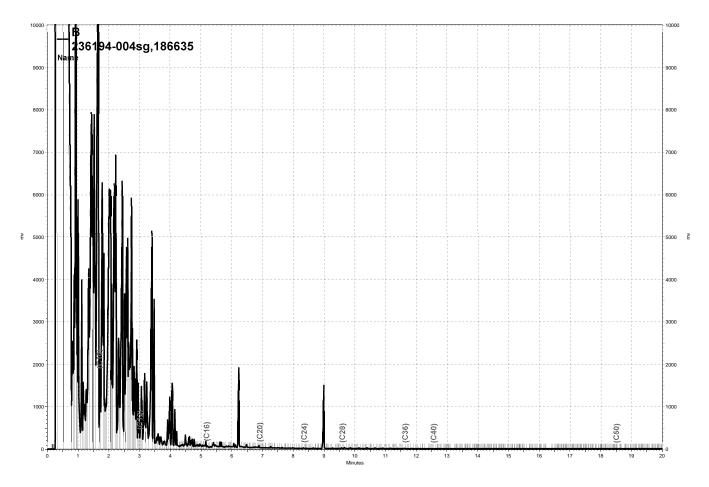
Analyte	Spiked	Result	%REC	Limits	RPD :	Lim
Diesel C10-C24	49.81	49.35	97	32-143	12	54



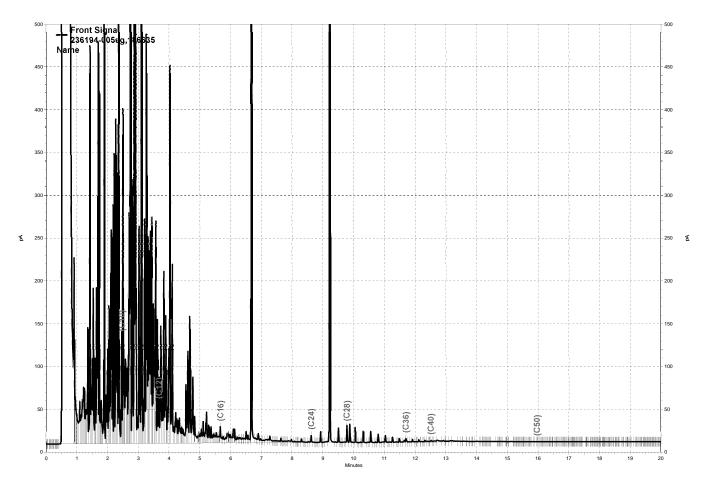
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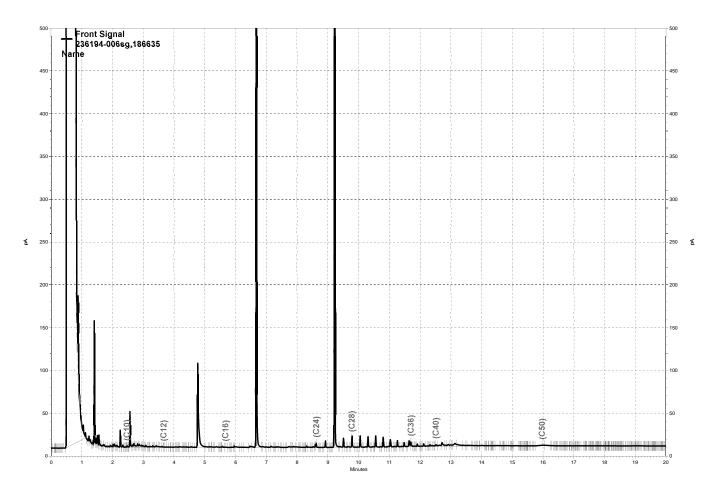
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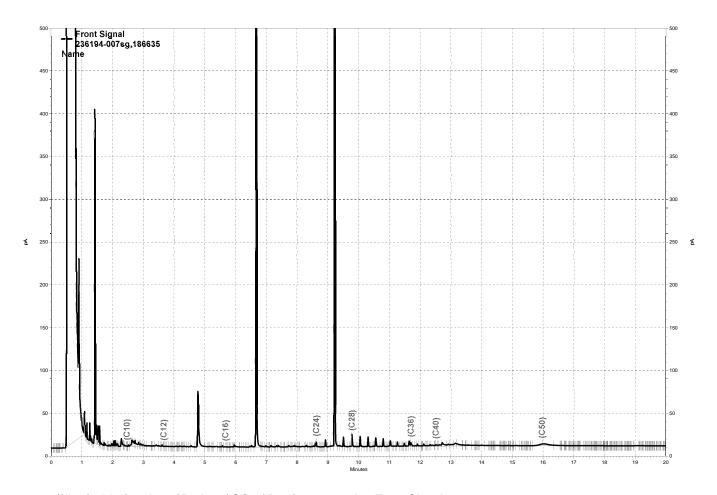
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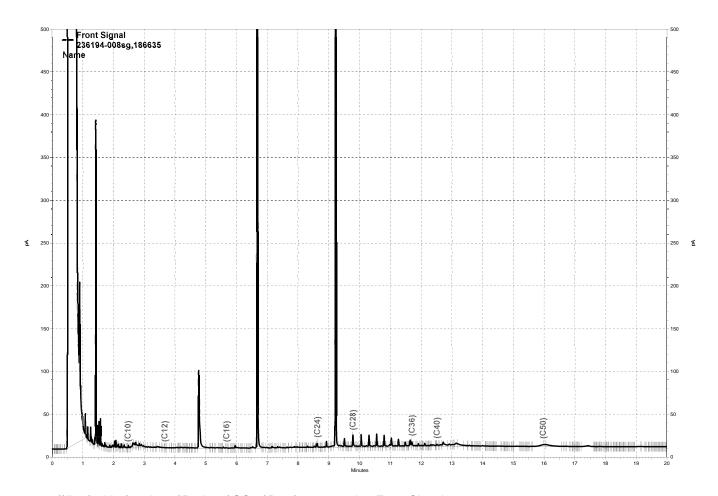
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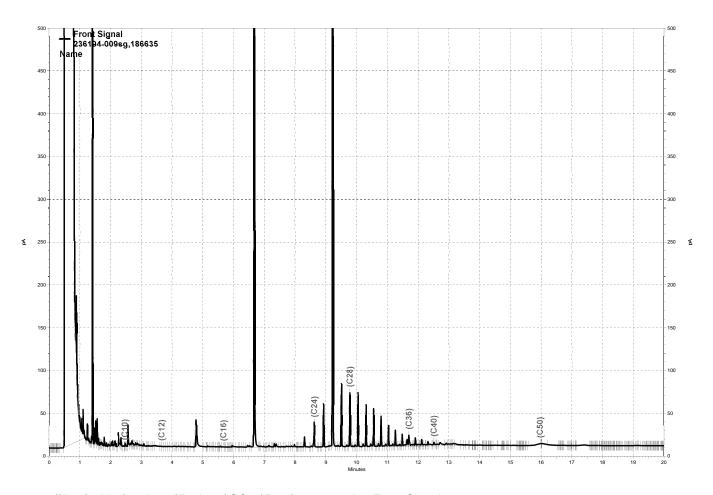
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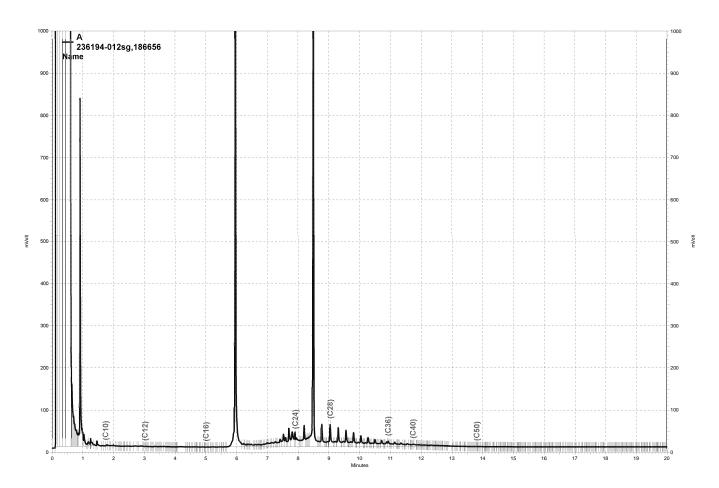
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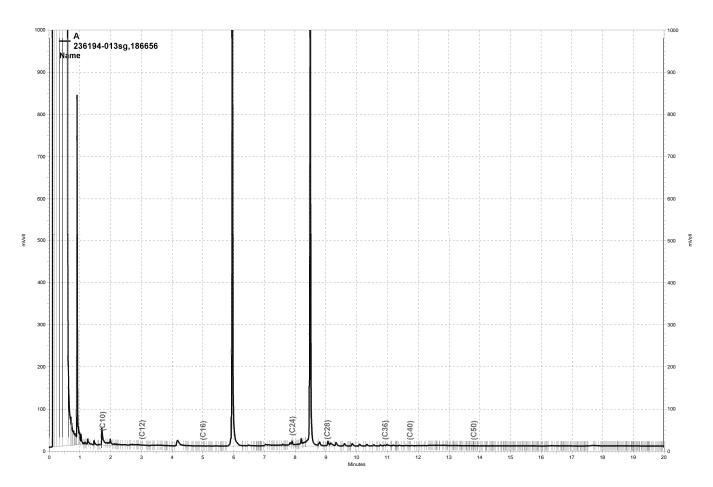
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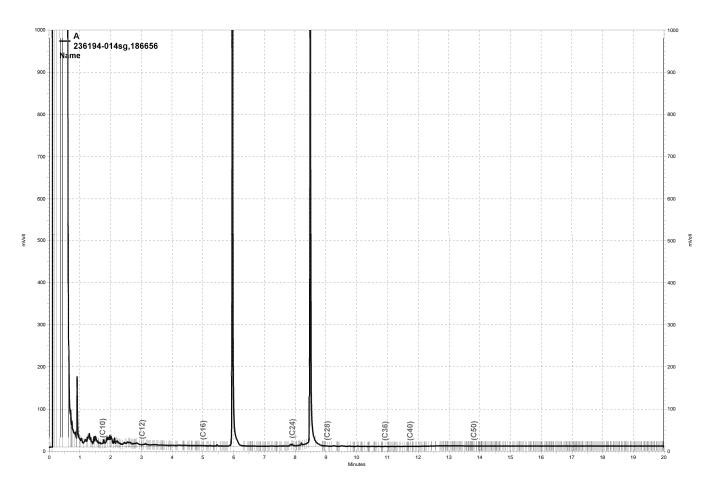
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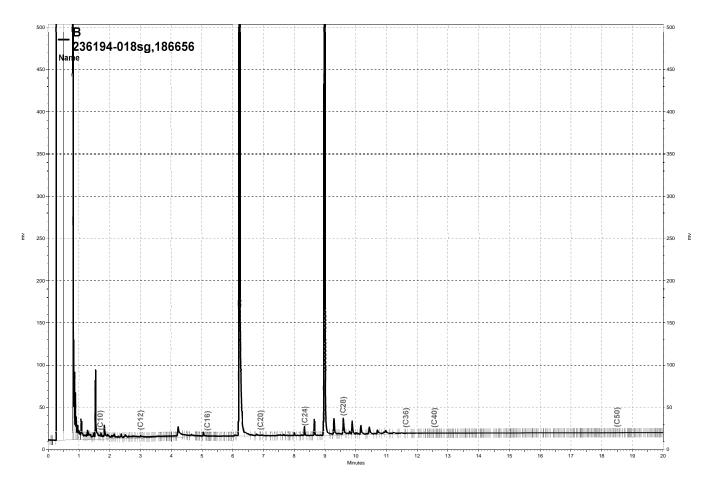
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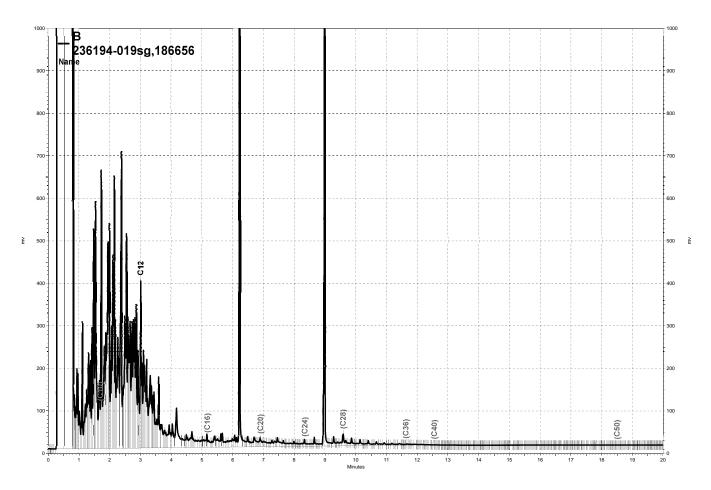
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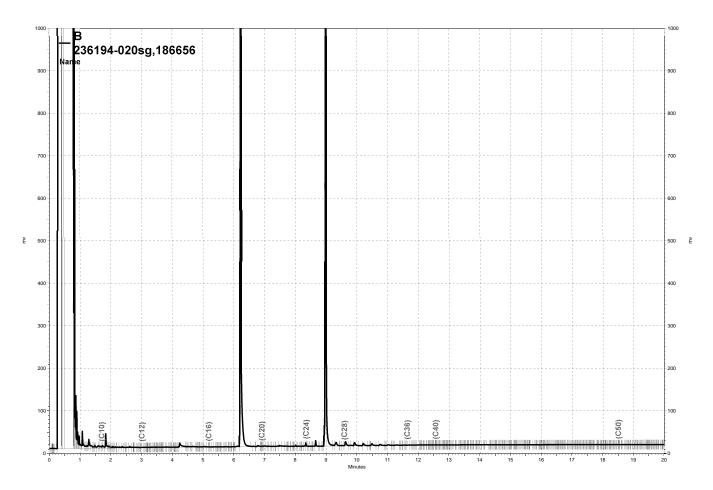
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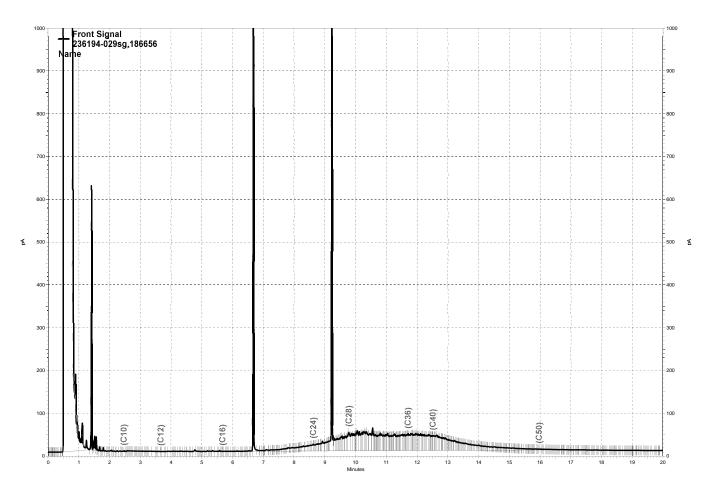
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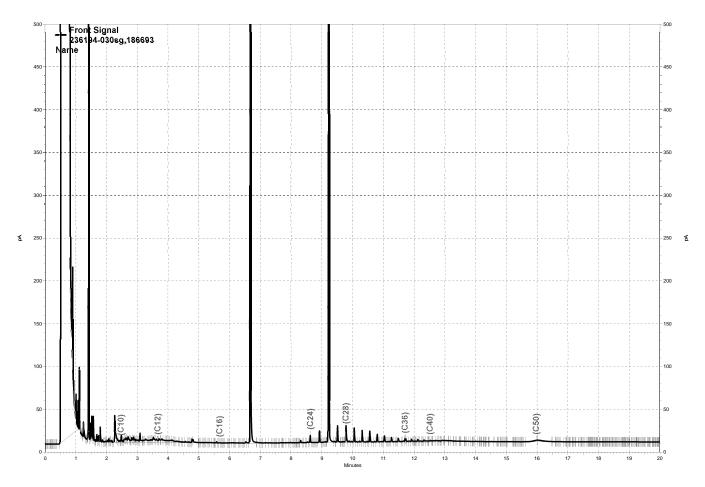
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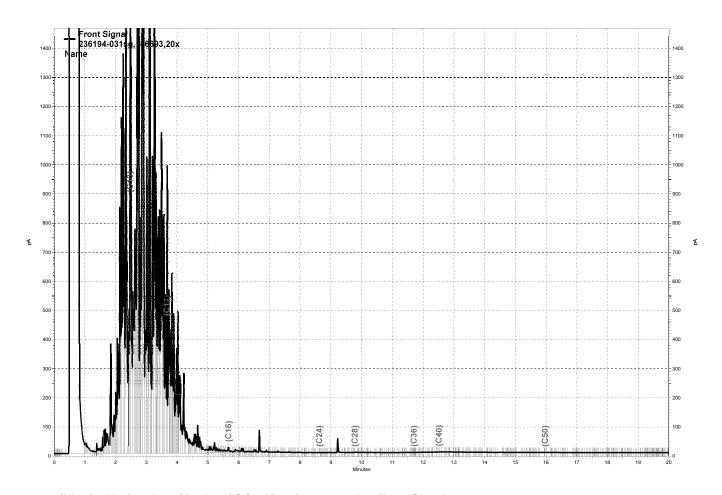
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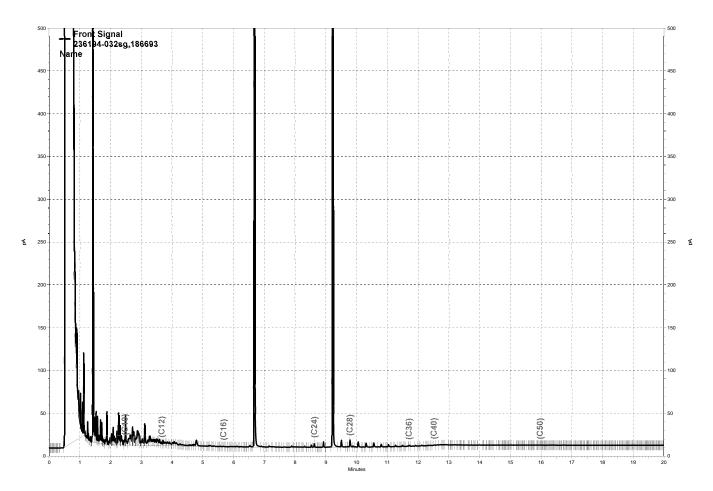
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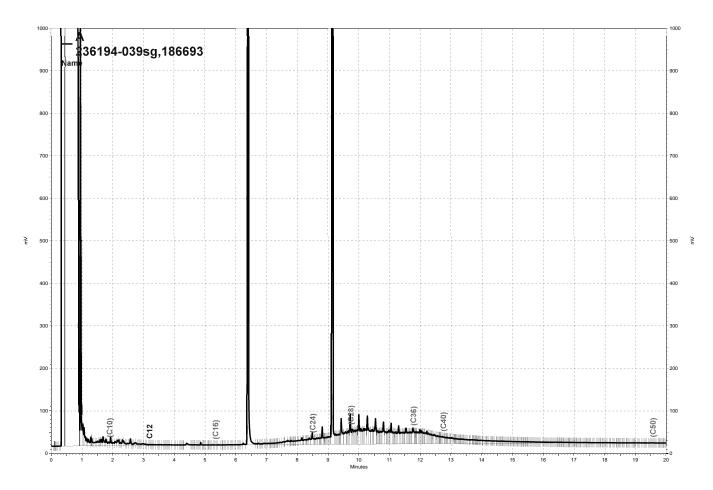
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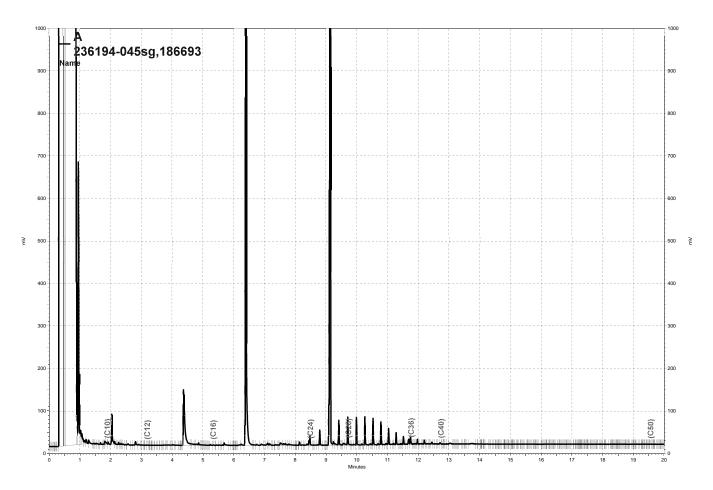
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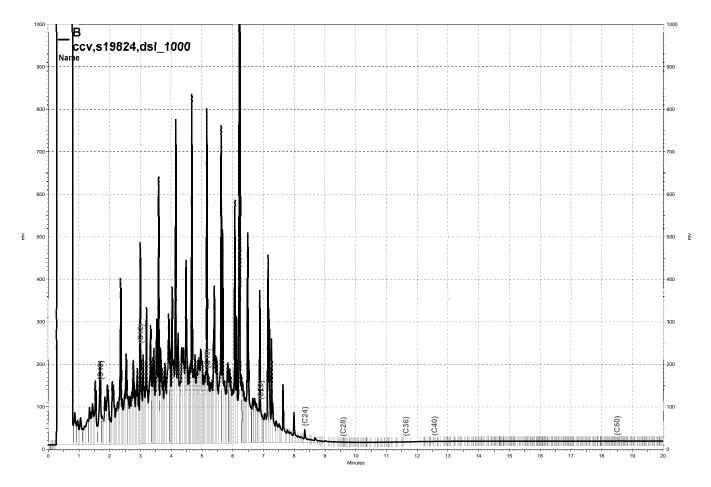
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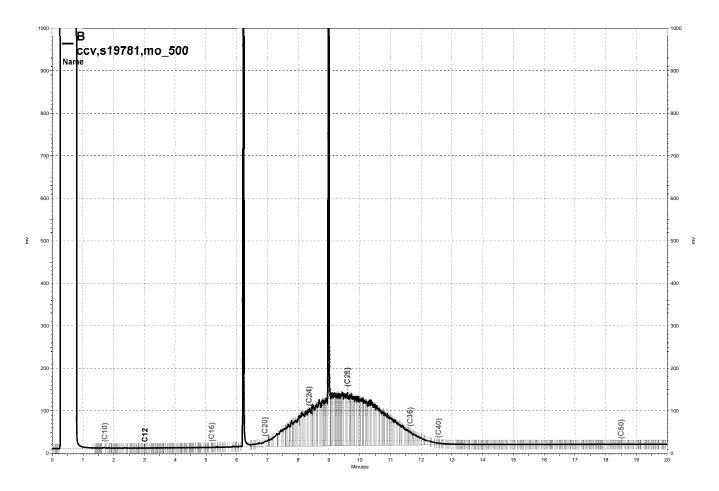
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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB1-5	Diln Fac:	0.9690
Lab ID:	236194-001	Batch#:	186570
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/15/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	97	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	103	74-133
1,2-Dichloroethane-d4	100	74-136
Toluene-d8	98	80-120
Bromofluorobenzene	100	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB1-7	Diln Fac:	250.0
Lab ID:	236194-002	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	25,000	
MTBE	ND	1,300	
Isopropyl Ether (DIPE)	ND	1,300	
Ethyl tert-Butyl Ether (ETBE)	ND	1,300	
1,2-Dichloroethane	ND	1,300	
Benzene	ND	1,300	
Methyl tert-Amyl Ether (TAME)	ND	1,300	
Toluene	ND	1,300	
1,2-Dibromoethane	ND	1,300	
Ethylbenzene	3,100	1,300	
m,p-Xylenes	21,000	1,300	
o-Xylene	9,900	1,300	

Surrogate	%REC	Limits
Dibromofluoromethane	95	74-133
1,2-Dichloroethane-d4	102	74-136
Toluene-d8	105	80-120
Bromofluorobenzene	106	77-130
Trifluorotoluene (MeOH)	98	60-135

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB1-10	Diln Fac:	166.7
Lab ID:	236194-003	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	17,000	
MTBE	ND	830	
Isopropyl Ether (DIPE)	ND	830	
Ethyl tert-Butyl Ether (ETBE)	ND	830	
1,2-Dichloroethane	ND	830	
Benzene	ND	830	
Methyl tert-Amyl Ether (TAME)	ND	830	
Toluene	ND	830	
1,2-Dibromoethane	ND	830	
Ethylbenzene	990	830	
m,p-Xylenes	55,000	830	
o-Xylene	30,000	830	

Surrogate	%REC	Limits
Dibromofluoromethane	94	74-133
1,2-Dichloroethane-d4	101	74-136
Toluene-d8	101	80-120
Bromofluorobenzene	112	77-130
Trifluorotoluene (MeOH)	98	60-135

ND= Not Detected
RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB1-12	Diln Fac:	250.0
Lab ID:	236194-004	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	25,000	
MTBE	ND	1,300	
Isopropyl Ether (DIPE)	ND	1,300	
Ethyl tert-Butyl Ether (ETBE)	ND	1,300	
1,2-Dichloroethane	ND	1,300	
Benzene	ND	1,300	
Methyl tert-Amyl Ether (TAME)	ND	1,300	
Toluene	ND	1,300	
1,2-Dibromoethane	ND	1,300	
Ethylbenzene	25,000	1,300	
m,p-Xylenes	81,000	1,300	
o-Xylene	24,000	1,300	

Surrogate	%REC	Limits
Dibromofluoromethane	97	74-133
1,2-Dichloroethane-d4	103	74-136
Toluene-d8	95	80-120
Bromofluorobenzene	108	77-130
Trifluorotoluene (MeOH)	100	60-135

ND= Not Detected
RL= Reporting Limit

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	втхе	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB1-12A	Diln Fac:	0.9901
Lab ID:	236194-005	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	99	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	99	74-133
1,2-Dichloroethane-d4	105	74-136
Toluene-d8	95	80-120
Bromofluorobenzene	102	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB1-15	Diln Fac:	0.9634
Lab ID:	236194-006	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	101	74-133
1,2-Dichloroethane-d4	97	74-136
Toluene-d8	94	80-120
Bromofluorobenzene	98	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB1-18	Diln Fac:	0.9470
Lab ID:	236194-007	Batch#:	186615
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	95	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane	103	74-133
1,2-Dichloroethane-d4	105	74-136
Toluene-d8	111	80-120
Bromofluorobenzene	113	77-130

ND= Not Detected RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB2-5	Diln Fac:	0.9960
Lab ID:	236194-008	Batch#:	186616
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	101	74-133
1,2-Dichloroethane-d4	98	74-136
Toluene-d8	98	80-120
Bromofluorobenzene	103	77-130



	BTXE 8	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB2-7	Diln Fac:	0.9560
Lab ID:	236194-009	Batch#:	186616
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	104	74-133
1,2-Dichloroethane-d4	103	74-136
Toluene-d8	96	80-120
Bromofluorobenzene	100	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB2-10	Diln Fac:	0.9980
Lab ID:	236194-010	Batch#:	186616
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane 1	100	74-133
1,2-Dichloroethane-d4	98	74-136
Toluene-d8	98	80-120
Bromofluorobenzene 1	100	77-130

ND= Not Detected
RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB3-5	Diln Fac:	0.9960
Lab ID:	236194-011	Batch#:	186616
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	100	74-133
1,2-Dichloroethane-d4	100	74-136
Toluene-d8	96	80-120
Bromofluorobenzene	100	77-130



	ВТХЕ	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB3-7	Diln Fac:	0.9328
Lab ID:	236194-012	Batch#:	186615
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	93	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane 10	.03	74-133
1,2-Dichloroethane-d4	13	74-136
Toluene-d8	11	80-120
Bromofluorobenzene 10	.09	77-130

ND= Not Detected RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB3-10	Diln Fac:	1.000
Lab ID:	236194-013	Batch#:	186615
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane 1	109	74-133
1,2-Dichloroethane-d4	109	74-136
Toluene-d8	112	80-120
Bromofluorobenzene	112	77-130

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	втхе	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB3-12	Diln Fac:	0.9843
Lab ID:	236194-014	Batch#:	186615
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane 1	L09	74-133
1,2-Dichloroethane-d4 1	L13	74-136
Toluene-d8 1	12	80-120
Bromofluorobenzene 1	12	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB3-15	Diln Fac:	0.9225
Lab ID:	236194-015	Batch#:	186615
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	92	
MTBE	ND	4.6	
Isopropyl Ether (DIPE)	ND	4.6	
Ethyl tert-Butyl Ether (ETBE)	ND	4.6	
1,2-Dichloroethane	ND	4.6	
Benzene	ND	4.6	
Methyl tert-Amyl Ether (TAME)	ND	4.6	
Toluene	ND	4.6	
1,2-Dibromoethane	ND	4.6	
Ethylbenzene	ND	4.6	
m,p-Xylenes	ND	4.6	
o-Xylene	ND	4.6	

Surrogate	%REC	Limits
Dibromofluoromethane	108	74-133
1,2-Dichloroethane-d4	111	74-136
Toluene-d8	109	80-120
Bromofluorobenzene	110	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB3-18	Diln Fac:	0.9470
Lab ID:	236194-016	Batch#:	186615
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/16/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	95	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate %	%REC	Limits
Dibromofluoromethane 11	11	74-133
1,2-Dichloroethane-d4 11	18	74-136
Toluene-d8 11	12	80-120
Bromofluorobenzene 11	15	77-130

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	ВТХЕ	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB4-5'	Diln Fac:	0.9843
Lab ID:	236194-017	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	103	74-133
1,2-Dichloroethane-d4	98	74-136
Toluene-d8	94	80-120
Bromofluorobenzene	100	77-130



	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB4-10'	Diln Fac:	0.9785
Lab ID:	236194-018	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane 1	103	74-133
1,2-Dichloroethane-d4	99	74-136
Toluene-d8	95	80-120
Bromofluorobenzene 1	100	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB4-7'	Diln Fac:	0.9843
Lab ID:	236194-019	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane 1	102	74-133
1,2-Dichloroethane-d4 1	101	74-136
Toluene-d8	95	80-120
Bromofluorobenzene 9	99	77-130



	ВТХЕ	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB4-13	Diln Fac:	0.9542
Lab ID:	236194-020	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	95	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	102	74-133
1,2-Dichloroethane-d4	101	74-136
Toluene-d8	93	80-120
Bromofluorobenzene	98	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB4-12	Diln Fac:	0.9653
Lab ID:	236194-021	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	97	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	103	74-133
1,2-Dichloroethane-d4	100	74-136
Toluene-d8	93	80-120
Bromofluorobenzene	98	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB4-15	Diln Fac:	0.9141
Lab ID:	236194-022	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	91	
MTBE	ND	4.6	
Isopropyl Ether (DIPE)	ND	4.6	
Ethyl tert-Butyl Ether (ETBE)	ND	4.6	
1,2-Dichloroethane	ND	4.6	
Benzene	ND	4.6	
Methyl tert-Amyl Ether (TAME)	ND	4.6	
Toluene	ND	4.6	
1,2-Dibromoethane	ND	4.6	
Ethylbenzene	ND	4.6	
m,p-Xylenes	ND	4.6	
o-Xylene	ND	4.6	

Surrogate	%REC	Limits
Dibromofluoromethane	101	74-133
1,2-Dichloroethane-d4	101	74-136
Toluene-d8	93	80-120
Bromofluorobenzene	100	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB5-5	Diln Fac:	0.9747
Lab ID:	236194-023	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	97	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	102	74-133
1,2-Dichloroethane-d4	100	74-136
Toluene-d8	95	80-120
Bromofluorobenzene	98	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB5-10	Diln Fac:	0.9728
Lab ID:	236194-024	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	97	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	103	74-133
1,2-Dichloroethane-d4	104	74-136
Toluene-d8	97	80-120
Bromofluorobenzene	98	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB5-7	Diln Fac:	0.9747
Lab ID:	236194-025	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	97	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	103	74-133
1,2-Dichloroethane-d4	103	74-136
Toluene-d8	93	80-120
Bromofluorobenzene	101	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB5-12	Diln Fac:	0.9747
Lab ID:	236194-026	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	97	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane 1	106	74-133
1,2-Dichloroethane-d4 1	103	74-136
Toluene-d8	95	80-120
Bromofluorobenzene 1	101	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB5-15	Diln Fac:	0.9470
Lab ID:	236194-027	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	95	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane 1	102	74-133
1,2-Dichloroethane-d4 1	103	74-136
Toluene-d8 9	94	80-120
Bromofluorobenzene 9	99	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB5-18	Diln Fac:	0.9560
Lab ID:	236194-028	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane 10	.04	74-133
1,2-Dichloroethane-d4 1	.08	74-136
Toluene-d8	.10	80-120
Bromofluorobenzene 10	.06	77-130



	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB6-5	Diln Fac:	0.9597
Lab ID:	236194-029	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate %	REC	Limits
Dibromofluoromethane 10	06	74-133
1,2-Dichloroethane-d4 10	80	74-136
Toluene-d8 11	11	80-120
Bromofluorobenzene 10)9	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB6-7	Diln Fac:	0.9597
Lab ID:	236194-030	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	96	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	105	74-133
1,2-Dichloroethane-d4	112	74-136
Toluene-d8	107	80-120
Bromofluorobenzene	105	77-130

ND= Not Detected
RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB6-10	Diln Fac:	2,500
Lab ID:	236194-031	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/19/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	250,000	
MTBE	ND	13,000	
Isopropyl Ether (DIPE)	ND	13,000	
Ethyl tert-Butyl Ether (ETBE)	ND	13,000	
1,2-Dichloroethane	ND	13,000	
Benzene	ND	13,000	
Methyl tert-Amyl Ether (TAME)	ND	13,000	
Toluene	ND	13,000	
1,2-Dibromoethane	ND	13,000	
Ethylbenzene	ND	13,000	
m,p-Xylenes	ND	13,000	
o-Xylene	ND	13,000	

Surrogate	%REC	Limits
Dibromofluoromethane	96	74-133
1,2-Dichloroethane-d4	101	74-136
Toluene-d8	105	80-120
Bromofluorobenzene	105	77-130
Trifluorotoluene (MeOH)	DO	60-135

DO= Diluted Out ND= Not Detected

RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB6-13	Diln Fac:	0.9470
Lab ID:	236194-032	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	95	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane	97	74-133
1,2-Dichloroethane-d4	112	74-136
Toluene-d8	105	80-120
Bromofluorobenzene	99	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB6-15	Diln Fac:	0.9785
Lab ID:	236194-033	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	99	74-133
1,2-Dichloroethane-d4	96	74-136
Toluene-d8	107	80-120
Bromofluorobenzene	100	77-130

ND= Not Detected
RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB7-5	Diln Fac:	0.8772
Lab ID:	236194-034	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	88	
MTBE	ND	4.4	
Isopropyl Ether (DIPE)	ND	4.4	
Ethyl tert-Butyl Ether (ETBE)	ND	4.4	
1,2-Dichloroethane	ND	4.4	
Benzene	ND	4.4	
Methyl tert-Amyl Ether (TAME)	ND	4.4	
Toluene	ND	4.4	
1,2-Dibromoethane	ND	4.4	
Ethylbenzene	ND	4.4	
m,p-Xylenes	ND	4.4	
o-Xylene	ND	4.4	

Surrogate	%REC	Limits
Dibromofluoromethane	101	74-133
1,2-Dichloroethane-d4	111	74-136
Toluene-d8	110	80-120
Bromofluorobenzene	106	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB7-7	Diln Fac:	0.9843
Lab ID:	236194-035	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	98	
MTBE	ND	4.9	
Isopropyl Ether (DIPE)	ND	4.9	
Ethyl tert-Butyl Ether (ETBE)	ND	4.9	
1,2-Dichloroethane	ND	4.9	
Benzene	ND	4.9	
Methyl tert-Amyl Ether (TAME)	ND	4.9	
Toluene	ND	4.9	
1,2-Dibromoethane	ND	4.9	
Ethylbenzene	ND	4.9	
m,p-Xylenes	ND	4.9	
o-Xylene	ND	4.9	

Surrogate	%REC	Limits
Dibromofluoromethane	101	74-133
1,2-Dichloroethane-d4	114	74-136
Toluene-d8	107	80-120
Bromofluorobenzene	108	77-130

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	втхе	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB7-10	Diln Fac:	0.9671
Lab ID:	236194-036	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	97	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane	109	74-133
1,2-Dichloroethane-d4	108	74-136
Toluene-d8	108	80-120
Bromofluorobenzene	108	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB7-13	Diln Fac:	0.8803
Lab ID:	236194-037	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	88	
MTBE	ND	4.4	
Isopropyl Ether (DIPE)	ND	4.4	
Ethyl tert-Butyl Ether (ETBE)	ND	4.4	
1,2-Dichloroethane	ND	4.4	
Benzene	ND	4.4	
Methyl tert-Amyl Ether (TAME)	ND	4.4	
Toluene	ND	4.4	
1,2-Dibromoethane	ND	4.4	
Ethylbenzene	ND	4.4	
m,p-Xylenes	ND	4.4	
o-Xylene	ND	4.4	

Surrogate	%REC	Limits
Dibromofluoromethane	105	74-133
1,2-Dichloroethane-d4	110	74-136
Toluene-d8	108	80-120
Bromofluorobenzene	107	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB7-15	Diln Fac:	0.9058
Lab ID:	236194-038	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	91	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane 1	107	74-133
1,2-Dichloroethane-d4 1	112	74-136
Toluene-d8 1	111	80-120
Bromofluorobenzene 1	102	77-130

ND= Not Detected
RL= Reporting Limit

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	втхе	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB8-5	Diln Fac:	0.8897
Lab ID:	236194-039	Batch#:	186670
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/17/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	89	
MTBE	ND	4.4	
Isopropyl Ether (DIPE)	ND	4.4	
Ethyl tert-Butyl Ether (ETBE)	ND	4.4	
1,2-Dichloroethane	ND	4.4	
Benzene	ND	4.4	
Methyl tert-Amyl Ether (TAME)	ND	4.4	
Toluene	ND	4.4	
1,2-Dibromoethane	ND	4.4	
Ethylbenzene	ND	4.4	
m,p-Xylenes	ND	4.4	
o-Xylene	ND	4.4	

Surrogate %I	REC	Limits
Dibromofluoromethane 106	6	74-133
1,2-Dichloroethane-d4 113	.3	74-136
Toluene-d8 112	.2	80-120
Bromofluorobenzene 108	8	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB8-7	Diln Fac:	0.8666
Lab ID:	236194-040	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	87	
MTBE	ND	4.3	
Isopropyl Ether (DIPE)	ND	4.3	
Ethyl tert-Butyl Ether (ETBE)	ND	4.3	
1,2-Dichloroethane	ND	4.3	
Benzene	ND	4.3	
Methyl tert-Amyl Ether (TAME)	ND	4.3	
Toluene	ND	4.3	
1,2-Dibromoethane	ND	4.3	
Ethylbenzene	ND	4.3	
m,p-Xylenes	ND	4.3	
o-Xylene	ND	4.3	

Surrogate	%REC	Limits
Dibromofluoromethane 9	98	74-133
1,2-Dichloroethane-d4 1	106	74-136
Toluene-d8	105	80-120
Bromofluorobenzene 9	99	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB8-10	Diln Fac:	0.9107
Lab ID:	236194-041	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	91	
MTBE	ND	4.6	
Isopropyl Ether (DIPE)	ND	4.6	
Ethyl tert-Butyl Ether (ETBE)	ND	4.6	
1,2-Dichloroethane	ND	4.6	
Benzene	ND	4.6	
Methyl tert-Amyl Ether (TAME)	ND	4.6	
Toluene	ND	4.6	
1,2-Dibromoethane	ND	4.6	
Ethylbenzene	ND	4.6	
m,p-Xylenes	ND	4.6	
o-Xylene	ND	4.6	

Surrogate	%REC	Limits
Dibromofluoromethane 9	98	74-133
1,2-Dichloroethane-d4	L07	74-136
Toluene-d8	L05	80-120
Bromofluorobenzene 1	L02	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB8-12	Diln Fac:	0.9074
Lab ID:	236194-042	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	91	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane	97	74-133
1,2-Dichloroethane-d4	106	74-136
Toluene-d8	106	80-120
Bromofluorobenzene	101	77-130

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	ВТХЕ	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB8-15	Diln Fac:	0.9091
Lab ID:	236194-043	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	91	
MTBE	ND	4.5	
Isopropyl Ether (DIPE)	ND	4.5	
Ethyl tert-Butyl Ether (ETBE)	ND	4.5	
1,2-Dichloroethane	ND	4.5	
Benzene	ND	4.5	
Methyl tert-Amyl Ether (TAME)	ND	4.5	
Toluene	ND	4.5	
1,2-Dibromoethane	ND	4.5	
Ethylbenzene	ND	4.5	
m,p-Xylenes	ND	4.5	
o-Xylene	ND	4.5	

Surrogate	%REC	Limits
Dibromofluoromethane 9	9	74-133
1,2-Dichloroethane-d4 1	108	74-136
Toluene-d8 1	L04	80-120
Bromofluorobenzene 1	L02	77-130

ND= Not Detected
RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB8-18	Diln Fac:	0.9191
Lab ID:	236194-044	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	92	
MTBE	ND	4.6	
Isopropyl Ether (DIPE)	ND	4.6	
Ethyl tert-Butyl Ether (ETBE)	ND	4.6	
1,2-Dichloroethane	ND	4.6	
Benzene	ND	4.6	
Methyl tert-Amyl Ether (TAME)	ND	4.6	
Toluene	ND	4.6	
1,2-Dibromoethane	ND	4.6	
Ethylbenzene	ND	4.6	
m,p-Xylenes	ND	4.6	
o-Xylene	ND	4.6	

Surrogate	%REC	Limits
Dibromofluoromethane 99	9	74-133
1,2-Dichloroethane-d4	.06	74-136
Toluene-d8	.05	80-120
Bromofluorobenzene 10	.02	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB2-15	Diln Fac:	0.9542
Lab ID:	236194-045	Batch#:	186777
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/21/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	95	
MTBE	ND	4.8	
Isopropyl Ether (DIPE)	ND	4.8	
Ethyl tert-Butyl Ether (ETBE)	ND	4.8	
1,2-Dichloroethane	ND	4.8	
Benzene	ND	4.8	
Methyl tert-Amyl Ether (TAME)	ND	4.8	
Toluene	ND	4.8	
1,2-Dibromoethane	ND	4.8	
Ethylbenzene	ND	4.8	
m,p-Xylenes	ND	4.8	
o-Xylene	ND	4.8	

Surrogate	%REC	Limits
Dibromofluoromethane 10	.07	74-133
1,2-Dichloroethane-d4	16	74-136
Toluene-d8	.08	80-120
Bromofluorobenzene 10	.08	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB2-18	Diln Fac:	0.9328
Lab ID:	236194-046	Batch#:	186718
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received	Analyzed:	05/18/12

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	93	
MTBE	ND	4.7	
Isopropyl Ether (DIPE)	ND	4.7	
Ethyl tert-Butyl Ether (ETBE)	ND	4.7	
1,2-Dichloroethane	ND	4.7	
Benzene	ND	4.7	
Methyl tert-Amyl Ether (TAME)	ND	4.7	
Toluene	ND	4.7	
1,2-Dibromoethane	ND	4.7	
Ethylbenzene	ND	4.7	
m,p-Xylenes	ND	4.7	
o-Xylene	ND	4.7	

Surrogate	%REC	Limits
Dibromofluoromethane	99	74-133
1,2-Dichloroethane-d4	109	74-136
Toluene-d8	105	80-120
Bromofluorobenzene	100	77-130

ND= Not Detected
RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC639808	Batch#:	186570
Matrix:	Soil	Analyzed:	05/15/12
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	134.5	108	46-135
MTBE	25.00	25.51	102	62-120
Isopropyl Ether (DIPE)	25.00	25.15	101	59-120
Ethyl tert-Butyl Ether (ETBE)	25.00	24.26	97	64-120
1,2-Dichloroethane	25.00	26.24	105	74-126
Benzene	25.00	26.96	108	78-125
Methyl tert-Amyl Ether (TAME)	25.00	23.17	93	68-120
Toluene	25.00	25.27	101	79-120
1,2-Dibromoethane	25.00	24.66	99	77-120
Ethylbenzene	25.00	25.78	103	80-120
m,p-Xylenes	50.00	50.30	101	80-120
o-Xylene	25.00	23.71	95	79-120

Surrogate	%REC	Limits
Dibromofluoromethane	105	74-133
1,2-Dichloroethane-d4	104	74-136
Toluene-d8	98	80-120
Bromofluorobenzene	100	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC639809	Batch#:	186570
Matrix:	Soil	Analyzed:	05/15/12
Units:	ug/Kg		

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	100	74-133
1,2-Dichloroethane-d4	102	74-136
Toluene-d8	99	80-120
Bromofluorobenzene	101	77-130

ND= Not Detected RL= Reporting Limit Page 1 of 1



	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	186570
MSS Lab ID:	236121-019	Sampled:	05/08/12
Matrix:	Soil	Received:	05/09/12
Units:	ug/Kg	Analyzed:	05/15/12
Basis:	as received	-	

Type: Lab ID: MS QC639874 Diln Fac: 0.9766

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<15.31	244.1	231.5	95	44-128
MTBE	<1.481	48.83	43.06	88	51-120
Isopropyl Ether (DIPE)	<1.263	48.83	43.49	89	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.9521	48.83	41.82	86	55-120
1,2-Dichloroethane	<0.9153	48.83	43.28	89	55-121
Benzene	<0.9497	48.83	50.28	103	58-122
Methyl tert-Amyl Ether (TAME)	<0.6201	48.83	41.69	85	55-120
Toluene	<1.282	48.83	46.38	95	54-120
1,2-Dibromoethane	<0.5891	48.83	40.58	83	52-120
Ethylbenzene	<1.179	48.83	47.30	97	47-120
m,p-Xylenes	<0.6046	97.66	90.84	93	47-120
o-Xylene	<1.104	48.83	42.04	86	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	74-133
1,2-Dichloroethane-d4	100	74-136
Toluene-d8	97	80-120
Bromofluorobenzene	101	77-130

Type: Lab ID: MSD QC639875 Diln Fac: 1.000

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	250.0	248.0	99	44-128	5	39
MTBE	50.00	43.70	87	51-120	1	32
Isopropyl Ether (DIPE)	50.00	43.15	86	50-120	3	32
Ethyl tert-Butyl Ether (ETBE)	50.00	42.47	85	55-120	1	32
1,2-Dichloroethane	50.00	46.28	93	55-121	4	33
Benzene	50.00	52.95	106	58-122	3	37
Methyl tert-Amyl Ether (TAME)	50.00	42.49	85	55-120	0	34
Toluene	50.00	49.36	99	54-120	4	35
1,2-Dibromoethane	50.00	43.71	87	52-120	5	35
Ethylbenzene	50.00	50.47	101	47-120	4	40
m,p-Xylenes	100.0	97.03	97	47-120	4	40
o-Xylene	50.00	44.76	90	47-120	4	40

Surrogate	%REC	Limits
Dibromofluoromethane	102	74-133
1,2-Dichloroethane-d4	102	74-136
Toluene-d8	96	80-120
Bromofluorobenzene	103	77-130



BTXE & Oxygenates							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 5030B				
Project#:	1409-1417	Analysis:	EPA 8260B				
Type:	LCS	Diln Fac:	1.000				
Lab ID:	QC640000	Batch#:	186615				
Matrix:	Soil	Analyzed:	05/16/12				
Units:	ug/Kg						

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	110.4	88	46-135
MTBE	25.00	21.46	86	62-120
Isopropyl Ether (DIPE)	25.00	23.26	93	59-120
Ethyl tert-Butyl Ether (ETBE)	25.00	23.28	93	64-120
1,2-Dichloroethane	25.00	23.02	92	74-126
Benzene	25.00	24.33	97	78-125
Methyl tert-Amyl Ether (TAME)	25.00	21.56	86	68-120
Toluene	25.00	27.19	109	79-120
1,2-Dibromoethane	25.00	25.79	103	77-120
Ethylbenzene	25.00	26.60	106	80-120
m,p-Xylenes	50.00	51.98	104	80-120
o-Xylene	25.00	24.17	97	79-120

Surrogate	%REC	Limits
Dibromofluoromethane	96	74-133
1,2-Dichloroethane-d4	98	74-136
Toluene-d8	109	80-120
Bromofluorobenzene	105	77-130

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BTXE & Oxygenates							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 5030B				
Project#:	1409-1417	Analysis:	EPA 8260B				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC640001	Batch#:	186615				
Matrix:	Soil	Analyzed:	05/16/12				
Units:	ug/Kg						

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	94	74-133
1,2-Dichloroethane-d4	98	74-136
Toluene-d8	110	80-120
Bromofluorobenzene	108	77-130

ND= Not Detected
RL= Reporting Limit

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BTXE & Oxygenates							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 5030B				
Project#:	1409-1417	Analysis:	EPA 8260B				
Type:	LCS	Diln Fac:	1.000				
Lab ID:	QC640002	Batch#:	186616				
Matrix:	Soil	Analyzed:	05/16/12				
Units:	ug/Kg						

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	121.4	97	46-135
MTBE	25.00	23.13	93	62-120
Isopropyl Ether (DIPE)	25.00	22.30	89	59-120
Ethyl tert-Butyl Ether (ETBE)	25.00	22.75	91	64-120
1,2-Dichloroethane	25.00	26.42	106	74-126
Benzene	25.00	28.47	114	78-125
Methyl tert-Amyl Ether (TAME)	25.00	24.19	97	68-120
Toluene	25.00	26.62	106	79-120
1,2-Dibromoethane	25.00	25.15	101	77-120
Ethylbenzene	25.00	26.87	107	80-120
m,p-Xylenes	50.00	53.95	108	80-120
o-Xylene	25.00	25.03	100	79-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	74-133
1,2-Dichloroethane-d4	98	74-136
Toluene-d8	96	80-120
Bromofluorobenzene	102	77-130

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BTXE & Oxygenates							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 5030B				
Project#:	1409-1417	Analysis:	EPA 8260B				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC640003	Batch#:	186616				
Matrix:	Soil	Analyzed:	05/16/12				
Units:	ug/Kg						

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	101	74-133
1,2-Dichloroethane-d4	99	74-136
Toluene-d8	99	80-120
Bromofluorobenzene	101	77-130

ND= Not Detected RL= Reporting Limit Page 1 of 1



	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB2-5	Batch#:	186616
MSS Lab ID:	236194-008	Sampled:	05/10/12
Matrix:	Soil	Received:	05/14/12
Units:	ug/Kg	Analyzed:	05/16/12
Basis:	as received		

Type: Lab ID: MS QC640018 Diln Fac: 0.9843

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<15.53	246.1	199.6	81	44-128
MTBE	<1.501	49.21	37.26	76	51-120
Isopropyl Ether (DIPE)	<1.281	49.21	36.43	74	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.9653	49.21	36.83	75	55-120
1,2-Dichloroethane	<0.9281	49.21	37.18	76	55-121
Benzene	<0.9630	49.21	41.17	84	58-122
Methyl tert-Amyl Ether (TAME)	<0.6288	49.21	40.51	82	55-120
Toluene	<1.299	49.21	39.42	80	54-120
1,2-Dibromoethane	<0.5973	49.21	35.97	73	52-120
Ethylbenzene	<1.196	49.21	40.76	83	47-120
m,p-Xylenes	<0.6130	98.43	78.88	80	47-120
o-Xylene	<1.120	49.21	36.16	73	47-120

Surrogate	%REC	Limits	
Dibromofluoromethane	101	74-133	
1,2-Dichloroethane-d4	99	74-136	
Toluene-d8	96	80-120	
Bromofluorobenzene	102	77-130	

Type: MSD Lab ID: QC640019 Diln Fac: 0.9766

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	244.1	226.4	93	44-128	13	39
MTBE	48.83	42.60	87	51-120	14	32
Isopropyl Ether (DIPE)	48.83	41.76	86	50-120	14	32
Ethyl tert-Butyl Ether (ETBE)	48.83	42.40	87	55-120	15	32
1,2-Dichloroethane	48.83	44.22	91	55-121	18	33
Benzene	48.83	48.95	100	58-122	18	37
Methyl tert-Amyl Ether (TAME)	48.83	45.54	93	55-120	12	34
Toluene	48.83	47.10	96	54-120	19	35
1,2-Dibromoethane	48.83	42.61	87	52-120	18	35
Ethylbenzene	48.83	46.83	96	47-120	15	40
m,p-Xylenes	97.66	94.10	96	47-120	18	40
o-Xylene	48.83	44.02	90	47-120	20	40

Surrogate	%REC	Limits
Dibromofluoromethane	101	74-133
1,2-Dichloroethane-d4	98	74-136
Toluene-d8	98	80-120
Bromofluorobenzene	100	77-130



	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	186615
MSS Lab ID:	236164-003	Sampled:	05/09/12
Matrix:	Soil	Received:	05/10/12
Units:	ug/Kg	Analyzed:	05/16/12
Basis:	as received	-	

Type: Lab ID: MS QC640055 Diln Fac: 0.9843

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<1.832	246.1	211.6	86	44-128
MTBE	<0.1524	49.21	38.53	78	51-120
Isopropyl Ether (DIPE)	<0.1994	49.21	43.75	89	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.1466	49.21	42.36	86	55-120
1,2-Dichloroethane	<0.3408	49.21	43.80	89	55-121
Benzene	<0.4328	49.21	43.66	89	58-122
Methyl tert-Amyl Ether (TAME)	<0.2284	49.21	38.85	79	55-120
Toluene	<0.3144	49.21	47.00	95	54-120
1,2-Dibromoethane	<0.2108	49.21	44.44	90	52-120
Ethylbenzene	<0.3762	49.21	46.63	95	47-120
m,p-Xylenes	<0.8989	98.43	89.56	91	47-120
o-Xylene	<0.2687	49.21	41.16	84	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	108	74-133
1,2-Dichloroethane-d4	113	74-136
Toluene-d8	109	80-120
Bromofluorobenzene	102	77-130

Type: Lab ID: MSD QC640056 Diln Fac: 0.9823

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	245.6	219.1	89	44-128	4	39
MTBE	49.12	41.32	84	51-120	7	32
Isopropyl Ether (DIPE)	49.12	45.48	93	50-120	4	32
Ethyl tert-Butyl Ether (ETBE)	49.12	43.25	88	55-120	2	32
1,2-Dichloroethane	49.12	45.82	93	55-121	5	33
Benzene	49.12	45.59	93	58-122	5	37
Methyl tert-Amyl Ether (TAME)	49.12	41.71	85	55-120	7	34
Toluene	49.12	48.07	98	54-120	2	35
1,2-Dibromoethane	49.12	45.93	94	52-120	3	35
Ethylbenzene	49.12	49.18	100	47-120	6	40
m,p-Xylenes	98.23	92.87	95	47-120	4	40
o-Xylene	49.12	44.72	91	47-120	8	40

	Surrogate	%REC	Limits
Ī	Dibromofluoromethane	110	74-133
	1,2-Dichloroethane-d4	110	74-136
	Toluene-d8	109	80-120
	Bromofluorobenzene	101	77-130



BTXE & Oxygenates								
Lab #:	236194	Location:	1409-1417 12th St., Oakland					
Client:	Impact Environmental	Prep:	EPA 5030B					
Project#:	1409-1417	Analysis:	EPA 8260B					
Type:	BLANK	Diln Fac:	1.000					
Lab ID:	QC640234	Batch#:	186670					
Matrix:	Soil	Analyzed:	05/17/12					
Units:	ug/Kg							

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane 1	L02	74-133
1,2-Dichloroethane-d4 1	L07	74-136
Toluene-d8 1	11	80-120
Bromofluorobenzene 1	108	77-130

ND= Not Detected RL= Reporting Limit

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BTXE & Oxygenates								
Lab #:	236194	Location:	1409-1417 12th St., Oakland					
Client:	Impact Environmental	Prep:	EPA 5030B					
Project#:	1409-1417	Analysis:	EPA 8260B					
Type:	LCS	Diln Fac:	1.000					
Lab ID:	QC640235	Batch#:	186670					
Matrix:	Soil	Analyzed:	05/17/12					
Units:	ug/Kg							

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	94.61	95	46-135
MTBE	20.00	18.15	91	62-120
Isopropyl Ether (DIPE)	20.00	18.70	93	59-120
Ethyl tert-Butyl Ether (ETBE)	20.00	17.52	88	64-120
1,2-Dichloroethane	20.00	20.35	102	74-126
Benzene	20.00	19.44	97	78-125
Methyl tert-Amyl Ether (TAME)	20.00	17.45	87	68-120
Toluene	20.00	20.81	104	79-120
1,2-Dibromoethane	20.00	21.31	107	77-120
Ethylbenzene	20.00	20.85	104	80-120
m,p-Xylenes	40.00	40.45	101	80-120
o-Xylene	20.00	17.68	88	79-120

Surrogate	%REC	Limits	
Dibromofluoromethane	104	74-133	
1,2-Dichloroethane-d4	105	74-136	
Toluene-d8	108	80-120	
Bromofluorobenzene	101	77-130	

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BTXE & Oxygenates							
Lab #: Client:	236194 Impact Environmental	Location: Prep:	1409-1417 12th St., Oakland EPA 5030B				
Project#:	1409-1417	Analysis:	EPA 8260B				
Field ID:	CSB7-13	Basis:	as received				
MSS Lab ID:	236194-037	Batch#:	186670				
Matrix:	Soil	Sampled:	05/10/12				
Units:	ug/Kg	Received:	05/14/12				

Type: MS Diln Fac: 0.9225 Lab ID: QC640236 Analyzed: 05/17/12

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<1.625	230.6	181.0	78	44-128
MTBE	<0.1352	46.13	39.81	86	51-120
Isopropyl Ether (DIPE)	<0.1770	46.13	42.52	92	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.1301	46.13	42.41	92	55-120
1,2-Dichloroethane	<0.3024	46.13	45.56	99	55-121
Benzene	<0.3840	46.13	46.31	100	58-122
Methyl tert-Amyl Ether (TAME)	<0.2027	46.13	41.55	90	55-120
Toluene	<0.2790	46.13	47.98	104	54-120
1,2-Dibromoethane	<0.1871	46.13	44.56	97	52-120
Ethylbenzene	<0.3338	46.13	48.44	105	47-120
m,p-Xylenes	<0.7976	92.25	95.20	103	47-120
o-Xylene	<0.2384	46.13	44.66	97	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	74-133
1,2-Dichloroethane-d4	112	74-136
Toluene-d8	109	80-120
Bromofluorobenzene	94	77-130

Type: MSD Diln Fac: 0.9398 Lab ID: QC640237 Analyzed: 05/18/12

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	235.0	208.6	89	44-128	12	39
MTBE	46.99	43.35	92	51-120	7	32
Isopropyl Ether (DIPE)	46.99	44.76	95	50-120	3	32
Ethyl tert-Butyl Ether (ETBE)	46.99	45.23	96	55-120	5	32
1,2-Dichloroethane	46.99	46.73	99	55-121	1	33
Benzene	46.99	46.91	100	58-122	1	37
Methyl tert-Amyl Ether (TAME)	46.99	43.67	93	55-120	3	34
Toluene	46.99	49.56	105	54-120	1	35
1,2-Dibromoethane	46.99	48.47	103	52-120	7	35
Ethylbenzene	46.99	49.72	106	47-120	1	40
m,p-Xylenes	93.98	96.52	103	47-120	0	40
o-Xylene	46.99	44.72	95	47-120	2	40

Surrogate	%REC	Limits
Dibromofluoromethane	102	74-133
1,2-Dichloroethane-d4	109	74-136
Toluene-d8	105	80-120
Bromofluorobenzene	99	77-130



BTXE & Oxygenates							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 5030B				
Project#:	1409-1417	Analysis:	EPA 8260B				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC640293	Batch#:	186686				
Matrix:	Soil	Analyzed:	05/17/12				
Units:	ug/Kg						

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate	%REC	Limits
Dibromofluoromethane	101	74-133
1,2-Dichloroethane-d4	100	74-136
Toluene-d8	93	80-120
Bromofluorobenzene	100	77-130

ND= Not Detected RL= Reporting Limit

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC640294	Batch#:	186686
Matrix:	Soil	Analyzed:	05/17/12
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	104.0	104	46-135
MTBE	20.00	21.18	106	62-120
Isopropyl Ether (DIPE)	20.00	20.42	102	59-120
Ethyl tert-Butyl Ether (ETBE)	20.00	22.44	112	64-120
1,2-Dichloroethane	20.00	21.02	105	74-126
Benzene	20.00	23.18	116	78-125
Methyl tert-Amyl Ether (TAME)	20.00	20.17	101	68-120
Toluene	20.00	21.68	108	79-120
1,2-Dibromoethane	20.00	20.18	101	77-120
Ethylbenzene	20.00	20.84	104	80-120
m,p-Xylenes	40.00	43.66	109	80-120
o-Xylene	20.00	20.16	101	79-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	74-133
1,2-Dichloroethane-d4	98	74-136
Toluene-d8	95	80-120
Bromofluorobenzene	99	77-130

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	BTXE	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	CSB4-5'	Diln Fac:	1.000
MSS Lab ID:	236194-017	Batch#:	186686
Matrix:	Soil	Sampled:	05/10/12
Units:	ug/Kg	Received:	05/14/12
Basis:	as received		

Type: Lab ID: MS QC640295 Analyzed: 05/17/12

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<15.34	250.0	262.1	105	44-128
MTBE	<1.484	50.00	47.97	96	51-120
Isopropyl Ether (DIPE)	<1.266	50.00	45.31	91	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.9539	50.00	46.25	93	55-120
1,2-Dichloroethane	<0.9171	50.00	48.53	97	55-121
Benzene	<0.9516	50.00	51.66	103	58-122
Methyl tert-Amyl Ether (TAME)	<0.6214	50.00	46.73	93	55-120
Toluene	<1.284	50.00	49.03	98	54-120
1,2-Dibromoethane	<0.5902	50.00	46.11	92	52-120
Ethylbenzene	<1.181	50.00	50.14	100	47-120
m,p-Xylenes	<0.6058	100.0	96.81	97	47-120
o-Xylene	<1.106	50.00	46.15	92	47-120

Surrogate	%REC	Limits	
Dibromofluoromethane	104	74-133	
1,2-Dichloroethane-d4	96	74-136	
Toluene-d8	97	80-120	
Bromofluorobenzene	104	77-130	

Type: MSD Lab ID: QC640296 Analyzed: 05/18/12

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	250.0	234.7	94	44-128	11	39
MTBE	50.00	48.49	97	51-120	1	32
Isopropyl Ether (DIPE)	50.00	46.11	92	50-120	2	32
Ethyl tert-Butyl Ether (ETBE)	50.00	45.34	91	55-120	2	32 32
1,2-Dichloroethane	50.00	49.52	99	55-121	2	33
Benzene	50.00	54.87	110	58-122	6	37
Methyl tert-Amyl Ether (TAME)	50.00	48.42	97	55-120	4	34
Toluene	50.00	50.07	100	54-120	2	35
1,2-Dibromoethane	50.00	46.35	93	52-120	1	35
Ethylbenzene	50.00	51.63	103	47-120	3	40
m,p-Xylenes	100.0	98.90	99	47-120	2	40
o-Xylene	50.00	47.89	96	47-120	4	40

Surrogate	%REC	Limits
Dibromofluoromethane	104	74-133
1,2-Dichloroethane-d4	95	74-136
Toluene-d8	95	80-120
Bromofluorobenzene	104	77-130



BTXE & Oxygenates							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 5030B				
Project#:	1409-1417	Analysis:	EPA 8260B				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC640443	Batch#:	186718				
Matrix:	Soil	Analyzed:	05/18/12				
Units:	ug/Kg						

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate %	%REC	Limits
Dibromofluoromethane 98	8	74-133
1,2-Dichloroethane-d4 10	02	74-136
Toluene-d8 10	03	80-120
Bromofluorobenzene 10	01	77-130

ND= Not Detected RL= Reporting Limit Page 1 of 1



BTXE & Oxygenates						
Lab #: Client: Project#:	236194 Impact Environmental 1409-1417	Location: Prep: Analysis:	1409-1417 12th St., Oakland EPA 5030B EPA 8260B			
Field ID: MSS Lab ID: Matrix: Units: Basis:	CSB8-18 236194-044 Soil ug/Kg as received	Batch#: Sampled: Received: Analyzed:	186718 05/10/12 05/14/12 05/19/12			

Type: Lab ID: MS QC640517 Diln Fac: 0.9470

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<14.33	236.7	194.1	82	44-128
MTBE	<1.385	47.35	38.58	81	51-120
Isopropyl Ether (DIPE)	<1.182	47.35	37.37	79	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.8908	47.35	40.83	86	55-120
1,2-Dichloroethane	<0.8564	47.35	39.56	84	55-121
Benzene	<0.8886	47.35	45.17	95	58-122
Methyl tert-Amyl Ether (TAME)	<0.5802	47.35	38.86	82	55-120
Toluene	<1.199	47.35	47.69	101	54-120
1,2-Dibromoethane	<0.5512	47.35	43.05	91	52-120
Ethylbenzene	<1.103	47.35	48.92	103	47-120
m,p-Xylenes	<0.5657	94.70	94.80	100	47-120
o-Xylene	<1.033	47.35	44.61	94	47-120

Surrogate	%REC	Limits	
Dibromofluoromethane	99	74-133	
1,2-Dichloroethane-d4	101	74-136	
Toluene-d8	105	80-120	
Bromofluorobenzene	101	77-130	

Type: MSD Lab ID: QC640518 Diln Fac: 0.9881

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	247.0	217.0	88	44-128	7	39
MTBE	49.41	40.79	83	51-120	1	32
Isopropyl Ether (DIPE)	49.41	44.48	90	50-120	13	32
Ethyl tert-Butyl Ether (ETBE)	49.41	42.46	86	55-120	0	32
1,2-Dichloroethane	49.41	37.64	76	55-121	9	33
Benzene	49.41	41.85	85	58-122	12	37
Methyl tert-Amyl Ether (TAME)	49.41	40.22	81	55-120	1	34
Toluene	49.41	45.59	92	54-120	9	35
1,2-Dibromoethane	49.41	40.99	83	52-120	9	35
Ethylbenzene	49.41	46.00	93	47-120	10	40
m,p-Xylenes	98.81	91.72	93	47-120	8	40
o-Xylene	49.41	41.24	83	47-120	12	40

Surrogate	%REC	Limits
Dibromofluoromethane	100	74-133
1,2-Dichloroethane-d4	100	74-136
Toluene-d8	103	80-120
Bromofluorobenzene	104	77-130



BTXE & Oxygenates							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 5030B				
Project#:	1409-1417	Analysis:	EPA 8260B				
Type:	LCS	Diln Fac:	1.000				
Lab ID:	QC640685	Batch#:	186718				
Matrix:	Soil	Analyzed:	05/18/12				
Units:	ug/Kg						

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	122.1	98	46-135
MTBE	25.00	23.17	93	62-120
Isopropyl Ether (DIPE)	25.00	22.40	90	59-120
Ethyl tert-Butyl Ether (ETBE)	25.00	24.24	97	64-120
1,2-Dichloroethane	25.00	24.25	97	74-126
Benzene	25.00	26.88	108	78-125
Methyl tert-Amyl Ether (TAME)	25.00	23.38	94	68-120
Toluene	25.00	27.67	111	79-120
1,2-Dibromoethane	25.00	25.93	104	77-120
Ethylbenzene	25.00	27.69	111	80-120
m,p-Xylenes	50.00	55.40	111	80-120
o-Xylene	25.00	26.35	105	79-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	74-133
1,2-Dichloroethane-d4	101	74-136
Toluene-d8	106	80-120
Bromofluorobenzene	102	77-130

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BTXE & Oxygenates							
Lab #:	236194	Location:	1409-1417 12th St., Oakland				
Client:	Impact Environmental	Prep:	EPA 5030B				
Project#:	1409-1417	Analysis:	EPA 8260B				
Type:	BLANK	Diln Fac:	1.000				
Lab ID:	QC640689	Batch#:	186777				
Matrix:	Soil	Analyzed:	05/21/12				
Units:	ug/Kg						

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	100	
MTBE	ND	5.0	
Isopropyl Ether (DIPE)	ND	5.0	
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	
1,2-Dichloroethane	ND	5.0	
Benzene	ND	5.0	
Methyl tert-Amyl Ether (TAME)	ND	5.0	
Toluene	ND	5.0	
1,2-Dibromoethane	ND	5.0	
Ethylbenzene	ND	5.0	
m,p-Xylenes	ND	5.0	
o-Xylene	ND	5.0	

Surrogate %	%REC	Limits
Dibromofluoromethane 10	04	74-133
1,2-Dichloroethane-d4 11	17	74-136
Toluene-d8 11	11	80-120
Bromofluorobenzene 10	09	77-130

ND= Not Detected
RL= Reporting Limit

Page 1 of 1

76.0



	BTXE	& Oxygenates	
Lab #: Client: Project#:	236194 Impact Environmental 1409-1417	Location: Prep: Analysis:	1409-1417 12th St., Oakland EPA 5030B EPA 8260B
Matrix: Units: Diln Fac:	Soil ug/Kg 1.000	Batch#: Analyzed:	186777 05/21/12

Type: BS Lab ID: QC640690

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	114.2	114	46-135
MTBE	20.00	19.25	96	62-120
Isopropyl Ether (DIPE)	20.00	21.29	106	59-120
Ethyl tert-Butyl Ether (ETBE)	20.00	20.08	100	64-120
1,2-Dichloroethane	20.00	20.71	104	74-126
Benzene	20.00	19.84	99	78-125
Methyl tert-Amyl Ether (TAME)	20.00	17.81	89	68-120
Toluene	20.00	20.76	104	79-120
1,2-Dibromoethane	20.00	20.36	102	77-120
Ethylbenzene	20.00	20.95	105	80-120
m,p-Xylenes	40.00	40.20	101	80-120
o-Xylene	20.00	17.51	88	79-120

Surrogate	%REC	Limits
Dibromofluoromethane	108	74-133
1,2-Dichloroethane-d4	116	74-136
Toluene-d8	111	80-120
Bromofluorobenzene	108	77-130

Type: BSD Lab ID: QC640691

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	100.0	88.32	88	46-135	26	36
MTBE	20.00	19.33	97	62-120	0	22
Isopropyl Ether (DIPE)	20.00	21.31	107	59-120	0	21
Ethyl tert-Butyl Ether (ETBE)	20.00	21.38	107	64-120	6	20
1,2-Dichloroethane	20.00	20.26	101	74-126	2	20
Benzene	20.00	19.59	98	78-125	1	20
Methyl tert-Amyl Ether (TAME)	20.00	17.05	85	68-120	4	20
Toluene	20.00	20.77	104	79-120	0	20
1,2-Dibromoethane	20.00	19.60	98	77-120	4	20
Ethylbenzene	20.00	20.67	103	80-120	1	20
m,p-Xylenes	40.00	38.71	97	80-120	4	20
o-Xylene	20.00	17.48	87	79-120	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	74-133
1,2-Dichloroethane-d4	108	74-136
Toluene-d8	108	80-120
Bromofluorobenzene	109	77-130



	ВТХЕ	& Oxygenates	
Lab #:	236194	Location:	1409-1417 12th St., Oakland
Client:	Impact Environmental	Prep:	EPA 5030B
Project#:	1409-1417	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.9728
MSS Lab ID:	236326-001	Batch#:	186777
Matrix:	Soil	Sampled:	05/17/12
Units:	ug/Kg	Received:	05/18/12
Basis:	as received	Analyzed:	05/22/12

Type: MS Lab ID: QC640765

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<1.726	243.2	260.9	107	44-128
MTBE	<0.1436	48.64	45.19	93	51-120
Isopropyl Ether (DIPE)	<0.1879	48.64	49.57	102	50-120
Ethyl tert-Butyl Ether (ETBE)	<0.1381	48.64	48.45	100	55-120
1,2-Dichloroethane	<0.3211	48.64	51.57	106	55-121
Benzene	<0.4077	48.64	48.33	99	58-122
Methyl tert-Amyl Ether (TAME)	<0.2152	48.64	45.30	93	55-120
Toluene	<0.2962	48.64	47.34	97	54-120
1,2-Dibromoethane	<0.1986	48.64	46.20	95	52-120
Ethylbenzene	<0.3544	48.64	46.90	96	47-120
m,p-Xylenes	<0.8468	97.28	89.11	92	47-120
o-Xylene	<0.2531	48.64	41.75	86	47-120

Surrogate	%REC	Limits	
Dibromofluoromethane	108	74-133	
1,2-Dichloroethane-d4	120	74-136	
Toluene-d8	105	80-120	
Bromofluorobenzene	102	77-130	

Type: MSD Lab ID: QC640766

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	243.2	223.6	92	44-128	15	39
MTBE	48.64	45.31	93	51-120	0	32
Isopropyl Ether (DIPE)	48.64	49.27	101	50-120	1	32
Ethyl tert-Butyl Ether (ETBE)	48.64	48.78	100	55-120	1	32
1,2-Dichloroethane	48.64	49.59	102	55-121	4	33
Benzene	48.64	48.41	100	58-122	0	37
Methyl tert-Amyl Ether (TAME)	48.64	46.44	95	55-120	2	34
Toluene	48.64	47.38	97	54-120	0	35
1,2-Dibromoethane	48.64	45.65	94	52-120	1	35
Ethylbenzene	48.64	46.72	96	47-120	0	40
m,p-Xylenes	97.28	89.97	92	47-120	1	40
o-Xylene	48.64	41.22	85	47-120	1	40

Surrogate	%REC	Limits
Dibromofluoromethane	103	74-133
1,2-Dichloroethane-d4	117	74-136
Toluene-d8	107	80-120
Bromofluorobenzene	99	77-130



Impact Environmental Services 39120 Argonaut Way, Suite 223 Fremont, California 94538

Tel: 510-703-5420 Fax: 510-713-7790

RE: 1409-1417 12th St., Oakland

Work Order No.: 1208254

Dear Joseph Cotton:

Torrent Laboratory, Inc. received 6 sample(s) on August 29, 2012 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

Patti Sandrock
QA Officer

September 06, 2012

Date

Total Page Count: 16 Page 1 of 16



Date: 9/6/2012

Client: Impact Environmental Services **Project:** 1409-1417 12th St.,Oakland

Work Order: 1208254

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Total Page Count: 16 Page 2 of 16



All compounds were non-detectable for this sample.

Sample Result Summary

Joseph Cotton Report prepared for: Date Received: 08/29/12 Impact Environmental Services Date Reported: 09/06/12 CSV-1 1208254-001A Parameters: **Analysis** <u>DF</u> MDL **PQL** Results **Method** <u>uq/m3</u> All compounds were non-detectable for this sample. CSV-2 1208254-002A Analysis Method Parameters: <u>DF</u> <u>MDL</u> **PQL** Results ug/m3 All compounds were non-detectable for this sample. CSV-3 1208254-003A Parameters: DF MDL **PQL** Results <u>Analysis</u> **Method** <u>ug/m3</u> All compounds were non-detectable for this sample. CSV-4 1208254-004A <u>MDL</u> **PQL** Parameters: <u>Analysis</u> <u>DF</u> Results Method ug/m3 All compounds were non-detectable for this sample. CSV-6 1208254-005A <u>DF</u> MDL <u>PQL</u> Parameters: **Analysis** Results Method ug/m3

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CSV-7

Sample Result Summary

Report prepared for: Joseph Cotton Date Received: 08/29/12

Impact Environmental Services Date Reported: 09/06/12

1208254-006A

<u>Parameters:</u> <u>Analysis</u> <u>DF</u> <u>MDL</u> <u>PQL</u> <u>Results</u> <u>ug/m3</u>

All compounds were non-detectable for this sample.

Total Page Count: 16 Page 4 of 16



Report prepared for: Joseph Cotton Date Received: 08/29/12

Impact Environmental Services Date Reported: 09/06/12

Lab Sample ID:

Sample Matrix:

Certified Clean WO #:

1208254-001A

Air

Client Sample ID: CSV-1

Project Name/Location: 1409-1417 12th St.,Oakland

Project Number: Site Closure verification Soil Vapor

Date/Time Sampled: 08/25/12 / 16:24

 Canister/Tube ID:
 1223
 Received PSI :
 14.7

 Collection Volume (L):
 0.00
 Corrected PSI :
 0.0

Tag Number: CSV-1

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
1,1-Difluoroethane	ETO15	NA	08/30/12	1	0.50	27	ND	ND		411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
MTBE	ETO15	NA	08/30/12	1	0.87	1.8	ND	ND		411297	NA
Benzene	ETO15	NA	08/30/12	1	0.68	1.6	ND	ND		411297	NA
Toluene	ETO15	NA	08/30/12	1	0.95	1.9	ND	ND		411297	NA
Ethyl Benzene	ETO15	NA	08/30/12	1	1.0	2.2	ND	ND		411297	NA
m,p-Xylene	ETO15	NA	08/30/12	1	1.6	4.3	ND	ND		411297	NA
o-Xylene	ETO15	NA	08/30/12	1	0.82	2.2	ND	ND		411297	NA
(S) 4-Bromofluorobenzene	ETO15	NA	08/30/12	1	65	135	101 %			411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	08/31/12	1	180	350	ND	ND		411301	NA

Total Page Count: 16 Page 5 of 16



Report prepared for: Joseph Cotton Date Received: 08/29/12

Impact Environmental Services Date Reported: 09/06/12

Lab Sample ID:

Sample Matrix:

Certified Clean WO #:

1208254-002A

Air

Client Sample ID: CSV-2

Project Name/Location: 1409-1417 12th St.,Oakland

Project Number: Site Closure verification Soil Vapor

Date/Time Sampled: 08/25/12 / 17:32

 Canister/Tube ID:
 527
 Received PSI :
 14.9

 Collection Volume (L):
 0.00
 Corrected PSI :
 0.0

Tag Number: CSV-2

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
1.1-Difluoroethane	ETO15	NA	08/30/12	1	0.50	27	ND	ND		411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
MTBE	ETO15	NA	08/30/12	1	0.87	1.8	ND	ND		411297	NA
Benzene	ETO15	NA	08/30/12	1	0.68	1.6	ND	ND		411297	NA
Toluene	ETO15	NA	08/30/12	1	0.95	1.9	ND	ND		411297	NA
Ethyl Benzene	ETO15	NA	08/30/12	1	1.0	2.2	ND	ND		411297	NA
m,p-Xylene	ETO15	NA	08/30/12	1	1.6	4.3	ND	ND		411297	NA
o-Xylene	ETO15	NA	08/30/12	1	0.82	2.2	ND	ND		411297	NA
(S) 4-Bromofluorobenzene	ETO15	NA	08/30/12	1	65	135	101 %			411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	08/31/12	1	180	350	ND	ND		411301	NA

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Lab Sample ID:

Sample Matrix:

Certified Clean WO #:

1208254-003A

Air

Report prepared for: Joseph Cotton Date Received: 08/29/12

Impact Environmental Services Date Reported: 09/06/12

Client Sample ID: CSV-3

Project Name/Location: 1409-1417 12th St.,Oakland

Project Number: Site Closure verification Soil Vapor

Date/Time Sampled: 08/25/12 / 18:34

 Canister/Tube ID:
 1238
 Received PSI :
 14.9

 Collection Volume (L):
 0.00
 Corrected PSI :
 0.0

Tag Number: CSV-3

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
1.1-Difluoroethane	ETO15	NA	08/30/12	1	0.50	27	ND	ND		411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
MTBE	ETO15	NA	08/30/12	1	0.87	1.8	ND	ND		411297	NA
Benzene	ETO15	NA	08/30/12	1	0.68	1.6	ND	ND		411297	NA
Toluene	ETO15	NA	08/30/12	1	0.95	1.9	ND	ND		411297	NA
Ethyl Benzene	ETO15	NA	08/30/12	1	1.0	2.2	ND	ND		411297	NA
m,p-Xylene	ETO15	NA	08/30/12	1	1.6	4.3	ND	ND		411297	NA
o-Xylene	ETO15	NA	08/30/12	1	0.82	2.2	ND	ND		411297	NA
(S) 4-Bromofluorobenzene	ETO15	NA	08/30/12	1	65	135	107 %			411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	08/31/12	1	180	350	ND	ND		411301	NA

Total Page Count: 16 Page 7 of 16



Report prepared for: Joseph Cotton Date Received: 08/29/12

Impact Environmental Services Date Reported: 09/06/12

Lab Sample ID:

Sample Matrix:

Certified Clean WO #:

1208254-004A

Air

Client Sample ID: CSV-4

Project Name/Location: 1409-1417 12th St.,Oakland

Project Number: Site Closure verification Soil Vapor

Date/Time Sampled: 08/25/12 / 16:52

 Canister/Tube ID:
 1417
 Received PSI :
 14.8

 Collection Volume (L):
 0.00
 Corrected PSI :
 0.0

Tag Number: CSV-4

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
1.1-Difluoroethane	ETO15	NA	08/30/12	1	0.50	27	ND	ND		411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
MTBE	ETO15	NA	08/30/12	1	0.87	1.8	ND	ND		411297	NA
Benzene	ETO15	NA	08/30/12	1	0.68	1.6	ND	ND		411297	NA
Toluene	ETO15	NA	08/30/12	1	0.95	1.9	ND	ND		411297	NA
Ethyl Benzene	ETO15	NA	08/30/12	1	1.0	2.2	ND	ND		411297	NA
m,p-Xylene	ETO15	NA	08/30/12	1	1.6	4.3	ND	ND		411297	NA
o-Xylene	ETO15	NA	08/30/12	1	0.82	2.2	ND	ND		411297	NA
(S) 4-Bromofluorobenzene	ETO15	NA	08/30/12	1	65	135	107 %			411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	08/31/12	1	180	350	ND	ND		411301	NA

Total Page Count: 16 Page 8 of 16



Report prepared for: Joseph Cotton Date Received: 08/29/12

Impact Environmental Services Date Reported: 09/06/12

Lab Sample ID:

Sample Matrix:

Certified Clean WO #:

1208254-005A

Air

Client Sample ID: CSV-6

Project Name/Location: 1409-1417 12th St.,Oakland

Project Number: Site Closure verification Soil Vapor

Date/Time Sampled: 08/25/12 / 16:46

 Canister/Tube ID:
 1419
 Received PSI :
 14.7

 Collection Volume (L):
 0.00
 Corrected PSI :
 0.0

Tag Number: CSV-6

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
1.1-Difluoroethane	ETO15	NA	08/30/12	1	0.50	27	ND	ND		411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
MTBE	ETO15	NA	08/30/12	1	0.87	1.8	ND	ND		411297	NA
Benzene	ETO15	NA	08/30/12	1	0.68	1.6	ND	ND		411297	NA
Toluene	ETO15	NA	08/30/12	1	0.95	1.9	ND	ND		411297	NA
Ethyl Benzene	ETO15	NA	08/30/12	1	1.0	2.2	ND	ND		411297	NA
m,p-Xylene	ETO15	NA	08/30/12	1	1.6	4.3	ND	ND		411297	NA
o-Xylene	ETO15	NA	08/30/12	1	0.82	2.2	ND	ND		411297	NA
(S) 4-Bromofluorobenzene	ETO15	NA	08/30/12	1	65	135	107 %			411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch	
TPH-Gasoline	ETO3	NA	08/31/12	1	180	350	ND	ND		411301	NA	_

Total Page Count: 16 Page 9 of 16



Report prepared for: Joseph Cotton Date Received: 08/29/12

Impact Environmental Services Date Reported: 09/06/12

Lab Sample ID:

Sample Matrix:

Certified Clean WO #:

1208254-006A

Air

Client Sample ID: CSV-7

Project Name/Location: 1409-1417 12th St.,Oakland

Project Number: Site Closure verification Soil Vapor

Date/Time Sampled: 08/25/12 / 18:08

 Canister/Tube ID:
 1251
 Received PSI :
 14.9

 Collection Volume (L):
 0.00
 Corrected PSI :
 0.0

Tag Number: CSV-7

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
1.1-Difluoroethane	ETO15	NA	08/30/12	1	0.50	27	ND	ND		411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
MTBE	ETO15	NA	08/30/12	1	0.87	1.8	ND	ND		411297	NA
Benzene	ETO15	NA	08/30/12	1	0.68	1.6	ND	ND		411297	NA
Toluene	ETO15	NA	08/30/12	1	0.95	1.9	ND	ND		411297	NA
Ethyl Benzene	ETO15	NA	08/30/12	1	1.0	2.2	ND	ND		411297	NA
m,p-Xylene	ETO15	NA	08/30/12	1	1.6	4.3	ND	ND		411297	NA
o-Xylene	ETO15	NA	08/30/12	1	0.82	2.2	ND	ND		411297	NA
(S) 4-Bromofluorobenzene	ETO15	NA	08/30/12	1	65	135	106 %			411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
TPH-Gasoline	ETO3	NA	08/31/12	1	180	350	ND	ND		411301	NA

Total Page Count: 16 Page 10 of 16



MB Summary Report

Work Order: Prep Method: NA Prep Date: NA Prep Batch: NA 1208254 Matrix: Air Analytical ETO15 Analyzed Date: 08/30/12 Analytical 411297 Method: Batch: Units: ppbv

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dichlorodifluoromethane	0.30	1.00	ND	
1,1-Difluoroethane	0.18	0.500	ND	
1,2-Dichlorotetrafluoroethane	0.70	2.00	ND	
Chloromethane	0.15	0.500	ND	
Vinyl Chloride	0.26	1.00	ND	
1,3-Butadiene	0.20	0.500	ND	
Bromomethane	0.18	0.500	ND	
Chloroethane	0.19	0.500	ND	
Trichlorofluoromethane	0.32	1.00	ND	
1,1-Dichloroethene	0.15	0.500	ND	
Freon 113	0.11	0.500	ND	
Carbon Disulfide	0.26	1.00	ND	
2-Propanol (Isopropyl Alcohol)	0.39	4.00	ND	
Methylene Chloride	0.17	0.500	ND	
Acetone	0.37	4.00	ND	
trans-1,2-Dichloroethene	0.16	0.500	ND	
Hexane	0.15	0.500	ND	
MTBE	0.24	0.500	ND	
tert-Butanol	0.22	2.00	ND	
Diisopropyl ether (DIPE)	0.21	0.500	ND	
1,1-Dichloroethane	0.18	0.500	ND	
ETBE	0.16	0.500	ND	
cis-1,2-Dichloroethene	0.13	0.500	ND	
Chloroform	0.25	1.00	ND	
Vinyl Acetate	0.16	0.500	ND	
Carbon Tetrachloride	0.14	0.500	ND	
1,1,1-Trichloroethane	0.15	0.500	ND	
2-Butanone (MEK)	0.21	0.500	ND	
Ethyl Acetate	0.21	0.500	ND	
Tetrahydrofuran	0.10	0.500	ND	
Benzene	0.21	0.500	ND	
TAME	0.086	0.500	ND	
1,2-Dichloroethane (EDC)	0.24	0.500	ND	
Trichloroethylene	0.26	1.00	ND	
1,2-Dichloropropane	0.29	1.00	ND	
Bromodichloromethane	0.13	0.500	ND	
1,4-Dioxane	0.35	1.00	ND	
trans-1,3-Dichloropropene	0.19	0.500	ND	
Toluene	0.25	0.500	ND	
4-Methyl-2-Pentanone (MIBK)	0.21	0.500	ND	
cis-1,3-Dichloropropene	0.25	0.500	ND	

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TPH-Gasoline

MB Summary Report

Work Order:	1208254	Prep	Method:	NA	Prep	Date:	NA	Prep Batch:	NA
Matrix:	Air	Analy Metho		ETO15	Anal	yzed Date:	08/30/12	Analytical Batch:	411297
Units:	ppbv	Metric	,					Baton.	
Parameters		MDL	PQL	Method Blank Conc.	Lab Qualifier				
Tetrachloroethyle	ene	0.13	0.500	ND					
1,1,2-Trichloroeth	nane	0.17	0.500	ND					
Dibromochlorome	ethane	0.20	0.500	ND					
1,2-Dibromoetha	ne (EDB)	0.27	1.00	ND					
2-Hexanone		0.27	1.00	ND					
Ethyl Benzene		0.23	0.500	ND					
Chlorobenzene		0.15	0.500	ND					
1,1,1,2-Tetrachlo	roethane	0.15	0.500	ND					
m,p-Xylene		0.38	1.00	ND					
o-Xylene		0.19	0.500	ND					
Styrene		0.16	0.500	ND					
Bromoform		0.11	0.500	ND					
1,1,2,2-Tetrachlo	roethane	0.10	0.500	ND					
4-Ethyl Toluene		0.17	0.500	ND					
1,3,5-Trimethylbe	enzene	0.15	0.500	ND					
1,2,4-Trimethylbe	enzene	0.14	0.500	ND					
1,4-Dichlorobenz	ene	0.11	0.500	ND					
1,3-Dichlorobenz	ene	0.14	0.500	ND					
Benzyl Chloride		0.12	0.500	ND					
1,2-Dichlorobenz	ene	0.15	0.500	ND					
Hexachlorobutad	iene	0.22	0.500	ND					
1,2,4-Trichlorobe	nzene	0.46	1.00	ND					
Naphthalene		0.28	1.00	ND					
(S) 4-Bromofluoro	obenzene			102					
Work Order:	1208254	Prep	Method:	NA	Prep	Date:	NA	Prep Batch:	NA
Matrix:	Air	Analy		ETO3	Anal	yzed Date:	08/31/12	Analytical	411301
Units:	ppbv	Metho	od:					Batch:	
Parameters		MDL	PQL	Method Blank Conc.	Lab Qualifier				

100

ND

Total Page Count: 16 Page 12 of 16



LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1208254	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA	
Matrix:	Air	Analytical	ETO15	Analyzed Date:	08/30/12	Analytical	411297	
Units:	ppbv	Method:				Batch:		

Parameters		MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	Э	0.15	0.500	ND	20	91.3	102	10.9	65 - 135	30	
Benzene		0.21	0.500	ND	20	103	105	1.35	65 - 135	30	
Trichloroethylene		0.26	1.00	ND	20	101	105	4.09	65 - 135	30	
Toluene		0.25	0.500	ND	20	103	106	2.35	65 - 135	30	
Chlorobenzene		0.15	0.500	ND	20	101	101	0.000	65 - 135	30	
(S) 4-Bromofluorol	penzene			ND	20	105	105		65 - 135		
Work Order:	1208254		Prep Method	d: NA		Prep Da	te:	NA	Prep Bat	ch: NA	
Matrix:	Air		Analytical	ETO3		Analyze	d Date:	08/31/12	Analytica	al 4113	301

Work Order:	1208254	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Air	Analytical Method:	ETO3	Analyzed Date:	08/31/12	Analytical Batch:	411301
Units:	ppbv	wethou.				Daton.	

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH-Gasoline	50	100	ND	500	111	91.4	19.8	50 - 150	30	

Total Page Count: 16 Page 13 of 16



Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.

Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.

Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)

Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.

Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)

Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.

Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero

Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.

Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates

Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis

Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.

Units: the unit of measure used to express the reported result - **mg/L** and **mg/Kg** (equivalent to PPM - parts per million in **liquid** and **solid**), **ug/L** and **ug/Kg** (equivalent to PPB - parts per billion in **liquid** and **solid**), **ug/m3**, **mg.m3**, **ppbv** and **ppmv** (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

- B Indicates when the anlayte is found in the associated method or preparation blank
- **D** Surrogate is not recoverable due to the necessary dilution of the sample
- E Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
- H- Indicates that the recommended holding time for the analyte or compound has been exceeded
- J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
- NA Not Analyzed
- N/A Not Applicable
- NR Not recoverable a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
- R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
- S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case parrative
- **X** -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.



Sample Receipt Checklist

Client Name: Impact Environmental Services Date and Time Received: 8/29/2012 14:16

Project Name: 1409-1417 12th St., Oakland Received By: navin

Work Order No.: 1208254 Physically Logged By: lorna

Checklist Completed By: lorna

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present? <u>Yes</u>

Chain of custody signed when relinquished and received? Yes

Chain of custody agrees with sample labels? Yes

Custody seals intact on sample bottles? <u>Not Present</u>

Sample Receipt Information

Custody seals intact on shipping container/cooler?

Not Present

Shipping Container/Cooler In Good Condition? <u>Yes</u>

Samples in proper container/bottle? Yes

Samples containers intact? Yes

Sufficient sample volume for indicated test? Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? <u>Yes</u>

Container/Temp Blank temperature in compliance? <u>No</u> Temperature: °C

Water-VOA vials have zero headspace? No VOA vials submitted

Water-pH acceptable upon receipt? N/A

pH Checked by: n/a pH Adjusted by: n/a



Torrent LABORATORY, INC.	Milpitas, CA 95035 Phone: 408.263.529 FAX: 408.263.8293 www.torrentlab.com	58	(•No	C OTE: SHA			-			OD		ONLY•		LAB WORK ORDER NO
Company Name: IMPACT ENVIRO	NMENTAL			☑ Env.	H 🔲	Food	Special	Location	on of Sa	ampling:	1409	-1417 1	2TH ST	., OAKLAND
Address: 39120 ARGONAUT WAY, #2	23					Purpo	se: SIT	E CLO	SURE	VERI	TICAT	TION S	OIL VA	POR
City: CA	State: CA	Zip	Code: 94	538		Specia	al Instru	ctions /	Comm	ents:				
Telephone: 510-703-5420	FAX:													
REPORT TO: JOSEPH COTTON	SAMPLER: JOSE	РН СОТТ	ON			P.O. #	t:		EMAI	L: JA(214	62@	AOL.C	COM .
TURNAROUND TIME:	SAMPLE TYPE		REPORT	FORMAT:	જ									1
☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work D ☐ 7 Work Days ☐ 3 Work Days ☐ Noon - N ☐ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hou	Waste Water Ground Water	Air Other	QC Le		TO-MT015 (TPHG BTEX&MTBE					,				ANALYSIS REQUESTED
LAB ID CANISTER I.D. CLIENT'S SAMPLE I.	D. DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	TO-P	-					,			REMARKS
_OO(A 1223 CSV-1	8-25-12 4:24pm	Vapor	1	Summa	✓									
-002A 527 CSV-2	8-25-12 5:32pm	Vapor	1	Summa	✓		,							
-003A 1238 CSV-3	8-25-12 6:34pm	Vapor	1	Summa	√									
-004A 1417 CSV-4	8-25-12 4:52pm	Vapor	1	Summa	✓									
-005# 1419 CSV-6	8-25-12 4:46pm	Vapor	1	Summa	✓									
-00 GA 1251 CSV-7	8-25-12 6:08pm	Vapor	1	Summa	✓									
										*	,			
Relinquished By: Print: JOSEPH COTT	3 6	ĵ-12	Time:	6 PM	Receive	red By:	koa	1988	Print:	VAY	N 6	Date:	29-/2	Time: 2:16 P.100
2 Relinquished By: Print:	Date:		Time:		Recei	rea by:	3.5		Princ			Date:		inte:
Were Samples Received in Good Condition? NOTE: Samples are discarded by the laboration.				es NO er arrangem			ment	D,	10.	Temp_	_ s	ample s		? Yes NO NA

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Impact Environmental Services 39120 Argonaut Way, Suite 223 Fremont, California 94538

Tel: 510-703-5420 Fax: 510-713-7790

RE: 1409-1417 12th St Oakland

Work Order No.: 1208267

Dear Joseph Cotton:

Torrent Laboratory, Inc. received 1 sample(s) on August 30, 2012 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

Patti Sandrock
QA Officer

September 06, 2012

Date

Total Page Count: 10 Page 1 of 10



Date: 9/6/2012

Client: Impact Environmental Services **Project:** 1409-1417 12th St Oakland

Work Order: 1208267

CASE NARRATIVE

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

Total Page Count: 10 Page 2 of 10



CSV-5

Sample Result Summary

Report prepared for: Joseph Cotton Date Received: 08/30/12

Impact Environmental Services Date Reported: 09/06/12

1208267-001A

<u>Parameters:</u> <u>Analysis</u> <u>DF</u> <u>MDL</u> <u>PQL</u> <u>Results</u> <u>ug/m3</u>

All compounds were non-detectable for this sample.

Total Page Count: 10 Page 3 of 10



Report prepared for: Joseph Cotton Date Received: 08/30/12

Impact Environmental Services Date Reported: 09/06/12

Lab Sample ID:

Sample Matrix:

Certified Clean WO #:

1208267-001A

Air

Client Sample ID: CSV-5

Project Name/Location: 1409-1417 12th St Oakland

Project Number: Site closure Verification

Date/Time Sampled: 08/29/12 / 18:00

 Canister/Tube ID:
 1250
 Received PSI :
 14.6

 Collection Volume (L):
 0.00
 Corrected PSI :
 0.0

Tag Number: 12th St Oakland

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
1.1-Difluoroethane	ETO15	NA	08/30/12	1	0.50	27	ND	ND		411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch
MTBE	ETO15	NA	08/30/12	1	0.87	1.8	ND	ND		411297	NA
Benzene	ETO15	NA	08/30/12	1	0.68	1.6	ND	ND		411297	NA
Toluene	ETO15	NA	08/30/12	1	0.95	1.9	ND	ND		411297	NA
Ethyl Benzene	ETO15	NA	08/30/12	1	1.0	2.2	ND	ND		411297	NA
m,p-Xylene	ETO15	NA	08/30/12	1	1.6	4.3	ND	ND		411297	NA
o-Xylene	ETO15	NA	08/30/12	1	0.82	2.2	ND	ND		411297	NA
(S) 4-Bromofluorobenzene	ETO15	NA	08/30/12	1	65	135	108 %			411297	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL ug/m3	PQL ug/m3	Results ug/m3	Results ppbv	Lab Qualifier	Analytical Batch	Prep Batch	Ī
TPH-Gasoline	ETO3	NA	08/31/12	1	180	350	ND	ND		411301	NA	•

Total Page Count: 10 Page 4 of 10



MB Summary Report

Work Order: Prep Method: NA Prep Date: NA Prep Batch: NA 1208267 Matrix: Air Analytical ETO15 Analyzed Date: 08/30/12 Analytical 411297 Method: Batch: Units: ppbv

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Dichlorodifluoromethane	0.30	1.00	ND		
1,1-Difluoroethane	0.18	0.500	ND		
1,2-Dichlorotetrafluoroethane	0.70	2.00	ND		
Chloromethane	0.15	0.500	ND		
Vinyl Chloride	0.26	1.00	ND		
1,3-Butadiene	0.20	0.500	ND		
Bromomethane	0.18	0.500	ND		
Chloroethane	0.19	0.500	ND		
Trichlorofluoromethane	0.32	1.00	ND		
1,1-Dichloroethene	0.15	0.500	ND		
Freon 113	0.11	0.500	ND		
Carbon Disulfide	0.26	1.00	ND		
2-Propanol (Isopropyl Alcohol)	0.39	4.00	ND		
Methylene Chloride	0.17	0.500	ND		
Acetone	0.37	4.00	ND		
trans-1,2-Dichloroethene	0.16	0.500	ND		
Hexane	0.15	0.500	ND		
MTBE	0.24	0.500	ND		
tert-Butanol	0.22	2.00	ND		
Diisopropyl ether (DIPE)	0.21	0.500	ND		
1,1-Dichloroethane	0.18	0.500	ND		
ETBE	0.16	0.500	ND		
cis-1,2-Dichloroethene	0.13	0.500	ND		
Chloroform	0.25	1.00	ND		
Vinyl Acetate	0.16	0.500	ND		
Carbon Tetrachloride	0.14	0.500	ND		
1,1,1-Trichloroethane	0.15	0.500	ND		
2-Butanone (MEK)	0.21	0.500	ND		
Ethyl Acetate	0.21	0.500	ND		
Tetrahydrofuran	0.10	0.500	ND		
Benzene	0.21	0.500	ND		
TAME	0.086	0.500	ND		
1,2-Dichloroethane (EDC)	0.24	0.500	ND		
Trichloroethylene	0.26	1.00	ND		
1,2-Dichloropropane	0.29	1.00	ND		
Bromodichloromethane	0.13	0.500	ND		
1,4-Dioxane	0.35	1.00	ND		
trans-1,3-Dichloropropene	0.19	0.500	ND		
Toluene	0.25	0.500	ND		
4-Methyl-2-Pentanone (MIBK)	0.21	0.500	ND		
cis-1,3-Dichloropropene	0.25	0.500	ND		

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TPH-Gasoline

MB Summary Report

				in D Gai	illial y IX	, po . t			
Work Order:	1208267	Prep	Method:	NA	Prep	Date:	NA	Prep Batch:	NA
Matrix:	Air	Analy		ETO15	Anal	yzed Date:	08/30/12	Analytical	411297
Units:	ppbv	Metho	od:					Batch:	
Parameters		MDL	PQL	Method Blank Conc.	Lab Qualifier				
Tetrachloroethyle	ne	0.13	0.500	ND	•				
1,1,2-Trichloroeth	nane	0.17	0.500	ND					
Dibromochlorome	ethane	0.20	0.500	ND					
1,2-Dibromoethar	ne (EDB)	0.27	1.00	ND					
2-Hexanone		0.27	1.00	ND					
Ethyl Benzene		0.23	0.500	ND					
Chlorobenzene		0.15	0.500	ND					
1,1,1,2-Tetrachlor	roethane	0.15	0.500	ND					
m,p-Xylene		0.38	1.00	ND					
o-Xylene		0.19	0.500	ND					
Styrene		0.16	0.500	ND					
Bromoform		0.11	0.500	ND					
1,1,2,2-Tetrachlor	roethane	0.10	0.500	ND					
4-Ethyl Toluene		0.17	0.500	ND					
1,3,5-Trimethylbe	enzene	0.15	0.500	ND					
1,2,4-Trimethylbe	enzene	0.14	0.500	ND					
1,4-Dichlorobenze	ene	0.11	0.500	ND					
1,3-Dichlorobenze	ene	0.14	0.500	ND					
Benzyl Chloride		0.12	0.500	ND					
1,2-Dichlorobenze	ene	0.15	0.500	ND					
Hexachlorobutadi	iene	0.22	0.500	ND					
1,2,4-Trichlorober	nzene	0.46	1.00	ND					
Naphthalene		0.28	1.00	ND					
(S) 4-Bromofluoro	obenzene			102					
Work Order:	1208267	Prep	Method:	NA	Prep	Date:	NA	Prep Batch:	NA
Matrix:	Air	Analy		ETO3	Anal	yzed Date:	08/31/12	Analytical	411301
Units:	ppbv	Metho	od:					Batch:	
Parameters		MDL	PQL	Method Blank Conc.	Lab Qualifier				

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100

ND

Total Page Count: 10 Page 6 of 10



LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1208267	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA	
Matrix:	Air	Analytical	ETO15	Analyzed Date:	08/30/12	Analytical	411297	
Units:	ppbv	Method:				Batch:		

Parameters		MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethen	е	0.15	0.500	ND	20	91.3	102	10.9	65 - 135	30	
Benzene		0.21	0.500	ND	20	103	105	1.35	65 - 135	30	
Trichloroethylene		0.26	1.00	ND	20	101	105	4.09	65 - 135	30	
Toluene		0.25	0.500	ND	20	103	106	2.35	65 - 135	30	
Chlorobenzene		0.15	0.500	ND	20	101	101	0.000	65 - 135	30	
(S) 4-Bromofluoro	benzene			ND	20	105	105		65 - 135		
Work Order:	1208267		Prep Method	d: NA		Prep Da	te:	NA	Prep Bat	ch: NA	
Matrix:	Air		Analytical	ETO3		Analyze	d Date:	08/31/12	Analytica	al 4113	301

Work Order:	1208267	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Air	Analytical Method:	ETO3	Analyzed Date:	08/31/12	Analytical Batch:	411301
Units:	ppbv	Metriou.				Daton.	

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH-Gasoline	50	100	ND	500	111	91.4	19.8	50 - 150	30	

Total Page Count: 10 Page 7 of 10



Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.

Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.

Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)

Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.

Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)

Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.

Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero

Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.

Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates

Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis

Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.

Units: the unit of measure used to express the reported result - **mg/L** and **mg/Kg** (equivalent to PPM - parts per million in **liquid** and **solid**), **ug/L** and **ug/Kg** (equivalent to PPB - parts per billion in **liquid** and **solid**), **ug/m3**, **mg.m3**, **ppbv** and **ppmv** (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS:

- B Indicates when the anlayte is found in the associated method or preparation blank
- **D** Surrogate is not recoverable due to the necessary dilution of the sample
- E Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
- H- Indicates that the recommended holding time for the analyte or compound has been exceeded
- J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
- NA Not Analyzed
- N/A Not Applicable
- NR Not recoverable a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
- R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
- S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case parrative
- **X** -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Total Page Count: 10 Page 8 of 10



Sample Receipt Checklist

Client Name: Impact Environmental Services Date and Time Received: 8/30/2012 18:30

Project Name: 1409-1417 12th St Oakland Received By: navin

Work Order No.: 1208267 Physically Logged By: lorna

Checklist Completed By: lorna

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present? <u>Yes</u>

Chain of custody signed when relinquished and received? Yes

Chain of custody agrees with sample labels? Yes

Custody seals intact on sample bottles? <u>Not Present</u>

Sample Receipt Information

Custody seals intact on shipping container/cooler?

Not Present

Shipping Container/Cooler In Good Condition? <u>Yes</u>

Samples in proper container/bottle? <u>Yes</u>

Samples containers intact? Yes

Sufficient sample volume for indicated test? <u>Yes</u>

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes

Container/Temp Blank temperature in compliance? No Temperature: °C

Water-VOA vials have zero headspace? No VOA vials submitted

Water-pH acceptable upon receipt? N/A

pH Checked by: n/a pH Adjusted by: n/a



/≟Torrent	Milpitas, CA 95035 Phone: 408.263.5258 FAX: 408.263.8293 www.torrentlab.com			(AIN OF CUSTODY AREAS ARE FOR TORRENT LAB USE ONLY •							LAB WORK ORDER NO			
LABORATORY, INC.				OTE: SHA) 12				
								Food Special Location of Sampling: 1409-1417 12TH ST., OAKLAND							
Address: 39120 ARGONAUT WAY, #223							Purpose: SITE CLOSURE VERIFICATION SOIL VAPOR								
ty: CA State: CA Zip Code: 94538						Special Instructions / Comments:									
Telephone: 510-703-5420 FAX:															
REPORT TO: JOSEPH COTTON SAMPLER: JOSEPH COTTON							P.O. #: EMAIL: JAC21462@AOL.COM								
TURNAROUND TIME: 10 Work Days	Day Waste Water Ground Water	✓ Air	QC Le		TO-PATO15 (TPHG & BTEX&MTBE / 11 DFA			,					ANALYSIS REQUESTED		
LAB ID CANISTER CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT	TO-J BTE								REMARKS		
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Rein juished By Print: JOSEPH COTTON		Date: 8-30-12		1000		eived By:						30/12	Time: 18:20		
Relinquished By: Print:	Date:					ed By:	i					2416	Time:		
Were Samples Received in Good Condition?		amples on lo	_	_			ment_	D	D	Temp		seals intac	t? Yes NO No		

483 Sinclair Frontage Rd., Milpitas, CA 95035 | tel: 408.263.5258 | fax: 408.263.8293 | www.torrentlab.com

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